DRAFT NAVAL AIR STATION ALAMEDA RESTORATION ADVISORY BOARD MEETING SUMMARY

Building 1, Suite 140, Community Conference Room
Alameda Point
Alameda, California

Tuesday, March 5, 2002

ATTENDEES

See attached list.

MEETING SUMMARY

I. Approval of Minutes

Jo-Lynne Lee, Vice Community Co-Chair, called the meeting to order at 6:38 p.m.

Ms. Lee asked for comments on the February 5, 2002, Restoration Advisory Board (RAB) Meeting Minutes. The minutes were approved, with the following corrections:

- Anna-Marie Cook, U.S. Environmental Protection Agency (EPA), stated that "Ms. Cook" in the last line of the third paragraph on Page 6 should be revised to "David Cooper."

- Ms. Cook also stated that EPA has been attending the RAB meetings, so the RAB comment under the administrative heading on Page 7 should be revised to "state regulatory agencies."

II. Co-Chair Announcements

Mike McClelland, U.S. Department of the Navy (Navy), made the following announcements.

The new RAB member orientation/tour will be held on Saturday March 16, 2002, from 1 to 4 p.m. Mr. McClelland asked RAB members to indicate if they expect to attend the tour by a show of hands. A minimum of nine RAB members will be present. Because of the number of members that were unable to attend the meeting, Steve Edde will contact those who were not present to verify if they will be attending the orientation.

Lea Loizos stated that she has a copy of the Mare Island RAB Orientation Packet, and that it may be of assistance to those planning the orientation. The Mare Island orientation includes information about the function of the RAB and about the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process. Ms. Loizos suggested that a portion of the orientation and tour be spent on reviewing the CERCLA process for new members who may be unfamiliar with it.

Marcia Liao, California Department of Toxic Substances Control (DTSC), recently has been assigned to Alameda Point as the permanent DTSC representative and will be attending the RAB meetings. Ms. Liao was unable to attend this meeting, because she was attending a training session on her new role at DTSC.

The Navy has received a formal request from the City of Alameda (City) to begin discussions about the possibility of early transfer of property. A meeting will be scheduled to begin that process in the near future, and Mr. McClelland will keep the RAB informed of the progress of those discussions. The co-chairs of the Mare Island RAB will be invited to give a presentation on the role of the RAB in the event that early transfer takes place.

The Navy's website has been updated to include an up-to-date link for the RAB website. The site includes general information about the RAB, RAB events, meeting minutes, and various links to other Base Realignment and Closure (BRAC)-related sites. A copy of a page printed from the website that includes the web address was distributed to RAB members. The address for the website is http://www.efdsw.navfac.navy.mil/Environmental/RAB.htm.

In response to Ingrid Baur's concern about the usefulness of the RAB Information Repository and her request to have the documents catalogued by location, Mr. McClelland has received a draft of a catalogue of the documents sorted by operable unit (OU). The catalogue is in a red binder and will be in the repository for RAB members to review. If no changes are requested, the document will be finalized and permanently placed on the shelves.

Mr. Edde announced that James Leach has been asked to join a team of experts to assist the government of Afghanistan in rebuilding the country. Mr. Leach's field of expertise is in water/waste treatment systems. The dates of his absence are not yet determined.

Ms. Lee made the following announcements.

Comments on the Draft Runway Wetland Human Health/Ecological Risk Screening Report are due May 1, 2002. The area was never a CERCLA site, but sampling was conducted there when sampling was conducted at Site 2. Samples showed elevated levels of metals but did not appear to warrant investigation under the CERCLA Program. The U.S. Fish and Wildlife Service (USFSW), to whom the property will be transferred, requested that a risk screening be conducted with existing data and reviewed by the agencies. Accordingly, the Navy reviewed the sampling results and prepared the screening report for agency review.

Ms. Lee will contact Mr. Leach to discuss finding a replacement for him as the chairperson of the Ecological Project Team.

At Site 2, which is a former landfill, an investigation is being conducted to determine if ordnance and explosive waste (OEW), such as 20-millimeter rounds, or radiological waste from radium dials and other instrumentation, is present. The Navy does not believe that unexploded ordnance (UXO) exists at Site 2. To characterize the presence of OEW and radiological wastes, a remedial investigation (RI) work plan has been prepared in anticipation of a radiological survey and an OEW walkover survey. To ensure that any UXO discovered in the course of RI work at Alameda Point may be disposed of without delay, the Navy drafted and has received concurrence on a work plan for immediate removal and disposal of UXO.

Michael John Torrey received notification of the Navy's decision not to use a slurry wall at Site 5. Initially, the slurry wall was intended to contain the area that was the subject of the removal and increase the efficiency of the technology. Because of the difficulty of installing a slurry wall and the low success rate the Navy and the agencies have observed, the BRAC Cleanup Team (BCT) has determined that the use of the slurry wall would be inefficient. Actions to prepare the 6-phase heating system will continue at both Sites 4 and 5. At Site 4, a low temperature system will be used to avoid possible damage to utility lines. If that approach is successful at Site 4, the same system may be used at Site 5 to reduce costs. In addition, there is an area in Site 5 where high concentrations of solvents have been detected at depth (45 to 60 feet below ground surface [bgs]). Because the 6-phase heating is not an effective technology to use at this depth, a vacuum extraction system may be used to remove large quantities of the solvents. The effectiveness of this removal will be evaluated to determine how much additional removal will be necessary in the final remedial option.

Various correspondence and documents were distributed to the RAB.

III. Environmental Program Overview

Mr. McClelland presented an overview of the environmental program for Alameda Point that included information pertaining to the CERCLA Program and the Total Petroleum Hydrocarbon (TPH)/Resource Conservation and Recovery Act (RCRA) Program. Information pertaining to the Transfer Program, funding, and accomplishments was also provided. Handouts were provided. Mr. McClelland reviewed Fiscal Year 2002 funded project descriptions presented by Andrew Dick at the January 8, 2002, RAB meeting. The total awards to date are $12,863,893. Additional funding may become available, and the Navy has identified several projects that they would be interested in funding with any additional awards they receive. Mr. McClelland cited the expansion of the Site 25 removal action to include Estuary Park as an example of one such project.

Disposal parcels are units that will be transferred to the City. Economic Development Conveyances are areas, such as the golf course, which will be used to foster economic development for the City. Public Benefit Conveyances will be areas, such as parks, schools and sports areas, that will be available for public enjoyment. Federal Agency to Federal Agency Transfer Units will be transferred from the Navy to the Federal Government, namely, the area that will be transferred to USFWS. The area designated as "TERM" was a piece of land that was leased from the City to the Navy; and the lease was terminated, and the property reverted to the City. In the lease, the Navy agreed to remove any improvements made that were unwanted by the City of Alameda.

Twenty-nine CERCLA sites (sites) in 10 OUs were identified under the Installation Restoration (IR) Program. The OUs originally were designed as a way to group sites with similar types of contamination and similar remedial alternatives. The hope was that they would follow similar schedules and could be transferred to the City at the same time, therefore requiring only one record of decision (ROD) for each OU. Since the initial designation of sites and OUs, several OUs have been subdivided and new sites have been added as characterization studies and RI investigations have provided new data.

One site, Site 18, has been dedesignated. It consisted of all the storm drain lines across the base. The BCT has decided to address the storm drains with the CERCLA site they are associated with, rather than attempting to look at them separately. The lines have been cleaned, and the

Navy's focus is to prevent migration of contamination from CERCLA sites to San Francisco Bay through storm drain lines.

The overview included information about the schedules, outstanding issues, and current status of the sites in each of the 10 OUs. Some sites required brief discussion in addition to the overview topics presented in the handouts. A summary of those discussions is included below.

Sites 14 and 15 are proceeding ahead of the rest of OU-1. The dioxin removal at Site 14 is nearing completion, and sampling at Site 15 indicated that additional removal for polychlorinated biphenyls (PCB) and lead in soil was not warranted. In an effort to promote early transfer of these sites, the Navy is preparing a combined RI/Feasibility Study (FS) report for Sites 14 and 15, separate from the rest of the OU.

Doug DeHaan asked if PCBs were a concern at Site 14. Ms. Cook stated that sampling did not indicate that they were. Initially, PCBs were a concern at Site 15.

Ms. Lee asked if the sites in OU-1 had been grouped together, because they were thought to be the sites with the fewest environmental problems and would require the least amount of time for remediation. Ms. Cook stated that originally that was the case, but further investigation has indicated some issues that were unknown at the time that the OU was designated. Remediation of Sites 6, 7, and 8 may be conducted under the TPH Program. Site 16 appears to be the most problematic and may require more time to complete remediation than the other sites in OU-1.

Bill Smith asked what the remedial action (RA) date in Mr. McClelland's handout referred to. Mr. McClelland clarified that the Navy is required to commence field work within 15 months of the ROD date. The RA date indicates when the remediation is scheduled to be completed and the property will be ready for transfer. To meet the RA date, all soil remediation must be completed, resulting in a determination that no further action (NFA) is necessary. For groundwater, where there is an ongoing treatment system in place,a determination that the system is operating successfully is required. That may require completion of four quarters of monitoring.

Mr. DeHaan asked if development requiring excavation and removal of existing structures could co-occur with remediation. Mr. McClelland stated that it would be possible for some areas if early transfer occurs. Because early transfer would be more time and cost-efficient, both the City and the Navy are committed to pursuing early transfer options. Ms. Cook stated that if early transfer occurs, the deadlines in the Site Management Plan (SMP) would still be binding, but that an expedited schedule could be followed.

In an effort to promote accelerated decomposition, the Navy is exploring the possibility of using an evapotranspiration (ET) cap for the landfill at Site 1 instead of a standard RCRA landfill cap. This would allow air and water into the landfill. It has been reported that an ET cap would decrease the time necessary for decomposition from about 30 years to just 3 years. Mr. Smith stated that he would strongly support the use of an ET cap, because RCRA caps interrupt the natural flows of water, which could be particularly problematic because of the tidal influences at Site 1.

George Humphreys expressed concern that allowing water into the landfill may allow contamination to leach from the landfill into the Bay. Ms. Cook stated that all risks associated with each type of cap would be examined extensively prior to any decision being made. EPA would not support any remedial alternative that poses additional ecological or human health risk.

A funnel and gate system that would reduce concentrations of contaminants exiting the landfill may be among the alternatives considered for use in conjunction with the ET cap. This system, which has been successful at other locations, uses iron filings to filter water and dramatically reduce concentrations of contaminants before reaching waterways.

Ms. Loizos asked if the various addenda to the OU-3 RI report would be compiled into one comprehensive final document to facilitate the review process. Mr. McClelland responded that all relevant information from the RI report and each of the addenda would be included in the FS. Ms. Cook acknowledged how difficult it can be to review separate addenda, but stated that it would not be time or cost efficient to produce a new RI report. All of the key points that would appear in a comprehensive RI report will be included in the FS, which will be reviewed thoroughly.

Ms. Lee suggested that Mr. Humphreys consider soliciting help from other RAB members for the OU-3 Project Team.

In an effort to clear up some of the confusion surrounding the nature and extent of the offshore areas, Mr. McClelland explained that a quit claim deed named the Navy owner of part of the Todd Shipyard property that is now Site 28, which includes offshore and onshore property. Sites 29 and 24 are depicted as small, circular areas on site maps, because their extents have not yet been defined.

Marina Village, Miller School, and the Alameda Child Development Center have never been part of a CERCLA site. However, they may become sites, pending results of the polycyclic aromatic hydrocarbon (PAH) investigation. However, they most likely will not become part of Site 25. Mr. McClelland reiterated that if additional funding becomes available, the ongoing Site 25 removal action might be extended to include Estuary Park. Currently, OU-5 is proceeding about 16 months ahead of the schedule that appears in the SMP.

The benzene groundwater plume that extends beneath Alameda Annex (Annex) and Site 25 will be investigated as a single plume and will be part of the Annex basewide groundwater Remedial Action Plan/ROD. In response to a request by DTSC, one ROD will be prepared for the remaining seven sites in the Annex requiring NFA, PAHs, and groundwater at the Annex and Alameda Point (site 25, Miller School, and Marina Village).

Ms. Loizos stated that she had concluded from an earlier focus group meeting with Rick Weissenborn, that it was very likely that the areas surrounding Site 25 would be given Superfund status. Mr. McClelland responded that the National Priorities List designation at Alameda Point includes all areas of contamination. If the PAH investigation indicates that any parcel not included in a CERCLA site poses an unacceptable risk, then those areas will be brought into the CERCLA Program.
Ms. Loizos also asked if indoor air sampling indicated high levels of naphthalene at Site 25. Ms. Cook responded that naphthalene was detected in groundwater in near the school. Indoor air sampling had been conducted beneath the Marina Village housing units. In the crawl space beneath the school, canisters that had been placed to measure contaminants had not indicated the presence of any contaminants above action levels. Navy conducted soil sampling in the exposed (unpaved) parts of the school property, but did not find any contaminants above action levels. Ms. Cook stressed that the important thing to note is that sampling was conducted and no chemicals were present above action levels. If the Navy were to find any contaminant above action levels, remediation would be conducted under the CERCLA Program.

The Total Petroleum Hydrocarbon (TPH) Program consists 24 sites including fuel lines grouped into 16 corrective action areas (CAA). Five sites currently require no further action (NFA), and there are four ongoing corrective actions. If investigation shows that an area that is designated as a CAA has petroleum contamination commingled with CERCLA contaminants, then the area will be remediated and closed under the CERCLA Program.

All but four RCRA permitted facilities have been closed. The Navy has requested closure for industrial waste treatment plant 360. In Area 37, there are CERCLA and TPH contaminants, as well as RCRA permitted areas. The Navy is inquiring about the possibility of applying the TPH strategy to closure of the RCRA units in an effort to pursue closure for tanks that share proximity in a consistent manner. All aboveground storage tanks (ASTs), underground storage tanks (USTs), and fuel lines either have been removed or closed in place.

Mr. McClelland briefly reviewed parts of the handout that reflect the accomplishments of the IR Program and encouraged RAB members to review the handout more closely and direct any questions to him. Ms. Lee also stated that if there is enough interest in discussing the accomplishments more in depth, a discussion could be included on the agenda for another meeting.

Mr. Humphreys asked for a definition of the Marsh Crust. Mr. McClelland explained that before the area that is now Alameda Point was filled with materials dredged from the surrounding waterways, the area consisted of a series of marshland inlets around the end of Alameda island. There were many early industries (such as an gas manufacturing plant and an oil refinery) that reportedly dumped wastes into the marshland. This waste migrated over much of the surface of the surrounding marshlands and was deposited through tidal actions under what would later become the Annex and the eastern portion of Alameda Point. At Alameda Point, the waste was deposited on tidal flats (former subtidal area). Fill material dredged from the Oakland Inner Harbor and surrounding San Francisco Bay was placed on these areas, encapsulating the former subtidal area and marsh crust under the fill. Because trying to locate and remove all of the Marsh Crust would not be practical, the Marsh Crust Ordnance for Alameda Point and the Annex was passed as an institutional control to minimize the impact of the condensed wastes. The depth of the Marsh Crust ranges from about 8 to 15 feet below ground surface (bgs) beneath the Annex and portions of Alameda Point.

V. BCT Activities

Ms. Cook provided the following report on BCT activities for February 2002.

The BCT met on February 19, 2002, to discuss the Sites 14 and 15 combined RI/FS report, the methods that will be used to conduct the risk assessment, and the most likely remedial alternatives. There was also an update on the Site 14 dioxin removal. The berm and soil surrounding the berm have been removed to a depth of 2 feet bgs. Confirmation samples indicated that there were still a few isolated areas where dioxins were present above action levels. Additional excavation has been conducted, and the Navy currently is waiting for the last set of confirmation samples to conclude the removal action. The final excavation area was about three times the size of the original, planned excavation area. Mr. Weissenborn requested to resubmit the basewide, groundwater-monitoring plan to allow for information gaps to be filled. The BCT reviewed a prototype of the revised the BRAC Cleanup Plan that illustrated the types

of figures and tables that will be used in the new version of the document. The intent of revising the document is to make it a thinner, more concise and user-friendly document. There was an update on the proposed schedule for the new Community Relations Plan. The interviews may begin in March 2002. Michael Bloom, the remedial project manager (RPM) for the offshore sites presented an update on the progress of those sites, focusing on Sites 17 and 29. Sampling at Site 29 was conducted in November 2001, and the information from that sampling is being compiled. The Navy is waiting for the results of fish tissue analysis that was conducted at Site 17. A management meeting with the BCT will be held in April 2002 to discuss offshore issues.

A conference call was held on February 27, 2002, with the Navy, EPA, DTSC, and IT Corporation to discuss the confirmation sampling for the Pesticide Storage Shed removal. Confirmation sampling following the initial excavation indicated that dieldrin was still present at the western side of the excavation and the southwestern portion of where the shed itself stood. The Navy decided to conduct additional excavation of the western portion of the excavation boundary and to remove soil down to a depth of 4 feet bgs in the area where the shed stood. The last set of confirmation samples has not been received yet.

The next BCT meeting will be March 26, 2002.

III. Community and RAB Comment Period

Mr. Smith and Tony Dover expressed their appreciation for the success of the IR Program and stated that the overview of the program was very helpful in understanding the progress of the cleanup and in giving RAB members, who often are exposed only to the process, a good view of the product of all the work that is being done. Mr. Smith requested that the presentation be made a semiannual event to keep the RAB up to date with the accomplishments of the IR Program.

Mr. Edde distributed copies of the Marsh Crust Proposed Plan, which includes a definition of the Marsh Crust. A copy of the document will be posted on the Navy's website, as well.

Ms. Lee and Mr. McClelland will try to schedule a presentation on early transfer at the next RAB meeting with the co-chairs from Mare Island. In addition, Ms. Cook will invite EPA's attorney to attend the meeting to be available to answer any legal questions that RAB members may have about the process.

In response to a complaint by a citizen at the February 5, 2002, RAB meeting, Mr. McClelland announced that the Navy conducted a noise evaluation at Building 397 to determine if the high-pitched noise from the soil vapor extraction system violated the noise ordnance for nearby neighborhoods. The system has been shut down while a muffling system is installed. If the muffling system is successful, the same system will be used at Area 37 and Site 7.

The meeting was adjourned at 8:44 p.m.

ATTACHMENT A

NAVAL AIR STATION ALAMEDA
RESTORATION ADVISORY BOARD MEETING AGENDA
March 5, 2002

(One Page)

RESTORATION ADVISORY BOARD

NAVAL AIR STATION, ALAMEDA

AGENDA

5 MARCH, 2002 6:30 PM

ALAMEDA POINT – BUILDING 1 – SUITE 140

COMMUNITY CONFERENCE ROOM

(FROM PARKING LOT ON W MIDWAY AVE, ENTER THROUGH MIDDLE WING)

TIME	SUBJECT	PRESENTER
6:30 - 6:35	Approval of Minutes	Michael-John Torrey
6:35 - 6:45	Co-Chair Announcements	Co-Chairs
6:45 - 8:00	Environmental Program Overview	Mike McClelland
8:00 - 8:10	BCT Activities	Anna-Marie Cook
8:10 - 8:20	Community & RAB Comment Period	Community & RAB
	RAB Meeting Adjournment	
8:20 - 8:50	Informal Discussions with the BCT	

ATTACHMENT B

NAVAL AIR STATION ALAMEDA
RESTORATION ADVISORY BOARD MEETING SIGN-IN SHEETS

(Four Pages)

ALAMEDA POINT
RESTORATION ADVISORY BOARD
Monthly Attendance Roster for 2001

Date: March 5, 2002

Please initial by your name

COMMUNITY MEMBERS	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Ingrid Baur	X	X										
Clem Burnap												
Ardella Dailey		*										
Nick DeBenedittis												
Douglas deHaan		X										
Tony Dover	X											
George Humphreys	X	X										
James D. Leach	X	X										
Jo-Lynne Lee	X	**										
Lea Loizos	X	X										
Bert Morgan	X	X										
Ken O' Donoghue												
Kurt Peterson												
Kevin Reilly	X	X										
Bill Smith (*attending for Mary Sutter*)	X	X										
Lyn Stirewalt	X	X										
Mary Sutter												
Luann Tetirick		X	X									
Michael John Torrey	X	X	MJT									

* Denotes excused absense

COMMUNITY MEMBERS	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Dana Kokubaun												
Golden Gate Audubon Society												
Betsy P. Elgar												
Debbie Collins	X	X										

REGULATORY AND OTHER AGENCIES	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Anna-Marie Cook	X	*	amc									
David Cooper	X	X	X									
Elizabeth Johnson	X	X										
Laurent Meillier												
Patricia Ryan	X	X										
Sophia Serda												

* Denotes excused absense

U.S. NAVY	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Glenna Clark												
Andrew Dick	**											
Steve Edde		X										
Greg Lorton												
Mike McClelland	X	X										
Tom Pinard	X	X										
Rick Weissenborn	X											

TETRA TECH EMI	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Courtney Colvin	X	X										
Tracy Craig	X	X										
Marie Rainwater												
Leah Waller	X	X										

GPI	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Michael Stone	**											
~~Jack Clemes~~												

* Denotes excused absense

OTHER	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Charlene Washington-EBCRC												
Janet Argyres-Bechtel												
Bart Draper-Bechtel												
Stephen Quayle-Bechtel												
Bruce Marvin - IT, Aquifer Solutions	X											

* Excused absence
** Attended but did not sign roster

ATTACHMENT C

NAVAL AIR STATION ALAMEDA
RESTORATION ADVISORY BOARD MEETING HANDOUT MATERIALS

Southwest Division Naval Facilities Engineering Command Web page. March 5, 2002. Mike McClelland, Base Realignment and Closure (BRAC) Environmental Coordinator, Naval Aviation Facility (NAVFAC), Southwest Division (SWDIV).

Environmental Program Brief for Restoration Advisory Board. March 5, 2002. Mike McClelland, BRAC Environmental Coordinator, NAVFAC, SWDIV.

Tables and Figures for Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Total Petroleum Hydrocarbons (TPH) Programs. March 5, 2002. Mike McClelland, BRAC Environmental Coordinator, NAVFAC, SWDIV.

Proposed Plan, Marsh Crust and Shallow Groundwater at Alameda Facility/Alameda Annex and Marsh Crust and Former Subtidal Area at Alameda Point, Alameda, California. June 2000. Steve Edde, Environmental Liaison, NAVFAC, SWDIV.

Southwest Division Naval Facilities Engineering Command Web Page. March 5, 2002.

(One Sheet)

Southern CA Schedule
Long Beach Naval Complex
MCAS El Toro
MCAS Miramar
MCAS Tustin
NAF El Centro
NAS North Island
Naval Base Ventura County
Naval Station San Diego
NTC San Diego
NWS Seal Beach
Salton Sea Test Base
San Pedro Facility

Northern CA Schedule
Alameda Point
FISC Alameda Annex
Hunters Point Shipyard
Mare Island Naval Shipyard
Moffett Federal Airfield
Crows Landing
Novato
Point Molate
Treasure Island Naval Station

RESTORATION ADVISORY BOARDS (RAB)

Restoration Advisory Boards (RABs) were created by the President's July 2, 1993 five-part program for fast track cleanup at installations designated for closure by the Base Closure and Realignment Commission (BRAC) process. The first RABs were created for BRAC '93 installations. The UNITED STATES NAVY has expanded RABs to all naval installations that have a Technical Review Committee (TRC) for their Installation Restoration program. The UNITED STATES MARINE CORPS will convert TRCs into RABS if they meet one of the following DEPARTMENT OF DEFENSE (DOD) criteria:

- A local government requests that a RAB be formed
  or
- Fifty local residents sign a petition requesting that a RAB be formed
  or
- An installation determines that a RAB is needed
  or
- The installation is a base closure

RABs are a forum for the exchange of information and partnership between citizens, the installation, the UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA) , and the state. RABs provide communities input into the environmental cleanup process.

Navy and Marine Corps Restoration Advisory Boards are currently at the following Southern California locations:

Southern California RAB Schedule
Long Beach Naval Complex
Marine Corps Air Station El Toro
Marine Corps Air Station Miramar
Marine Corps Air Facility Tustin
Naval Air Facility El Centro

Environmental Program Brief for Restoration Advisory Board. March 5, 2002.

(Three Sheets)

ALAMEDA POINT
ALAMEDA, CALIFORNIA

Environmental Program Brief for Restoration Advisory Board

5 March 2002

ALAMEDA POINT
ALAMEDA, CALIFORNIA

Environmental Program Goal

- Make property environmentally suitable for transfer while ensuring protection of human health and the environment.

ALAMEDA POINT
ALAMEDA, CALIFORNIA

Presentation Outline

- CERCLA Program
- Petroleum Program
- RCRA Permitted Facilities
- Accomplishments

ALAMEDA POINT
ALAMEDA, CALIFORNIA

CERCLA Program

- 29 IR Sites (One dedesignated) in 10 Operable Units – OUs 1, 2A, 2B, 2C, 3, 4A, 4B, 4C, 5, and 6
- Federal Facilities Agreement
- FY02 Funding

ALAMEDA POINT
ALAMEDA, CALIFORNIA

FY 02 Funded Project Descriptions

- $3,726,307 funding for the time critical removal action at Site 25
- $3,063,663 funding for preparation of work plan, fieldwork, eight SI reports, and background study for Base-wide Polynuclear Aromatic Hydrocarbons (PAHs)
- $1,800,000 funding to continue the geotechnical and seismic evaluation, and OEW removal at Site 2
- $1,569,299 funding for free product corrective action at Site 7 and Parcel 37
- $661,633 funding for preparation of FS, Proposed Plan, and ROD for Site 25

ALAMEDA POINT
ALAMEDA, CALIFORNIA

FY 02 Funded Project Descriptions

- $450,000 funding for RCRA Part B Permit closure at Industrial Wastewater Treatment Plant (IWTP) for Buildings 25 and 32
- $131,096 funding to complete the treatability study at Site 25
- $62,229 funding for additional RI sampling at Site 25
- $839,666 funding to continue the offshore investigation
- $560,000 funding web based integration of environmental and closure programs
- Total FY 02 awards to date =$12,863,893

ALAMEDA POINT
ALAMEDA, CALIFORNIA

FY 02 Pending Project Descriptions

- $6-10M funding to expand the removal action at Site 25
- $1-4M funding for RAD removal action at Site 2
- $1-4M funding for RAD removal action at Site 5
- $1-4M funding for LBP removal action at water tower and antenna area
- $1-3M funding to complete the removal action at Sites 9, 11, 16, & 21
- $1-4M funding for basewide groundwater monitoring

ALAMEDA POINT
ALAMEDA, CALIFORNIA

FY 02 Pending Project Descriptions

- $1-4M funding to complete the DNAPL removal action at Sites 4 & 5
- $.5-2M funding for petroleum removal action
- $1-3M funding for project management and various technical memorandums
- Total FY 02 awards pending - about $22M

ALAMEDA POINT
ALAMEDA, CALIFORNIA

Operable Unit 1

- Sites 6, 7, 8, 14, 15, 16
- Schedule
  - Final RI 2/04 Final FS 7/04 ROD 6/05 RA 12/06
- Outstanding Issues
  - Completion of Removal Actions
  - PAH background
  - GW monitoring
- Current Status
  - RI/FS Development
  - Separate RI/FS for sites 14&15
  - Removals at 14&15

ALAMEDA POINT
ALAMEDA, CALIFORNIA

Operable Unit 2A

- Sites 9, 13, 19, 22, 23
- Schedule
  - Final RI 2/04 Final FS 7/04 ROD 6/05 RA 1/07
- Outstanding Issues
  - Closure under CERCLA vice Petroleum Program
  - GW monitoring
- Current Status
  - Revised Draft RI
  - Petroleum Actions underway

ALAMEDA POINT
ALAMEDA, CALIFORNIA

Operable Unit 2B

- Sites 3,4,11,21
- Schedule
  - Final RI 6/04 Final FS 11/04 ROD 11/05 RA 1/08
- Outstanding Issues
  - Completion of Removal Actions
  - PAH Investigation
  - GW monitoring
- Current Status
  - Draft RI being developed
  - Removal actions at 4,11,21

ALAMEDA POINT
ALAMEDA, CALIFORNIA

Operable Unit 2C

- Sites 5, 10, 12
- Schedule
  - Final RI 12/04 Final FS 10/05 ROD 9/06 RA 12/08
- Outstanding Issues
  - Completion of Removal Actions
  - PAH Investigation
  - GW monitoring
- Current Status
  - Draft RI being developed
  - 3 removal actions site 5 Rad, Cadmium, DNAPL

ALAMEDA POINT
ALAMEDA, CALIFORNIA

Operable Unit 3

- Site 1
- Schedule
  - Final RI 7/02 Final FS 2/03 ROD 1/04 RA 10/05
- Outstanding Issues
  - OEW/Geotechnical
  - Radiological - Removal will be first step in RA
- Current Status
  - Draft OEW/Geotechnical Characterization Report 30 MAR 2002
  - Revised Draft FS Report 01 SEP 2002

ALAMEDA POINT
ALAMEDA, CALIFORNIA

Operable Unit 4A

- Site 2
- Schedule
  - Final RI 8/05 Final FS 10/05 ROD 12/06 RA 12/08
- RI Work Plan - FY02 Award Possible
- Outstanding Issues
  - OEW/Geotechnical
  - Radiological
  - Ecological Risk Assessment
  - Continuing Source?
  - Migratory Birds => Limited Field Work

ALAMEDA POINT
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Operable Unit 4A (Cont.)

- Current Status
  - OEW/Geotech Characterization Underway
  - Radiological Removal Award FY02
  - Potential ET Cap instead of RCRA C Cap

ALAMEDA POINT
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Operable Units 4B and 4C

- OU 4B – Sites 17 and 24; OU 4C – Sites 20, 28 (offshore), and 29
- Schedules
  - 17 and 29 Final RI 6/03, Final FS 4/04, ROD 6/05, RA 6/07
  - 20, 24, 28 Final RI 11/04, Final FS 10/05, ROD 1/07, RA 12/08
- Data Gap Sampling
  - Site 17, 24, 20 and 28 (offshore)
- Outstanding Issues
  - Site 17: Elevated PCBs and metals near corner outfalls
  - Site 24: Elevated cresol, PCBs, and metals adjacent to piers
  - Site 20: Funding not available to complete
  - Site 28: Funding not available to complete
  - Site 29: Ecological concerns for lead shot

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Operable Units 4B and 4C (cont'd)

Current Status

- Site 17: Analyzing fish composite data for incorporation into RI report
- Site 24: On hold for additional funding
- Site 20: On hold until 2003
- Site 28: On hold until 2003
- Site 29: Analyzing data from field work for incorporation into RI report

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Operable Unit 5

- Site 25
- Schedule
  - Final RI 9/02 Final FS 3/03 ROD 3/04 RA 4/06
- Removal Actions
  - Housing Area
  - Estuary Park
- Outstanding Issues
  - Depth of Remediation
  - Benzene Plume
  - Marina Village, Miller School, Alameda Child Development Center

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Operable Unit 5 (Cont.)

- Current Status
  - Housing Area Removal Action Underway
  - Estuary Park Removal Action to be Awarded 2nd Quarter FY02
  - Accelerated Schedule=SMP - 16 Months

ALAMEDA POINT
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Operable Unit 6

- Sites 26, 27, 28
- Schedule
  - Final RI 7/03 Final FS 1/04 ROD 12/04 RA 3/07
- Outstanding Issues
  - PAH, Pesticides Metals, CHL
  - Identify Source at Site 27
- Current Status
  - RI workplan complete site 26

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Petroleum Program

- 24 sites and fuel line systems are grouped into 16 Corrective Action Areas (CAAs).
- Corrective actions are underway at the sites with the most significant contamination.

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ALAMEDA, CALIFORNIA

Petroleum Program

Corrective Action Areas

- No further action is recommended at five sites (5 CAAs).
- Remediation is currently underway at four sites (4 CAAs).
- Investigations are continuing at the remaining thirteen sites and two former fuel lines (7 CAAs).
  - Closure is expected through corrective actions through the petroleum program at four of the sites and the fuel lines
  - Closure is expected through CERCLA removal/remedial actions at nine of the sites. These are CAAs that overlap CERCLA sites and involve potential comingling of CERCLA contaminants and petroleum products.

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RCRA Permitted Facilities Program

- All RCRA Permitted Facilities closed with the exception of the following:
  - IWTP 360
    - Awaiting DTSC Approval of closure
  - Area 37 Tanks
    - Drafting Response to DTSC Comments on approval of closure request
  - IWTP 25
    - Recently Funded - Developing POA&M
  - IWTP 32
    - Recently Funded - Developing POA&M

ALAMEDA POINT
ALAMEDA, CALIFORNIA

Accomplishments

- **FY 01 - team awarded $41.243 million**
- **FY 02 – to date team awarded $12.863 million**
- Federal Facility Agreement negotiated and signed.
- Prepared Removal Documentation and transferred East Housing.
- Marsh Crust RAP/ROD completed and signed.
- PAH strategy developed and subsequently approved by the agencies. Draft workplan will be distributed next week for agency review.
- Data Gap Sampling Complete. Report due in March.
- Received EPA concurrence on Site 25 TCRA Action Memo

ALAMEDA POINT
ALAMEDA, CALIFORNIA

Accomplishments

- Basewide Groundwater monitoring workplan under review by agencies.
- OU-5 Draft RI report under review by the agencies
- Based on the Data Gap Sampling Results the BCT agreed that no removal action was necessary at Site 15. Sites 14 and 15 are further ahead of schedule than the rest of OU-1. Therefore, a Draft RI/FS will be completed by June 2002 and ROD is expected by the end of the calendar year. These two sites are within the Golf Course proposed by Alameda.

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Accomplishments

- The Navy developed a strategy for cleaning up and closing out petroleum sites and received regulatory concurrence on the strategy.
- All fuel lines at Alameda Pt. have been removed or abandoned in place.
- All USTs have been removed.
- RI workplan for site 26 is finalized.
- RI workplan for sites 27 and 28 are under 30 day review by agencies.

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ALAMEDA, CALIFORNIA

Accomplishments

- **Removal Actions underway**
  - IR Site 25 Time Critical Removal Action (Coast Guard Housing)-the objective of this project is to remove PAH contaminated soil from various areas of North Village and Estuary Park
  - Site 2 OEW Time Critical Removal Action (West Beach Landfill and Associated Wetlands)-the objective of the removal is to excavate a possible OEW burial area to a depth of one foot to allow for additional site characterization

ALAMEDA POINT
ALAMEDA, CALIFORNIA

Accomplishments

- **Removal Actions underway continued:**
  - Pesticides Shed Time Critical Removal Action, Building 195 of EDC 5 – The objective of this project is to remove dieldrin and lead contaminated soil
  - Lead Contaminated Soil Emergency Removal Action – this action took place at 530 and 550 Corpus Christi Road of EDC 5 and sod was placed over contaminated soil
  - Non Time Critical Removal Action at the Water Tower and Antenna Sites of EDC 5 – the objective of the project is to remove the lead based paint on towers and from soil

ALAMEDA POINT
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Accomplishments

- **Removal Actions underway continued:**
  - Non Time Critical Soil Removal Action at Site 5 (Building 5 Aircraft Rework Facility) – the objective of the project is to remove cadmium contaminated soil
  - Non Time Critical Soil Removal Action at Site 14 (Former Fire Training Area) – the objective of the project is to remove dioxin/furan contaminated soil
  - Non Time Critical Removal Action at Sites 4 & 5 – the objective of the project is to remove DNAPL and dissolved source from the groundwater using 6 Phase Heating.

Tables and Figures for Comprehensive Environmental Response, Compensation and Liability Act and Total Petroleum Hydrocarbon Programs. March 5, 2002.

(Nine Sheets)

OAKLAND INNER HARBOR

EDC-13
WESTERN BAYSIDE
EDC-14
EDC-16
PBC-1B
EDC-15
EDC-7
EDC-8
PBC-3
EDC-20 (FED-4)
EDC-3
PBC-1A
EDC-1
FED-1B
FED-1A
FED-2A
FED-2C
EDC-5
EDC-6
FISC-1
EDC-9
EDC-21 (FED-3)
EDC-5
EDC-4
EDC-5
SOUTH SHORE
FED-2B
SEAPLANE LAGOON
EDC-2
EDC-10
SAN FRANCISCO BAY
EDC-19
FED-1B
EDC-12
EDC-11
EDC-18B
EDC-17
BREAKWATER BEACH
TERM-1
EDC-18A

SITE	DESCRIPTION
1	1943-1956 DISPOSAL AREA
2	WEST BEACH LANDFILL AND ASSOCIATED WETLANDS
3	ABANDONED FUEL STORAGE AREA
4	BUILDING 360 (AIRCRAFT ENGINE FACILITY)
5	BUILDING 5 (AIRCRAFT REWORK FACILITY)
6	BUILDING 41 (AIRCRAFT INTERMEDIATE MAINTENANCE FACILITY)
7	BUILDING 459 (NAVY EXCHANGE SERVICE STATION)
8	BUILDNG 114 (PESTICIDE STORAGE AREA)
9	BUILDING 410 (PAINT STRIPPING FACILITY)
10	BUILDING 400 (MISSILE REWORK OPERATIONS)
11	BUILDING 14 (ENGINE TEST CELL)
12	BUILDING 10 (POWER PLANT)
13	FORMER OIL REFINERY
14	FORMER FIRE TRAINING AREA
15	BUILDINGS 301 AND 389 (FORMER TRANSFORMER STORAGE AREA)
16	C-2 CANS AREA (SHIPPING CONTAINER STORAGE)
17	SEAPLANE LAGOON
19	YARD D-13 (HAZARDOUS WASTE STORAGE)
20	OAKLAND INNER HARBOR
21	BUILDING 162 (SHIP FITTING AND ENGINE REPAIR)
22	BUILDING 547 (FORMER SERVICE STATION)
23	BUILDING 530 (MISSILE REWORK OPERATIONS)
24	PIER 1 AND 2 SEDIMENTS
25	ESTUARY PARK AND THE COAST GUARD HOUSING AREA
26	WESTERN HANGAR ZONE
27	DOCK ZONE
28	TODD SHIPYARD
29	SKEET RANGE

LEGEND

BOUNDARIES

- # ENVIRONMENTAL BASELINE SURVEY PARCEL BOUNDARY AND NUMBER
- DISPOSAL PARCEL
  - TERM - REVERTS TO CITY
  - EDC - ECONOMIC DEVELOPMENT CONVEYANCE
  - FED - FEDERAL TRANSFER
  - PBC - PUBLIC BENEFIT CONVEYANCE
  - FISC - SPECIAL LEGISLATION
- CERCLA SITE
- OPERABLE UNIT 1
- OPERABLE UNIT 2A
- OPERABLE UNIT 2B
- OPERABLE UNIT 2C
- OPERABLE UNIT 3
- OPERABLE UNIT 4A
- OPERABLE UNIT 4B
- OPERABLE UNIT 4C
- OPERABLE UNIT 5
- OPERABLE UNIT 6

SITE FEATURES

- ALAMEDA POINT ONSHORE PROPERTY
- OPEN WATER

N

600 0 600 1200

SCALE: 1" = 1200'

FIGURE 4-1
OPERABLE UNITS AND CERCLA SITES (WITH DISPOSAL PARCELS)

ALAMEDA POINT
ALAMEDA, CALIFORNIA
NOVEMBER 29, 2001

Tetra Tech EM Inc.

U:\ALMEDA_SA\CTO190\APR_FILES\SUPPLEMENTAL_EBS.APR OPERABLE UNITS AND CERCLA SITES (WITH DISPOSAL PARCELS) 07/19/02 KJJ

CERCLA SITE SUMMARY TABLE

ALAMEDA POINT

SITE	SITE NAME	CURRENT STATUS	PLANNED ACTION	ANTICIPATED OUTCOME	NORM DATABASE ASSUMPTIONS	ROD DATE
OPERABLE UNIT 1						
6	Building 41 (Aircraft Intermediate Maintenance Facility)	• Remedial Investigation (RI) report finalized, but, was not accepted by the agencies pending the receipt of additional data and completion of a revised risk assessment • Draft feasibility (FS) study report submitted • Data gap sampling conducted June through October 2001 • Non-drinking water source area • Soil risk drivers: PAH • Groundwater risk drivers: PCE, vinyl chloride • PAHs in soil are a concern • Includes a portion of CAA-Fuel line B	• Evaluate data gap sampling (DGS) results • Evaluate the results of the ambient PAH determination study • Evaluate the results of one year of quarterly groundwater monitoring (including MNA evaluation) • Prepare and submit an addendum to the RI report including a revised risk assessment • If a portion of CAA-Fuel Line B is transferred to the CERCLA program, then remediate TPH-impacted soil and groundwater • Conduct FS if the RI report indicates groundwater poses an unacceptable risk • Issue NFA ROD for soil	The site is in the non-drinking water source area and it is anticipated that the risk associated with the groundwater will be acceptable. Therefore, the RI will recommend that the groundwater will be fast-tracked to the ROD. It is expected that the risk from PAH compounds (the only risk driver) in soils at the site will be acceptable after ambient PAH concentrations are determined. Therefore, it is expected that the RI will recommend NFA for soils.	AS/SVE/catalytic oxidation with LTO for groundwater Long term monitoring	June 2005
7	Building 459 (Navy Exchange Service Station)	• Includes CAA-7 • RI report finalized, but, was not accepted by the agencies pending the receipt of additional data and completion of a revised risk assessment • Draft FS report submitted • Evaluating MTBE • Corrective Actions underway at CAA-7 • Non-drinking water source Area • Soil risk drivers: Benzene, PAH, lead • Groundwater risk drivers: benzene, ethylbenzene, PAH, TPH • PAHs in soil are a concern	• Complete free-product corrective action under TPH/RCRA program • Evaluate the results of one year of quarterly groundwater monitoring • Complete corrective actions • Evaluate the results of the ambient PAH determination study. • Prepare revised RI Addendum for OU-1, including the results of the revised risk assessment and the additional data • Issue NFA ROD	The soil and groundwater risk drivers at the site are related to TPH compounds and therefore; the RI will recommend NFA for soils and groundwater under the CERCLA program. It is expected that corrective actions for soils and groundwater will continue under the TPH/RCRA program.	Dual vacuum extraction and catalytic oxidation with LTO for groundwater (previously funded) Long term monitoring	June 2005
8	Building 114 (Pesticide Storage Area)	• Includes CAA-8 • RI report finalized, but, was not accepted by the agencies pending the receipt of additional data and completion of a revised risk assessment • DF Study report submitted • Non-drinking water source area • Soil risk drivers: chromium • Groundwater risk drivers: benzene, vinyl chloride, TPH • PAHs in soil are a concern • DGS conducted June through October 2001	• Evaluate DGS results for chromium speciation • Evaluate the results of one year of quarterly groundwater monitoring (including MNA evaluation) • Evaluate the results of the ambient PAH determination study • Prepare and submit addendum to the RI report including revised risk assessment • Remediation of TPH-impacted soil and groundwater (CAA-8), and preparation of FS report and ROD will be handled under the CERCLA program. • Conduct FS • Issue ROD	It is anticipated that removal actions for TPH impacted soils will reduce risk to acceptable levels and the RI will recommend NFA for soil pending resolution of the PAH issue. The site is in a non-drinking water source area and it expected that the risk associated with groundwater would be acceptable; therefore, the RI will recommend a fast track to the ROD.	Soil excavation for TPH impacted soil with off-site disposal Long term monitoring	June 2005
14	Former Fire Training Area	• Includes CAA-2 • Will be included in RI/FS with Site 15 • DGS conducted June through October 2001 • Removal action for dioxins in berm and sump areas began December 2001 • Corrective Action Area being closed under TPH Program • Non-drinking water source area • TPH at Site 14 is not a chemical of concern • Soil risk drivers: dioxins, PAH • Groundwater risk drivers: vinyl chloride • PAHs in soil are a concern	• Evaluate DGS results • Prepare and submit RI/FS report including revised risk assessment • Issue NFA ROD	The soil removal action for Dioxins is expected to reduce risk to acceptable levels; therefore, the RI report will recommend NFA for soils and groundwater pending resolution of the PAH issue.	Excavation of dioxin impacted soil with off-site disposal Monitored natural attenuation/Long term monitoring	June 2005

CERCLA SITE SUMMARY TABLE

ALAMEDA POINT

SITE	SITE NAME	CURRENT STATUS	PLANNED ACTION	ANTICIPATED OUTCOME	NORM DATABASE ASSUMPTIONS	ROD DATE
OPERABLE UNIT 1 (Continued)						
15	Buildings 301 and 389 (Former Transformer Storage Area)	• Will be included in RI/FS report with Site 14 • DGS conducted June through October 2001 • Data from the DGS program failed to verify high levels of PCB and lead above action levels. The results were reviewed by the BCT. Based on these results, the BCT made a decision that a removal action was no longer warranted at this site. • Non-drinking water source area • Soil risk drivers: Lead, PCBs, PAH • Groundwater risk drivers: none • PAHs in soil are a concern	• Evaluate DGS results • Evaluate the results of the ambient PAH determination study • Determine whether chromium is a problem through speciation • Evaluate the results of one year of quarterly groundwater monitoring • Prepare and submit addendum to the RI report including revised risk assessment • Issue NFA ROD	There were no groundwater risk drivers identified and the DGS failed to verify high concentrations of lead and PCBs in soil; therefore, the RI will recommend NFA for soils and groundwater pending resolution of the PAH issue.	No action	June 2005
16	C-2 CANS Area (Shipping Container Storage)	• Includes CAA-9B • RI report finalized, but, was not accepted by the agencies pending the receipt of additional data and completion of a revised risk assessment • Draft FS report submitted • DGS conducted June through October 2001 • VOCs in groundwater are more extensive than originally thought. Site boundary is being reevaluated. • Potential school site in Parcel 115 • Drinking water source area • Soil risk drivers: none • Groundwater risk drivers: TCE, DCB • PAHs in soil are a concern	• Reevaluate site boundaries based on VOC plume data • Conduct removal action for mass reduction of aqueous phase VOC in groundwater • Evaluate TPH risks using TPH strategy • Evaluate DGS results • Evaluate the results of the ambient PAH determination study • Evaluate source for TCE and DCB • Prepare and submit addendum to the RI report including revised risk assessment • Remediate TPH-impacted soil and groundwater and close UST 608-1 (CAA-9B) under CERCLA. • Conduct FS • Issue ROD	There are no risk drivers for soil and the removal action for VOCs in groundwater are expected to reduce the risk to an acceptable level; therefore the RI will recommend NFA for soils pending chlordane and PAH resolution and the groundwater will be fast tracked to the ROD.	AS/SVE/catalytic oxidation with LTO for groundwater Long term monitoring	June 2005
OPERABLE UNIT 2A						
9	Building 410 (Paint Stripping Facility)	• Draft RI report submitted and reviewed by regulatory agencies. The review identified additional data gaps and the need for additional investigation • DGS completed June through October 2001 • 1,1-DCA (1,200 ppm) was identified at a depth of 60 feet bgs during design data collection, November 2001 • RI report delayed until 2003 to allow the inclusion of one year of quarterly groundwater results, the results of the removal actions, and the ambient PAH determination study • Drinking water source area • Soil risk drivers: vinyl chloride • Groundwater risk drivers: PCP, vinyl chloride, benzene • PAHs in soil are a concern	• Conduct removal action for mass reduction of aqueous phase VOCs in groundwater • Evaluate groundwater data from the DGS program conducted June through October 2001 • Evaluate the results of the ambient PAH determination study • Evaluate the results of one year of quarterly groundwater monitoring • Revise RI Report for OU-2A to include the additional data and the results of the revised risk assessment • Conduct FS • Issue ROD	Groundwater is in a drinking water source area and it is expected that the planned removal action for mass reduction of VOCs will reduce the risk associated with groundwater to acceptable levels. The risk will be re-evaluated upon completion of the removal actions. Low concentrations of vinyl chloride were the only soil risk driver identified. It is anticipated that the RI will recommend NFA for soils pending resolution of the PAH issue.	AS/SVE/catalytic oxidation with LTO for groundwater Monitored natural attenuation/Long term monitoring	June 2005

CERCLA SITE SUMMARY TABLE

ALAMEDA POINT

SITE	SITE NAME	CURRENT STATUS	PLANNED ACTION	ANTICIPATED OUTCOME	NORM DATABASE ASSUMPTIONS	ROD DATE
OPERABLE UNIT 2A (Continued)						
13	Former Oil Refinery	• Includes portions of CAA-13 • Draft RI report submitted and reviewed by regulatory agencies. The review identified additional data gaps and the need for additional investigation • DGS completed June through October 2001 • RI report delayed until 2003 to allow the inclusion of one year of quarterly groundwater results, and the results of the ambient PAH determination study • Corrective action – free product removal at CAA-13 • Drinking water source area • Soil risk drivers: benzene, TPH • Groundwater risk drivers: PCP, vinyl chloride, benzene, TPH • PAHs in soil are a concern	• Evaluate groundwater data from the DGS program conducted June through October 2001 • Evaluate the results of one year of quarterly groundwater monitoring • Evaluate the results of the ambient PAH determination study • Evaluate extent of acidic oily mass • Evaluate TPH risks using TPH strategy • Revise RI Report for OU-2A to include the results of the revised risk assessment and the additional data • Conduct FS • Issue ROD	The groundwater is in a drinking water source area with VOCs, SVOCs, and TPH risk drivers. The soil risk drivers at the site are CERCLA refinery waste compounds related to refinery activities. Therefore, it is anticipated that the RI/FS will also recommend remediation of soils and groundwater under the CERCLA program.	Excavation of petroleum impacted soil with off-site disposal AS/SVE/catalytic oxidation with LTO for groundwater Monitored natural attenuation/Long term monitoring	June 2005
19	Yard D-13 (Hazardous Waste Storage)	• Includes portions of CAA-4B • Draft RI report submitted and reviewed by regulatory agencies. The review identified additional data gaps and the need for additional investigation • DGS completed June through October 2001 • RI report delayed until 2003 to allow the inclusion of one year of quarterly groundwater results, and the results of the ambient PAH determination study • Drinking water source area • Soil risk drivers: TPH • Groundwater risk drivers: PCP, vinyl chloride, benzene, TPH • PAHs in soil are a concern	• Conduct removal action for mass reduction of aqueous phase VOCs in groundwater • Evaluate DGS results • Evaluate the results of one year of quarterly groundwater monitoring including MNA evaluation • Evaluate the results of the ambient PAH determination study • Revise RI Report for OU-2A to include the additional data and the results of the revised risk assessment • Conduct FS • Issue NFA ROD for soil	Groundwater is in a drinking water source area and it is expected that the planned removal action for mass reduction of VOCs will reduce the risk associated with groundwater to acceptable levels. The risk from groundwater contamination will be re-evaluated upon completion of the removal actions. The risk drivers for soil are related to TPH compounds. It is anticipated that the RI will recommend NFA for soils pending resolution of the PAH issue. It is expected that corrective actions for soils and groundwater will continue under the TPH/RCRA program.	Monitored natural attenuation/Long term monitoring	June 2005
22	Building 547 (Former Service Station)	• Includes CAA-4C • Draft RI report submitted and reviewed by regulatory agencies. The review identified additional data gaps and the need for additional investigation • DGI completed June through October 2001 • RI report delayed until 2003 to allow the inclusion of one year of quarterly groundwater results, and the ambient PAH determination study • Drinking water source area • Soil risk drivers: benzene, TPH • Groundwater risk drivers: benzene, TPH • PAHs in soil are a concern	• Evaluate the results of the DGS • Evaluate the results of one year of quarterly groundwater monitoring including MNA evaluation • Evaluate the results of the ambient PAH determination study • Revise RI Report for OU-2A to include the results of the revised risk assessment and the additional data • Issue NFA ROD	The soil and groundwater risk drivers at the site are related to TPH compounds and therefore; the RI will recommend NFA for soils and groundwater under the CERCLA program. It is expected that corrective actions for soils and groundwater will continue under the TPH/RCRA program.	Dual phase extraction/AS with catalytic oxidation for air and activated carbon for water with LTO for groundwater Monitored natural attenuation/Long term monitoring	June 2005
23	Building 530 (Missile Rework Operations)	• Includes portions of CAA-13 • Draft RI report submitted and reviewed by regulatory agencies. The review identified additional data gaps and the need for additional investigation • DGS completed June through October 2001 • Corrective action – free product removal at CAA-13 • RI report delayed until 2003 to allow the inclusion of one year of quarterly groundwater results, and the ambient PAH determination study • Drinking water source area • Soil risk drivers: TPH • Groundwater risk drivers: benzene, TPH • PAHs in soil are a concern	• Evaluate the results of the DGS • Evaluate the results of one year of quarterly groundwater monitoring including MNA evaluation • Evaluate the results of the ambient PAH determination study • Revise RI Report for OU-2A to include the results of the revised risk assessment and the additional data • Issue NFA ROD	The soil and groundwater risk drivers at the site are related to TPH compounds and therefore; the RI will recommend NFA for soils and groundwater under the CERCLA program. It is expected that corrective actions for soils and groundwater will continue under the TPH/RCRA program.	AS/SVE/catalytic oxidation with LTO for groundwater Monitored natural attenuation/Long term monitoring	June 2005

CERCLA SITE SUMMARY TABLE

ALAMEDA POINT

SITE	SITE NAME	CURRENT STATUS	PLANNED ACTION	ANTICIPATED OUTCOME	NORM DATABASE ASSUMPTIONS	ROD DATE
OPERABLE UNIT 2B						
3	Abandoned Fuel Storage Area	• Includes CAAs –3B and –3C • Draft RI report submitted and reviewed by regulatory agencies. The review identified additional data gaps and the need for additional investigation • DGS completed June through October 2001 • RI report delayed until 2004 to allow the inclusion of one year of quarterly groundwater results, and the ambient PAH determination study • Boundaries may have to be expanded due to plume delineation • Portions of Site 3 are in drinking water source area and portions are in non-drinking water source area • Soil risk drivers: lead, TPH • Groundwater risk drivers: 1,1-DCE, vinyl chloride, TCE, benzene, chloroform, TPH • PAHs in soil are a concern	• Evaluate groundwater data from the DGS program conducted June through October 2001 • Evaluate the results of one year of quarterly groundwater monitoring including MNA evaluation • Evaluate the results of the ambient PAH determination study • Boundaries may be modified depending on results of evaluation of lead in soil • Revise RI report for OU-2B to include the additional data and the results of the revised risk assessment • If CAA-3B and CAA-3C are transferred to the CERCLA program, then remediate TPH-impacted soil and groundwater and close USTs 97-A through 97-E • Conduct FS • Issue ROD	The groundwater is in a non-drinking water source area with chlorinated solvents, VOCs, and TPH risk drivers. The soil risk drivers at the site include lead and TPH compounds. Therefore, it is anticipated that the RI/FS will also recommend remediation of soils and groundwater under the CERCLA program.	Excavation of lead impacted soil and off-site disposal Enhanced bioremediation with LTO for groundwater Long term monitoring	Nov 2005
4	Building 360 (Aircraft Engine Facility)	• Includes CAAs –4A and –4B • Draft RI report submitted and reviewed by regulatory agencies. The review identified additional data gaps and the need for additional investigation • DGS completed June through October 2001 • RI report delayed until 2004 to allow the inclusion of one year of quarterly groundwater results, the results of the removal actions, and the ambient PAH determination study • Drinking water source area • Soil risk drivers: cadmium, chromium, TPH • Groundwater risk drivers: 1,1-DCE, vinyl chloride, TCE, benzene, chloroform, TPH • PAHs in soil are a concern	• Evaluate extent of cadmium in soil using results of DGS • Conduct removal action for mass reduction of DNAPL in groundwater • Evaluate the results of the DGS • Evaluate the results of one year of quarterly groundwater monitoring including MNA evaluation • Evaluate the results of the ambient PAH determination study • Revise RI Report for OU-2B to include additional data and results of the revised risk assessment • Remediate TPH-impacted soil and groundwater and close USTs 163-1 (CAA-4A), 372-1, 372-2 (CAA-4B under CERCLA • Conduct FS • Issue ROD	Groundwater is in a drinking water source area and it is expected that the planned removal action for mass reduction of DNAPL will reduce the risk associated with groundwater to acceptable levels. The risk from DNAPL in groundwater will be re-evaluated upon completion of the removal actions. The risk drivers for soil include cadmium, chromium, and TPH compounds. It is anticipated that the RI/FS will recommend continued groundwater remediation and remediation of cadmium in soils. It is expected that corrective actions for TPH compounds in soil and groundwater will continue under the TPH/RCRA program.	Interim removal action (6-phase heating) for DNAPL (previously funded) AS/SVE/catalytic oxidation with LTO for groundwater Long term monitoring	Nov 2005
11	Building 14 (Engine Test Cell)	• Includes CAA-11A • Draft RI report submitted and reviewed by regulatory agencies. The review identified additional data gaps and the need for additional investigation • DGS completed June through October 2001 • RI report delayed until 2004 to allow the inclusion of one year of quarterly groundwater results, the results of the removal actions, and the ambient PAH determination study • Drinking water source area • Soil risk drivers: vinyl chloride, TPH • Groundwater risk drivers: 1,1-DCE, vinyl chloride, TCE, benzene, chloroform, TPH • PAHs in soil are a concern	• Conduct removal action for mass reduction of aqueous phase VOCs in groundwater • Evaluate the results of DGS • Evaluate the results of one year of quarterly groundwater monitoring including MNA evaluation • Evaluate the results of the ambient PAH determination study • Revise RI report for OU-2B to include the additional data and the results of the revised risk assessment • Remediate TPH-impacted soil and groundwater and close USTs 14-1 through 14-6 (CAA-11A) under CERCLA • Conduct FS • Issue NFA ROD for soil	Groundwater is in a drinking water source area and it is expected that the planned removal action for mass reduction of VOCs will reduce the risk associated with groundwater. The risk from groundwater contamination will be re-evaluated upon completion of the removal actions. There were no risk drivers for soil. It is anticipated that the RI/FS will recommend continued remediation for groundwater and a NFA ROD for soils pending resolution of the PAH issue. It is expected that corrective actions for soils and groundwater will continue under the TPH/RCRA program.	AS/SVE/catalytic oxidation with LTO for groundwater Long term monitoring	Nov 2005

CERCLA SITE SUMMARY TABLE

ALAMEDA POINT

SITE	SITE NAME	CURRENT STATUS	PLANNED ACTION	ANTICIPATED OUTCOME	NORM DATABASE ASSUMPTIONS	ROD DATE
OPERABLE UNIT 2B (Continued)						
21	Buildings 162 (Ship Fitting and Engine Repair)	• Includes CAA-3A • Draft RI report submitted and reviewed by regulatory agencies. The review identified additional data gaps and the need for additional investigation • DGS completed • RI report delayed until 2004 to allow the inclusion of one year of quarterly groundwater results, the results of the removal actions, and the ambient PAH determination study • Portions of Site 21 are in drinking water source area and portions are in non-drinking water source area • Soil risk drivers: none • Groundwater risk drivers: 1,1-DCE, arsenic, benzo(a)pyrene, ideno(1,2,3-d,d)pyrene, TCE, vinyl chloride, benzene, benzo(a)arithracene, benzo(b)fluoranthene, bis(2-chloroethyl)ether • PAHs in soil are a concern	• Conduct removal action for mass reduction of aqueous phase VOCs in groundwater • Evaluate the results of the DGS • Evaluate the results of one year of quarterly groundwater monitoring including MNA evaluation • Evaluate the results of the ambient PAH determination study • Revise RI report for OU-2B to include the additional data and the results of the revised risk assessment • If CAA-3A is transferred to the CERCLA program, remediate TPH-impacted soil and groundwater, close USTs 398-1 & 2, ASTs under CERCLA • Conduct FS • Issue NFA ROD for soil	Groundwater is in a drinking water source area and it is expected that the planned removal action for mass reduction of VOCs will reduce the risk associated with groundwater. The risk from groundwater contamination will be re-evaluated upon completion of the removal actions. There were no risk drivers for soil. It is anticipated that the RI/FS will recommend continued remediation for groundwater and a NFA ROD for soils pending resolution of the PAH issue. It is expected that corrective actions for soils and groundwater will continue under the TPH/RCRA program.	AS/SVE/catalytic oxidation with LTO for groundwater Monitored natural attenuation/Long term monitoring	Nov 2005
OPERABLE UNIT 2C						
5	Building 5 (Aircraft Rework Facility)	• Includes CAAs -5A and -5B • Draft RI report submitted and reviewed by regulatory agencies. The review identified additional data gaps and the need for additional investigation • DGS completed June through October 2001 • RI report delayed until 2004 to allow the inclusion of one year of quarterly groundwater results, the results of the removal actions, and the ambient PAH determination study • TPH/free product identified in DGS program. Possible free product removal action • Non-drinking water source area • Soil risk drivers: cadmium, TPH • Groundwater risk drivers: 1,1-DCE, vinyl chloride, cyanide, xylenes, TPH • PAHs are not a soil concern	• Review DGS results for chromium speciation • Finalize radiation (RAD) closeout survey report for internal building surfaces with third party review • Conduct removal action for mass reduction of cadmium in soil • Complete phase II storm drain radiation removal • Conduct removal action for mass reduction of DNAPL • Investigate free-product/TPH for commingled plumes • Evaluate the results of the DGS • Evaluate the results of one year of quarterly groundwater monitoring including MNA evaluation • Evaluate the results of the ambient PAH determination study • Conduct third party survey for RAD removal areas • Revise RI report for OU-2C to include the additional data and the results of the revised risk assessment • Remediate TPH-impacted soil and groundwater and close USTs 5-2, 5-3 (CAA-5A), USTs 261-1 through 261-3, 615-1 through 615-4 (CAA-5B) under CERCLA • Conduct FS • Issue NFA ROD for soil	It is anticipated that removal actions for cadmium-impacted soils will reduce risk to acceptable levels and the RI will recommend NFA for soil (PAHs are not of concern at this site). The site is in a non-drinking water source area and the planned removal actions for DNAPL are expected to reduce the risk in groundwater to acceptable levels. Therefore, the RI/FS will recommend a NFA ROD for soils and continued remediation of groundwater under the CERCLA program.	Removal of RAD impacted storm drain lines with off-site disposal Interim removal action (6-phase heating) for DNAPL (previously funded) AS/SVE/catalytic oxidation with LTO for groundwater Long term monitoring	Sept 2006

CERCLA SITE SUMMARY TABLE

ALAMEDA POINT

SITE	SITE NAME	CURRENT STATUS	PLANNED ACTION	ANTICIPATED OUTCOME	NORM DATABASE ASSUMPTIONS	ROD DATE
			OPERABLE UNIT 2C (Continued)			
10	Building 400 (Missile Rework Operations)	• Includes CAA-5C • Draft RI report submitted and reviewed by regulatory agencies. The review identified additional data gaps and the need for additional investigation • DGS completed June through October 2001 • RI report delayed until 2004 to allow the inclusion of one year of quarterly groundwater results, the results of the removal actions, and the ambient PAH determination study • Non-drinking water source area • Soil risk drivers: none • Groundwater risk drivers: 1,1-DCE, vinyl chloride, TPH • PAHs are not a soil concern	• Finalize Radiation (RAD) closeout survey report for internal building surfaces with third party review • Evaluate results of the DGS • Evaluate the results of one year of quarterly groundwater monitoring including MNA evaluation • Evaluate soil gas data collected during EBS • Evaluate the results of the ambient PAH determination study • Revise RI Report for OU-2C to include the additional data and the results of the revised risk assessment • If CAA-5C is transferred to the CERCLA Program, then remediate TPH-impacted soil and groundwater and close UST 400-1 • Conduct FS • Issue NFA ROD	There are no soil risk drivers at the site and the groundwater is in a non-drinking water source area. Therefore, it is anticipated that the RI/FS will recommend a NFA ROD for soils and groundwater.	Removal of RAD impacted storm drain lines with off-site disposal Long term monitoring	Sept 2006
12	Building 10 (Power Plant)	• Draft RI report submitted and reviewed by regulatory agencies. The review identified additional data gaps and the need for additional investigation • DGS completed June through October 2001 • RI report delayed until 2004 to allow the inclusion of one year of quarterly groundwater results, the results of the removal actions, and the ambient PAH determination study • Non-drinking water source area • Soil risk drivers: none • Groundwater risk drivers: none • PAHs are not a soil concern	• Evaluate the results of the DGS • Evaluate the results of one year of quarterly groundwater monitoring • Evaluate the results of the ambient PAH determination study • Revise RI Report for OU-2C to include the additional data and the results of the revised risk assessment • Conduct FS • Issue NFA ROD	There are no soil or groundwater risk drivers at the site and the groundwater is in a non-drinking water source area. Therefore, it is anticipated that the RI/FS will recommend a fast-tracked NFA ROD for soils and groundwater.	Long term monitoring	Sept 2006
			OPERABLE UNIT 3			
1	1943-1956 Disposal Area	• Submitted Final RI Addendum Volume I and Draft RI Addendum Volume II • Non-drinking water source area • Soil risk drivers: PAH, PCBs, chromium • Groundwater risk drivers: VOCs, SVOCs, CHC • OEW and lead from Pistol Range, Radium -226 and Radon -222 from instrument dials • PAHs in soil are a concern	• Complete OEW documentation • Submit the OU-3 RI Addendum Volume III, ordnance and explosive/geotechnical survey results • Prepare revised draft FS for 4 foot soil cap • Issue ROD	Soil risk drivers include elevated concentrations of PAH, PCBs, and chromium and the groundwater risk drivers include VOCs, SVOCS, and CHC. However, the groundwater is in a non-drinking water source area and the expected future land use is recreational. Therefore, it is anticipated that the RI/FS will recommend capping of the former landfill and a long-term monitoring program.	RCRA D Cap Long Term Monitoring	Jan 2004
			OPERABLE UNIT 4A			
2	West Beach Landfill and Associated West Beach Wetlands	• Preparing for DGS of OEW • Non-drinking water source area • Soil risk drivers: PAH, PCBs • Groundwater risk drivers: PAH, BTEX, CHC • Radium 226 and Radon 222 from instrument dials • Evaluating direct hydraulic impact to the San Francisco Bay • PAHs are not a soil concern	• Complete OEW/Geotechnical investigation • Finalize RI work plan • Conduct RI sampling • Conduct RAD removal action • Submit RI report • Conduct FS • Issue ROD	Soil risk drivers include elevated concentrations of PAH, and PCBs, and the groundwater risk drivers include PAH, BTEX, and CHC. However, the groundwater is in a non-drinking water source area and the expected future land use is recreational. Therefore, it is anticipated that the RI/FS will recommend capping with evapotraspiration of the former landfill and a long-term monitoring program.	Interim Removal Action (Soil Excavation) – OEW removal with off-site disposal RCRA C Cap Long Term Monitoring	Dec 2006

CERCLA SITE SUMMARY TABLE

ALAMEDA POINT

SITE	SITE NAME	CURRENT STATUS	PLANNED ACTION	ANTICIPATED OUTCOME	NORM DATABASE ASSUMPTIONS	ROD DATE
OPERABLE UNIT 4B						
17	Seaplane Lagoon	• Included in area wide sediment work group • Metals, PCBs, PAH, pesticides, organotins, and TPH in offshore sediment	• Draft RI report due June 2003 • Conduct FS • Issue ROD	Sediment risk drivers are yet to be determined.	Sediment excavation and off-site disposal	June 2005
24	Pier 1 and 2 Sediment	• Included in area wide sediment workgroup • Preparing draft Data Summary Report	• Draft RI report due June 2004 • Conduct FS • Issue ROD	Sediment risk drivers are yet to be determined.	Sediment excavation and off-site disposal	Jan 2007
OPERABLE UNIT 4C						
20	Oakland Inner Harbor	• Included in area wide sediment workgroup • Preparing draft data summary report • Metals, PCBs, PAH, pesticides, organotins, and TPH in offshore sediment	• Change site boundaries to include offshore area at CERCLA Site 28 • Draft DGS work plan of the offshore area is due in April 2003 • Complete DGS • Prepare RI report • Conduct FS • Issue NFA ROD	High concentrations of metals, PCBs, PAH, pesticides, organotins, and TPH were not verified in offshore sediment during DGS sampling. The contaminants that were identified were at concentrations that pose an acceptable risk. It is anticipated that the RI/FS will recommend a NFA ROD for the offshore sediment.	No action	Jan 2007
29	Skeet Range	• Added to the CERCLA Program in August 2000 • Risk drivers: To be determined	• Draft RI report is due January 2003 • Conduct FS • Issue ROD	Sediment risk drivers are yet to be determined.	Excavation of lead impacted sediment with off-site disposal	Jun 2005
OPERABLE UNIT 5						
25	Estuary Park and Coast Guard Housing Area	• Preparing for DGS • Preparing combined RI/FS documentation • Action memorandum submitted • Non-drinking water source area • Soil risk drivers: PAH • Groundwater risk drivers: PAH, carbazole, and benzene • PAHs in soil are a concern	• Complete time critical removal of PAHs in soil from residential areas (underway) • Evaluate the results of the ambient PAH determination study • Determine how to combine NFA ROD for benzene plume beneath both Alameda Point and Alameda Annex • Prepare RI report • Conduct FS • Issue ROD	The groundwater is in a non-drinking water source area with PAH, carbazole, and benzene risk drivers present. It is anticipated that removal actions for PAH impacted soils will reduce risk to acceptable levels and the RI will recommend NFA for soil. The site is in a non-drinking water source area and it expected that the risk associated with groundwater would be acceptable; therefore, the FS will also recommend a NFA ROD for groundwater. There is no unacceptable risk associated with groundwater.	Interim Removal Action (Soil Excavation) PAH removal with off-site disposal Excavation of remaining PAH impacted soil with off-site disposal AS/SVE/catalytic oxidation with LTO for groundwater Long term monitoring	Mar 2004
OPERABLE UNIT 6						
26	Western Hangar Area	• Includes portions of CAA-6 • Site 26 was added to the CERCLA Program for OU-6 in August 2000 • RI/FS Planned • Draft work plan for RI submitted and reviewed • Field work to start February 2002 • Completing corrective action for fuel lines at CAA-6 • Non-drinking water source area • Soil risk drivers: To be determined • Groundwater risk drivers: benzene, CHC, and metals • PAHs in soil are a concern	• Complete RI Work plan in December 2001 • Conduct RI soil and groundwater sampling February through May of 2002 • Close USTs under CERCLA • Evaluate the results of the ambient PAH determination study • Prepare RI report • Conduct FS • Issue ROD	Will evaluate spot removal, institutional controls, and groundwater monitoring. The soil risk drivers have yet to be determined. The groundwater is located in a non-drinking water source area; however, risk drivers include elevated concentrations of benzene, CHC, and metals. Although the RI has yet to be completed, it is anticipated that the RI/FS will recommend soil and groundwater remediation.	AS/SVE/catalytic oxidation with LTO for groundwater Long term monitoring	Dec 2004

CERCLA SITE SUMMARY TABLE

ALAMEDA POINT

SITE	SITE NAME	CURRENT STATUS	PLANNED ACTION	ANTICIPATED OUTCOME	NORM DATABASE ASSUMPTIONS	ROD DATE
OPERABLE UNIT 6 (Continued)						
27	Dock Zone	• Site 27 was added to the CERCLA Program for OU-6 in August 2000 • RI/FS Planned • Draft work plan for RI submitted and reviewed • Field work to start February 2002 • Drinking water source area • Groundwater risk drivers: CHC • PAHs in soil are a concern	• Complete RI Work plan in January 2002 • Conduct RI soil and groundwater sampling February through June 2002 • Evaluate the results of one year of quarterly groundwater monitoring • Evaluate results of ambient PAH determination study • Prepare RI report • Conduct FS • Issue ROD	Groundwater is in a drinking water source area with CHC as the primary risk driver. The risk from groundwater contamination will be evaluated upon completion of the RI. There were no risk drivers for soil. It is anticipated that the RI/FS will recommend remediation for groundwater and a NFA ROD for soils pending resolution of the PAH issue.	AS/SVE/catalytic oxidation with LTO for groundwater Monitored natural attenuation/Long term monitoring	Dec 2004
28	Todd Shipyard	• Site 28 was added to the CERCLA Program (OU-6) in August 2000 • RI/FS Planned • Draft work plan for RI submitted and reviewed • Field work to start February 2002 • Non-drinking water source area • Soil risk drivers: metals, PAH • Groundwater risk drivers: metals aldrin, arochlor 1260 • PAHs in soil are a concern	• Complete RI Work plan in January 2002 • Conduct RI soil and groundwater sampling February through May 2002 • Evaluate ecological risk to the Oakland Inner Harbor • Evaluate the results of one year of quarterly groundwater monitoring • Evaluate the results of the ambient PAH determination study • Prepare RI report • Conduct FS • Issue ROD	Groundwater is in a non-drinking water source area with metals, aldrin, Arochlor 1260, and PAHs as the primary risk drivers. The risk from groundwater contamination will be evaluated upon completion of the RI. Soil risk drivers include metals and PAH. Although the RI has yet to be completed, it is anticipated that the RI/FS will recommend soil remediation and a NFA ROD for groundwater.	RCRA D Cap	Dec 2004

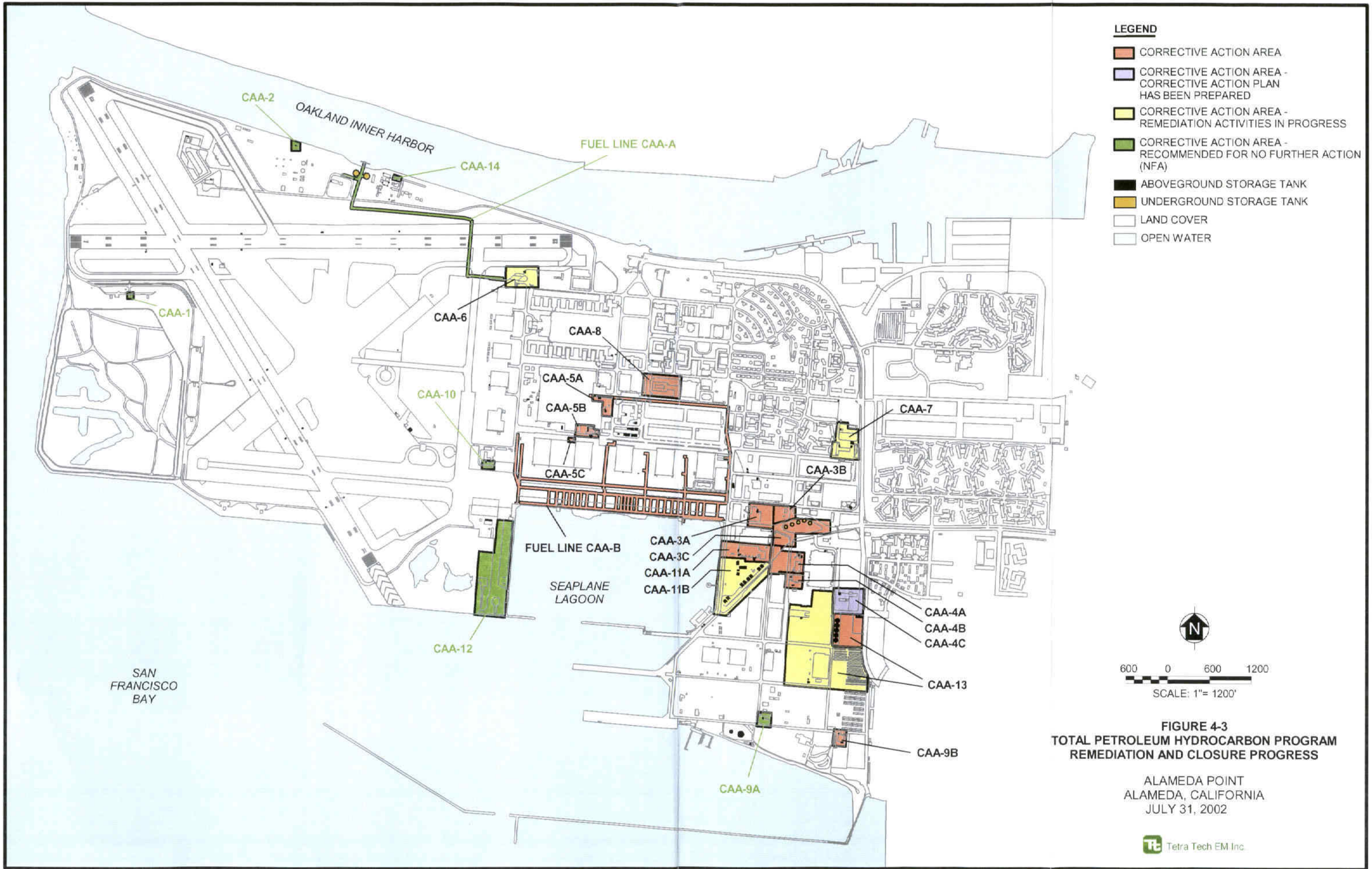


FIGURE 4-3
TOTAL PETROLEUM HYDROCARBON PROGRAM
REMEDIATION AND CLOSURE PROGRESS

ALAMEDA POINT
ALAMEDA, CALIFORNIA
JULY 31, 2002

Tetra Tech EM Inc.

U:\ALMDA_SAICTO307\APR_FILES\REGULATORY_NEGOTIATIONS\APR_TPH PROGRAM REMEDIATION AND CLOSURE PROGRESS_KJJ 07/19/02

TABLE 3-4
ALAMEDA POINT
CORRECTIVE ACTION AREA SUMMARY SHEET

CAA	*CAA DESCRIPTION AND TANKS*	*STATUS AS OF 3/12/02*	*PLANNED ACTION*	*ANTICIPATED OUTCOME*	*DATE OF REGULATORY CONCURRENCE FOR CLOSURE*
TPH PROGRAM					
1	Vacant land, paved access roads, Building 442 (watchtower), UST 442-1	• Draft No Further Action and UST Closure Report submitted • UST recommended for closure	• CAA and UST will be closed	No Further Action	TBD
2	Gravel surfaces with little vegetation and no buildings, UST 357-FS-1	• Draft No Further Action and UST closure report submitted • UST recommended for closure • CAA-2 is located within boundaries of CERCLA Site 14	• CAA and UST will be closed	No Further Action	TBD
3A	Building 398 (auxiliary power units, cooling air turbine shop, aircraft engine test cells), USTs 398-1, 398-2, and three ASTs	• Groundwater and soil is contaminated with TPH and low concentrations of chlorinated hydrocarbons • Free product may be present • CAA-3A is located within boundaries of CERCLA Site 21	• Evaluate additional data collected from data gap sampling event to delineate the extent of TPH and chlorinated hydrocarbons in the soil and groundwater. • Based on the concentration of CERCLA contaminants commingled with TPH, determine appropriate program to use for remediation. • Evaluate data collected during data gap sampling event to determine if free product is present • If present, remove free product • IF CAA remains in the TPH program, prepare a Corrective Action Plan (CAP) for remediation • Conduct soil and groundwater remediation for TPH and CERCLA contaminants • Monitor MNA in groundwater • Close CAA and USTs	Remediation followed by MNA	TBD
3B	Paved areas, Building 109 (gasoline truck loading station), Structure 430 (aircraft truck facility)	• Groundwater and soil is contaminated with TPH • No USTs or ASTs are associated with CAA-3B • CAA-3B is located within boundaries of CERCLA Site 3	• Evaluate additional data collected from data gap sampling event to delineate the extent of TPH and chlorinated hydrocarbons in the soil and groundwater • Based on the concentration of CERCLA contaminants commingled with TPH, determine appropriate program to use for remediation • IF CAA remains in the TPH program, prepare a CAP for remediation= • Conduct soil and groundwater remediation for TPH and CERCLA contaminants. • Monitor MNA in groundwater • Close CAA	Remediation followed by MNA	2005
3C	Paved and grass covered areas, USTs 97a through 97e (AVGAS storage)	• Soil and groundwater is contaminated with TPH and lead • Chlorinated hydrocarbons have been detected in groundwater (may be extending from CERCLA Site 4) • CAA-3C is located within boundaries of CERCLA Site 3	• Evaluate additional data collected from data gap sampling event to delineate the extent of TPH and chlorinated hydrocarbons in the soil and groundwater • Based on the concentration of CERCLA contaminants commingled with TPH, determine appropriate program to use for remediation • IF CAA remains in the TPH program, prepare a CAP for remediation • Conduct soil and groundwater remediation for TPH and CERCLA contaminants. • Monitor MNA in groundwater • Close CAA and USTs	Remediation followed by MNA	2005

TABLE 3-4
ALAMEDA POINT
CORRECTIVE ACTION AREA SUMMARY SHEET

CAA	*CAA DESCRIPTION AND TANKS*	*STATUS AS OF 3/12/02*	*PLANNED ACTION*	*ANTICIPATED OUTCOME*	*DATE OF REGULATORY CONCURRENCE FOR CLOSURE*
TPH PROGRAM					
4A	Building 163 (Aircraft maintenance), Building 414 (hazardous materials storage), UST 163-1	• Soil and groundwater is contaminated with TPH and lead • Closure report for UST 163-1 has been submitted to RQWCB. • Chlorinated hydrocarbons are present in groundwater (likely from solvent plume extending from Building 360) • CAA-4A is located within boundaries of CERCLA Site 4 • Additional data have been collected during data gap sampling event to delineate the TPH and chlorinated hydrocarbon plumes	• Evaluate additional data collected from data gap sampling event to delineate the extent of TPH and chlorinated hydrocarbons in the soil and groundwater • Transfer CAA to CERCLA program for remediation.	Transfer to CERCLA Program	See CERCLA Site 4
4B	Building 372 (jet engine testing facility), USTs 372-1 and 372-2	• Soil and groundwater is contaminated with TPH and lead • Chlorinated hydrocarbons are present in groundwater (likely from solvent plume extending from Building 360) • CAA-4B is located within boundaries of CERCLA Site 4 and a portion of CERCLA Site 19. • Additional data have been collected during data gap sampling event to delineate the TPH and chlorinated hydrocarbon plumes	• Evaluate additional data collected from data gap sampling event to delineate the extent of TPH and chlorinated hydrocarbons in the soil and groundwater • Transfer CAA to CERCLA program for remediation.	Transfer to CERCLA Program	See CERCLA Site 4
4C	Building 547 (gasoline service station and car wash), USTs 547-1 through 547-5	• Soil and groundwater is contaminated with TPH and lead • CAA-4C is located within boundaries of CERCLA Site 22 • Additional groundwater data have been collected during data gap sampling event to delineate the TPH plume; soil gas data has also been collected to evaluate the risk from inhalation of vapors	• Evaluate additional data collected from data gap sampling event to delineate the extent of TPH and any chlorinated hydrocarbons in the soil and groundwater, and risk from inhalation of vapors. • Prepare a CAP for remediation. • Monitor MNA • Close CAA and USTs	Remediation followed by MNA	2004
5A	USTs 5-2 and 5-3	• Soil and groundwater is contaminated with TPH and lead • BERC performed a steam enhanced free product removal in 1999 • CAA-5A is located within boundaries of CERCLA Site 5 • Additional groundwater data have been collected during data gap sampling event to delineate the TPH plume; soil gas data have also been collected to evaluate the risk from inhalation of vapors • Chlorinated hydrocarbons (Site 5) are commingled with TPH contamination	• Evaluate additional data collected from data gap sampling event to delineate the extent of TPH and chlorinated hydrocarbons in the soil and groundwater, and risk from inhalation of vapors. • Transfer CAA to CERCLA program for remediation.	Transfer to CERCLA program	See CERCLA Site 5
5B	Buildings 615 (electrical equipment), 261 (storage), 348 (corrosion control shop), 415 (miscellaneous liquids storage), USTs 261-1, 261-2, 261-3, 615-1, 615-2, 615-3 (oil/water/separator), 615-4	• RCRA unit (includes USTs 615-3 and 615-4) is closed. • TPH and lead in soil and groundwater • CAA-5B is located with CERCLA Site 5. • Chlorinated hydrocarbons (Site 5) are commingled with TPH in the groundwater.	• Evaluate additional data collected from data gap sampling event to delineate the extent of TPH and chlorinated hydrocarbons in the soil and groundwater, and risk from inhalation of vapors. • Transfer CAA to CERCLA program for remediation.	Transfer to CERCLA program	See CERCLA Site 5

TABLE 3-4
ALAMEDA POINT
CORRECTIVE ACTION AREA SUMMARY SHEET

CAA	*CAA DESCRIPTION AND TANKS*	*STATUS AS OF 3/12/02*	*PLANNED ACTION*	*ANTICIPATED OUTCOME*	*DATE OF REGULATORY CONCURRENCE FOR CLOSURE*
TPH PROGRAM					
5C	Portion of Building 400 (missile armament and avionics rework), UST 400-1	• TPH in soil and groundwater • Additional data were collected during data gap sampling to delineate the TPH in groundwater and soil • CAA-5C is located within boundaries of CERCLA Site 10 • Chlorinated hydrocarbons from Building 400 (CERCLA Site 10) are commingled with TPH	• Evaluate additional data collected from data gap sampling event to delineate the extent of TPH and chlorinated hydrocarbons in the groundwater. • Based on the concentration of CERCLA contaminants commingled with TPH, determine appropriate program to use for remediation • IF CAA remains in the TPH program, prepare a CAP for remediation • Conduct soil and groundwater remediation for TPH and CERCLA contaminants. • Monitor MNA in groundwater • Close CAA and UST	Remediation followed by MNA	2005
6	Building 373 (fuel loading station), USTs 373-1, 373-2 (oil water separator)	• TPH in soil and groundwater • The Navy is conducting a source removal of TPH floating product in soil and groundwater • The lower portion of CAA-6 is located within CERCLA Site 26	• Evaluate extent of current source removal and whether additional remediation is required • Prepare corrective action report • Monitor MNA if recommended • Close CAA and USTs	MNA	2005
7	Building 459 (automobile service station) and 506 (maintenance and equipment storage), USTs 459-1 through 459-8, UST 506-1	• TPH and lead are present in soil and groundwater and MTBE is present in groundwater • The Navy is conducting a source removal of TPH floating product and study of extent of MTBE contamination • CAA-7 is located within CERCLA Site 7	• Evaluate extent of source removal and whether additional remediation is required • Prepare Corrective Action Report • Monitor MNA if recommended • Close CAA and USTs	MNA	2005
8	Building 114 (maintenance, storage, weed and pest control) and 191 (storage)	• Lead is present in soil and groundwater • Benzene is present in groundwater • CAA-8 is located within CERCLA Site 8	• Evaluate extent of TPH and CERCLA contaminants in soil and groundwater • Transfer CAA to CERCLA program to address lead and benzene contamination	Transfer to CERCLA program	See CERCLA Site 8
9A	Building 584 (storage for air and steam plant), USTs 584-1 and 584-2	• TPH in soil and groundwater is not a threat to human health or the environment • Draft No Further Action report and request for UST closure submitted	• CAA and UST will be closed	No Further Action	2002
9B	Building 608 (automobile service and repair facility), UST 608-1	• TPH and MTBE are present in the groundwater • CAA-9B is located within CERCLA Site 16 • Chlordane has been detected in the soil and chlorinated hydrocarbons are present in the groundwater.	• Evaluate additional data collected from data gap sampling event to delineate the extent of TPH and CERCLA contaminants in the soil and groundwater. • Transfer CAA to the CERCLA program.	Transfer to CERCLA Program	See CERCLA Site 16
10	Building 19 (control tower and photographic processing department), 491 (emergency generator), UST 491	• TPH and benzene are present in the groundwater • Internal Draft No Further Action and UST Closure Report submitted	• Evaluate the soil gas data collected from the recent data gap sampling for risk to inhalation of indoor air • Based on evaluation of additional data, prepare No Further Action report or Corrective Action Plan for groundwater remediation • Close CAA and UST	No Further Action	2002

TABLE 3-4
ALAMEDA POINT
CORRECTIVE ACTION AREA SUMMARY SHEET

CAA	*CAA DESCRIPTION AND TANKS*	*STATUS AS OF 3/12/02*	*PLANNED ACTION*	*ANTICIPATED OUTCOME*	*DATE OF REGULATORY CONCURRENCE FOR CLOSURE*
TPH PROGRAM					
11A	Building 14 (aircraft engine test and repair facility), USTs 14-1 through 14-6	• TPH and lead are present in soil and groundwater • CAA-11A is located within CERCLA Site 11 • Chlorinated solvents in groundwater are commingled with TPH • Additional data has been collected during the recent data gap sampling event to delineate the TPH and chlorinated solvent plumes in groundwater and evaluate the condition of the storm drains as exposure pathways	• Evaluate additional data collected from data gap sampling event to delineate the extent of TPH and CERCLA contaminants in the soil and groundwater. • Transfer CAA to CERCLA program for remediation.	Transfer to CERCLA Program	See CERCLA Site 11
11B	Area 37 (fuel storage), Structure 598 (fuel storage secondary containment), USTs 37-1 through 37-24, 7 fuel storage ASTs	• TPH and benzene concentrations in soil and groundwater indicate floating product may still be present • The Navy is conducting a source removal and remediation of soil and groundwater for TPH	• Evaluate extent of source removal and whether additional remediation is required • Prepare Corrective Action Report • Monitor MNA if recommended • Close CAA and USTs	MNA	2005
12	Buildings 29 (aircraft weapons overhaul and testing), 38 (acoustical enclosure), aircraft run-up areas	• Isolated surface soil stains and no significant TPH contamination • No USTs associated with CAA-12 • Recommended for closure • Internal Draft Request for Closure Report submitted	• Prepare No Further Action report • Close CAA	No Further Action	2002
13	Building 397 (jet engine testing facility), 529 (auxiliary power), 530 (missile rework operations), 600 (support), 606 (administration), aircraft de-fueling areas, aircraft parking, West Coast Refinery, USTs, ASTs, bowser tanks	• TPH is present in groundwater and soil and indicates floating product is present • Tarry material beneath the surface soil is present at several locations. PAHs are present in the soil. • The Navy is conducting soil removal actions, floating product and source removal, and additional soil and groundwater investigations. • Additional soil, groundwater, soil gas, and storm drain data have been collected during the recent data gap sampling event to evaluate the extent of contamination, the storm drain exposure pathway, and the risk from volatilization to indoor air. • CAA-13 is located within CERCLA Sites 13 and 23.	• Evaluate the additional data collected during the data gap sampling and the Navy investigation activities for the extent of soil and groundwater contamination, the storm drain exposure pathway, and the risk from inhalation of vapors. • Prepare one or more Corrective Action Plans for media as appropriate. • Prepare Corrective Action Report for those areas where removal actions or remediation is complete. • Conduct and monitor additional remediation, as appropriate under the TPH or CERCLA program. • Close CAA and USTs.	Removal actions, remediation, MNA, and land use controls as appropriate for each subarea	2006
14	Building 331 (woodworking facility)	• Isolated surface soil stains but no significant TPH contamination. • CAA has been recommended for removal from TPH program	• Formalize recommendation from EBS TPH Evaluation for removal of CAA from TPH Program	No Further Action	2002
Fuel Line A	Two parallel fuel lines used to transport JP5	• One isolated location indicated possible TPH floating product contamination may be present • Floating product investigation at that location was conducted during the recent data gap sampling event. • Internal Draft No Further Action Report has been submitted	• Evaluate the floating product investigation results • Evaluate the condition of the storm drain and whether there is a potential exposure pathway. • If corrective action is recommended, prepare a Corrective Action Plan or prepare a No Further Action report. • Close CAA	No further action	2002

TABLE 3-4
ALAMEDA POINT
CORRECTIVE ACTION AREA SUMMARY SHEET

CAA	*CAA DESCRIPTION AND TANKS*	*STATUS AS OF 3/12/02*	*PLANNED ACTION*	*ANTICIPATED OUTCOME*	*DATE OF REGULATORY CONCURRENCE FOR CLOSURE*
TPH PROGRAM					
Fuel Line B	Three east-west parallel fuel lines and multiple crossings that tie together a series of fueling pits.	• Benzene and TPH concentrations are present in groundwater at isolated locations. • A portion of CAA-Fuel Line B is located within CERCLA Site 6. • Additional soil and soil gas data were collected during the recent data gap sampling event and a storm drain investigation was also conducted.	• Evaluate recent soil and soil gas data gap sampling data for the extent of TPH soil contamination and the risk to inhalation of indoor air. Evaluate the storm drain investigation data for the potential of a complete exposure pathway. • If corrective action is warranted, prepare a Corrective Action Plan. • Transfer part of CAA-Fuel Line B to the CERCLA program (portion located within CERCLA Site 6) for remediation. • Perform any recommended remediation for CAA-Fuel Line B remaining in TPH program or prepare a No Further Action report • Close CAA.	No further action for portions of Fuel Line B, and transfer area within CERCLA Site 6 to CERCLA program	2002 for CAA-Fuel Line B not located within CERCLA Site 6, also see CERCLA Site 6

Proposed Plan, Marsh Crust and Shallow Groundwater at Alameda Facility/Alameda Annex and Marsh Crust and Former Subtidal Area at Alameda Point.

(Three Sheets)

EVALUATING ALTERNATIVES: NINE CRITERIA

he alternatives were evaluated using nine criteria to select the preferred alternative:

VERALL PROTECTION OF HUMAN HEALTH ND THE ENVIRONMENT

valuates whether a remedy adequately protects and describes how isks posed by each pathway are eliminated, reduced, or controlled hrough treatment, engineering controls, or institutional controls.

OMPLIANCE WITH ARARS

ddresses whether a remedy will meet all applicable or relevant nd appropriate federal and state environmental statutes and requirements (known as ARARs) or whether it provides grounds for invoking a waiver.

LONG-TERM EFFECTIVENESS AND PERMANENCE

Refers to the ability of a remedy to reliably protect human health and the environment over time after cleanup goals have been met.

REDUCTION OF TOXICITY, MOBILITY, OR VOLUME THROUGH TREATMENT

Addresses the statuary preference for alternatives that employ treatment technologies for permanent and significant reduction.

SHORT-TERM EFFECTIVENESS

Addresses time needed to achieve protection and any adverse impacts on human health and the environment that may occur during construction and implementation period until cleanup goals are achieved.

IMPLEMENTABILITY

Evaluates the technical and administrative feasibility of a remedy, including the availability of materials and services required.

COST

Includes estimated capital construction, operation and maintenance, and net present-worth costs.

STATE ACCEPTANCE

Indicates whether the state concurs, opposes, or has no comment on the preferred alternative.

COMMUNITY ACCEPTANCE

Considers public comments on the preferred alternative.

HOW WERE ECOLOGICAL RISKS EVALUATED?

An ecological risk assessment (ERA) was conducted to evaluate whether contamination left over from past industrial activities is harming animals that may use the facility. The ERA concluded that the sites pose little or no risk because the habitat is unsuitable and because animals are unlikely to be exposed to groundwater at Alameda Facility/Alameda Annex. Contaminants contained in the marsh crust and subtidal area are too deep to affect plants and animals at Alameda Facility/Alameda Annex and Alameda Point. The ERA also assessed whether shallow groundwater could affect marine life in the Oakland Inner Harbor. The assessment concluded that because of slow groundwater movement and other natural breakdown, contaminants of concern in shallow groundwater would not move beyond the boundaries of Alameda Facility/Alameda Annex at concentrations that would cause adverse impacts to plants, animals, or people.

PUBLIC COMMENT PERIOD AND COMMUNITY MEETING

The Navy continues to conduct an outreach program to involve community members in the environmental cleanup process. The outreach program is designed to (1) inform the community about environmental cleanup, (2) obtain public input on proposed cleanup actions, and (3) ensure that cleanup is compatible with plans for future reuse.

A primary vehicle for community involvement is the **Restoration Advisory Board (RAB)**, established in March 1995. The Alameda Facility/Alameda Annex RAB meets on the second Tuesday of each month from 9:30 to 11:30 a.m., and the Alameda Point RAB meets on the first Tuesday of each month from 6:30 to 9 p.m. Both RAB meetings take place at Alameda Point (950 West Mall Square, Building 1) in the first-floor conference room. Community members are encouraged to attend.

SUBMIT PUBLIC COMMENTS

The Navy invites the public to become involved in the process and is conducting a 30-day public comment period to solicit oral and written comments on the proposed plan and draft RAP/ROD for Alameda Facility/Alameda Annex and Alameda Point. The public comment period will be held from **June 20** through **July 20.** There are two ways to provide comments during the public comment period: in writing and at the public meeting. **Written comments must be postmarked no later than July 20, 2000,** and may be sent to:

Mike McClelland
BRAC Environmental Coordinator
1230 Columbia Street, Suite 1100, San Diego, CA 92101-8517
619-532-0965

Mary Rose Cassa
Dept. of Toxic Substances Control
700 Heinz Ave., Suite 200, Berkeley, CA 94710-2721
510-540-3767

ATTEND A PUBLIC MEETING

The public is encouraged to attend and submit comments during the public meeting on June 29, 2000.

PUBLIC MEETING
JUNE 29, 7-9 P.M.
Alameda Point
950 West Mall Square, Building 1, Room 140

After the public comment period ends, the Navy will review and consider comments before making a decision on the proposed approach for the marsh crust and shallow groundwater at Alameda Facility/Alameda Annex and the marsh crust and former subtidal area at Alameda Point. The Navy's response to public comments will be documented in a responsiveness summary in the final RAP/ROD.

VISIT THE INFORMATION REPOSITORIES

The Navy has established information repositories for documents, fact sheets, and other materials related to the environmental cleanup program at Alameda Point and the Alameda Annex. The information repositories also contain the administrative record, which is the complete legal file of documents that support the ultimate cleanup decision. The Navy encourages the public to visit one of the repositories to gain a more complete understanding of investigations and cleanup activities. The repositories are:

Alameda Public Library
2200 A Central Ave.
Alameda
510-748-4660

Alameda Point
950 West Mall Square
Building 1
Alameda

GLOSSARY

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.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) – Also known as Superfund, CERCLA is the 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 the potential hazard to plants, animals, and their habitat as a result of exposure to chemicals in the environment is known as an ERA.

Exposure Pathway – The mechanism by which a chemical comes in contact with a living organism.

Feasibility Study (FS) – A study that identifies and evaluates potential cleanup methods based on their effectiveness, availability, and cost. See criteria, page 5.

Hazardous Substances Account Act (HSAA) – California's law that establishes requirements for environmental cleanup.

Human Health Risk Assessment (HHRA) – This risk assessment is an estimate of the potential harmful effects humans may experience as a result of exposure to chemicals.

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

Polynuclear aromatic hydrocarbons (PAH) – PAHs are chemical compounds typically present in petroleum base stock and in used oil. They also occur when organic materials burn. Some PAHs (including benzoa[a]pyrene found in marsh crust) are known human carcinogens.

Record of Decision (ROD) and Remedial Action Plan (RAP) – This legal document explains the selected cleanup method to be used. In California, the document is signed by the Navy, U.S. EPA, and DTSC and is a binding agreement regarding how and when site cleanup is conducted. Federal law requires a ROD; California law requires the RAP.

Remedial Investigation (RI) – An RI is a comprehensive study that identifies the types, amounts, and locations of contamination.

Total Petroleum Hydrocarbons (TPH) – TPH includes petroleum-based substances derived from crude oil processing such as motor fuels, jet oils, lubricants, petroleum solvents, and used oils.

SUMMARY OF CLEANUP ALTERNATIVES

This section summarizes the alternatives for addressing (1) the marsh crust and former subtidal area at the Alameda Facility/Alameda Annex and Alameda Point, and (2) the shallow groundwater at Alameda Facility/ Alameda Annex. ***The Navy's preferred alternative is Alternative 2 (Land Use Controls and Groundwater Monitoring).*** For a more detailed description of the alternatives including costs, review the RAP/ROD at the local information repository.

ALTERNATIVES FOR MARSH CRUST AND FORMER SUBTIDAL AREA

Because they are similar, the marsh crust and former subtidal area are addressed together. The feasibility study considered four alternatives.

Alternative 1—No Action. The Navy is legally required to consider the no-action alternative. It provides a baseline for evaluating other alternatives. This alternative examines whether cleanup goals and health-based standards would be met if the contamination were left in place in the marsh crust and subtitle area.

Alternative 2—Land Use Controls. Alternative 2 is the Navy's preferred alternative to address the marsh crust and subtidal area. Under this alternative, DTSC and the City of Alameda would enter into a land use covenant, and the Navy and the City of Alameda would also impose deed restrictions to ensure that controls are enforced in the future. Essentially, land use controls and deed restrictions would require that proper procedures are followed to excavate soil to depths that would reach the marsh crust and former subtidal area. These procedures, which are contained in the City of Alameda ordinance, would prevent workers from exposure to contaminants below ground and that any soil brought to the surface is handled and disposed of in a way that fully protects public health. The Navy would review the site after 5 years to ensure compliance with the land use controls, as required by CERCLA. The site could be available for residential or industrial use after Alternative 2 is implemented.

Alternative 3—Excavation and Off-Site Disposal. This alternative involves excavating and transporting contaminated soil to licensed off-site disposal facilities. This alternative involves excavating the entire surface area (143 acres) of Alameda Facility/ Alameda Annex and 548 acres of Alameda Point. The excavated soil would be replaced with clean fill to restore the areas. Although the site would be available for residential or industrial use after it was excavated and restored, Alternative 3 could create significant short-term risks to the community, site workers, and the environment because it would involve extensive excavation, stockpiling, and transportation of the contaminated material. This alternative is extremely expensive. Furthermore, Alternative 3 would unnecessarily delay productive use of the property for at least four years.

Alternative 4—Excavation and On-Site Treatment with Thermal Desorption. This alternative involves excavating the contaminated marsh crust and subtidal area, on-site treatment of contaminated soil using a heating process, and restoring excavated areas with treated soil. This alternative requires excavating the entire surface area (143 acres) of Alameda Facility/Alameda Annex and 548 acres of Alameda Point. Although Alternative 4 would make the area available for residential or industrial uses after the soil is treated and replaced, it could create significant short-term risks to the community, site workers, and the environment because it would involve extensive excavation, stockpiling, and treatment of the contaminated material. Similar to Alternative 3, this alternative is extremely expensive.

ALTERNATIVES FOR SHALLOW GROUNDWATER

Two cleanup alternatives, described below, were evaluated for the shallow groundwater that underlies Alameda Facility/ Alameda Annex.

Alternative 1—No Action. As noted above, the no action alternative provides the baseline used to evaluate other alternatives. It basically analyzes the existing condition of the shallow groundwater. No cleanup would occur.

Alternative 2—Land Use Controls and Groundwater Monitoring. Alternative 2 is the Navy's preferred alternative. Under Alternative 2, DTSC and the City of Alameda would sign a land use covenant that prohibits drilling water wells and using the shallow groundwater except for limited purposes (irrigation and emergency use). The Navy and the City of Alameda would also impose deed restrictions to ensure that controls are enforced. The covenant would also control how groundwater is disposed of should it be brought to the surface during excavation or sampling. As required by CERCLA, the Navy would monitor groundwater for a limited period (up to 5 years) to make sure that contaminant levels are decreasing and that contaminants are not moving off Alameda Facility/Alameda Annex. The Navy will review the alternative after 5 years to confirm that the land use controls are still effective. Under this alternative, land use controls would restrict use of the shallow groundwater without the required permits, and drinking shallow groundwater would be prohibited. The City of Alameda and State of California would enforce existing standards that control well construction.

SITE DESCRIPTION AND ENVIRONMENTAL CONDITIONS

Marsh Crust and Former Subtidal Area. Fill materials were deposited on the tidal marshland to construct Alameda Facility/Alameda Annex. Contamination that remained from industrial operations that ended before the Navy began using the facility became trapped under the fill material. This trapped material is known as the marsh crust, a thin discontinuous layer of oil byproducts and sludge deposited in the tidal marshland. Samples of the marsh crust indicate high concentrations of **polynuclear aromatic hydrocarbons (PAH)** and **total petroleum hydrocarbons (TPH).**

The history of the adjacent Alameda Point is similar. Artificial fill was deposited over a subtidal area and tidal marshland to create usable land. The Navy has identified the same oil byproducts and sludge, namely PAH and TPH below ground, in Alameda Point's tidal marshland and former subtidal area.

The PAH and TPH associated with the marsh crust are, on average, 15 feet below the surface of the ground at Alameda Facility/Alameda Annex and, on average, 8 feet below ground at Alameda Point—so deep that people would not be exposed to the contaminants under existing conditions. However, exposure to the contaminants is possible if soils at these depths are brought to the surface during future construction.

Shallow Groundwater at Alameda Facility/Alameda Annex. Organic and inorganic compounds, primarily petroleum-related, have been detected in samples of shallow groundwater at Alameda Facility/ Alameda Annex. Samples of deep groundwater contained no contaminants at levels of concern, and tests indicate that the shallow and deep groundwater aquifers are not connected.

Shallow groundwater does not pose a risk according to U.S. EPA's standards for health protection. The groundwater does not meet RWQCB drinking water standards because of high levels of salt in the water. Therefore, shallow groundwater will not be used for drinking water in the future. See the detailed discussion of potential risks in *What is a Human Health Risk Assessment?*

THE ENVIRONMENTAL CLEANUP PROGRAM

Environmental investigations and cleanup have been under way at Alameda Facility/Alameda Annex and Alameda Point since the mid-1980s. The Navy, in close coordination with U.S. EPA, DTSC, and RWQCB, carries out the cleanup program, called the installation restoration program (IRP). The IRP identifies and cleans up sites that may have been contaminated by past Naval industrial operations. In addition to the marsh crust, subtidal area, and the shallow groundwater, the Navy is preparing cleanup proposals for other sites at the facilities that will be presented to the public separately. Should you wish to review documents describing the sites, visit the information repository.

WHAT IS A HUMAN HEALTH RISK ASSESSMENT?

U.S. EPA has established a target range of risk levels to estimate potential human health risks caused by exposure to contaminants. Risks are assessed based on the types of contaminants present at a site and possible exposure pathways. The Navy evaluated possible risks under three future reuse scenarios: residential users (both adults and children), site workers, and maintenance or construction workers. Risk calculations were based on conservative assumptions that most protect human health and the environment. ("Conservative" means the assumption will tend to overestimate risk or lead to a more protective cleanup proposal.) Recommended cleanup actions are based on risks associated with residential use — that is, an individual living at the site continually for 30 years.

Exposure pathways are ways people could come into contact with contaminants. The following pathways were evaluated at Alameda Facility/Alameda Annex:

- The possibility that contaminants in groundwater will vaporize, move up through the soil, and contaminate either outside or indoor air.
- The possibility that people will use the shallow groundwater for landscaping or car washing and will be exposed to contaminants.

Each of these exposure pathways was evaluated in risk assessments, which concluded that exposure does not pose a risk to human health.

Direct contact with groundwater is not considered a possible exposure pathway since groundwater is not currently used and no drinking water or irrigation wells are located at the site. Furthermore, shallow groundwater below the facility is not currently designated a source of drinking water, nor is it anticipated to be in the future.

Currently, no exposure pathways exist to the marsh crust and former subtidal area. However, the potential that future construction may raise contaminated soil to the surface was evaluated. The Navy, U.S. EPA, DTSC, and the City of Alameda agreed to propose several protective measures, as reflected in the Navy's preferred alternative (Alternative 2) to be protective for the future construction scenario.

PROPOSED PLAN

MARSH CRUST AND SHALLOW GROUNDWATER AT ALAMEDA FACILITY/ALAMEDA ANNEX AND MARSH CRUST AND FORMER SUBTIDAL AREA AT ALAMEDA POINT ALAMEDA, CALIFORNIA

U.S. DEPARTMENT OF THE NAVY, ENGINEERING FIELD DIVISION SOUTHWEST, SAN DIEGO, CALIFORNIA · JUNE 2000

NAVY PRESENTS THIS PROPOSED PLAN

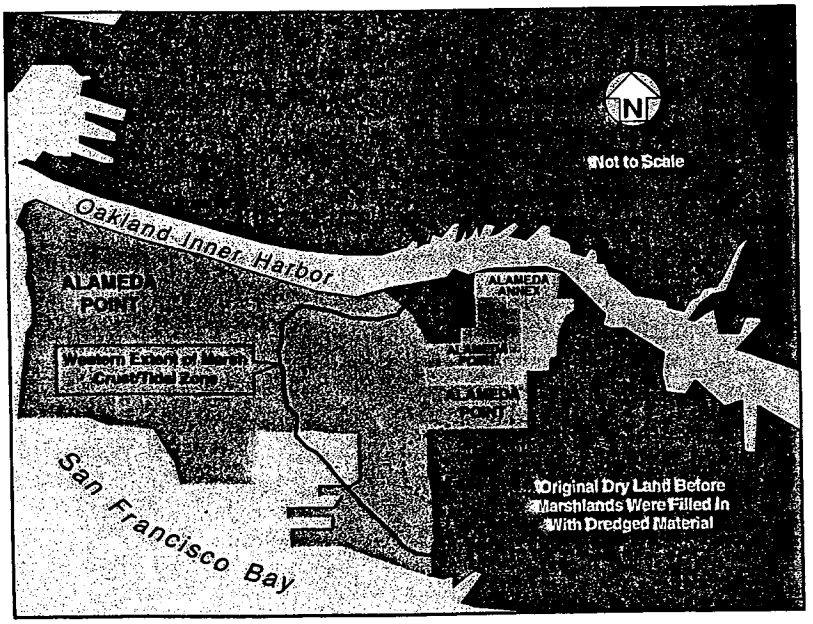
The U.S. Navy invites you to comment on this proposed plan for the marsh crust and shallow groundwater at Fleet and Industrial Supply Center Oakland Alameda Facility/Alameda Annex and for the marsh crust and former subtidal area at Alameda Point (formerly Naval Air Station Alameda), Alameda, California. The Navy, together with the California Department of Toxic Substances Control (DTSC) and U.S. Environmental Protection Agency (U.S. EPA), agree that the areas in the current condition do not pose a risk to human health because the marsh crust is deep underground and the groundwater poses no risk. However, they have decided to restrict certain activities in these areas to prevent any possible human exposure to contaminants due to construction in the future. These proposed actions, called alternatives, are described in detail on page 4. The Navy's preferred alternative includes land use covenants (ordinances and agreements) that would control soil excavation and use of groundwater.

This proposed plan describes the results of environmental investigations; the cleanup alternatives evaluated for the marsh crust, shallow groundwater, and former subtidal areas; the Navy's preferred alternative to manage the sites; and opportunities for public involvement in the cleanup program. The Navy's preferred alternative for these areas is discussed in detail in the draft **remedial action plan (RAP)/record of decision (ROD)***, available at the information repositories at the Alameda Public Library and at Alameda Point in the Main Office Building. (See page 6.)

The Navy encourages you to comment on this proposed plan. The public comment period begins June 20, 2000, and ends July 20, 2000. After reviewing all public comments, the Navy, U.S. EPA, and DTSC will select a final alternative that protects human health and the environment and will announce the decision in a final RAP/ROD.

The Navy developed this proposed plan in coordination with U.S. EPA, DTSC, and the California Regional Water Quality Control Board (RWQCB). The Navy's environmental cleanup complies with the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)**, the **California Hazardous Substances Account Act (HSAA)** (Division 20, Ch. 6.8 of the California Health & Safety Code), and all other federal and state laws that govern environmental cleanups. Detailed information on the environmental investigations, risk assessments, and feasibility studies is presented in the **remedial investigation (RI)** (January 1996) and the **feasibility study (FS)** reports (January 2000). As required by California Health and Safety Code 25356.1, a draft RAP has been prepared and is available for public comment. All documents related to the project are available at the information repository.

* *Items in bold are defined in Glossary, page 6.*



PUBLIC MEETING

JUNE 29, 7-9 P.M.
Alameda Point
950 West Mall Square
Building 1, Room 140
Tel: 619-532-0965

THE NAVY INVITES YOUR INPUT!

The Navy, in consultation with U.S. EPA and DTSC, may modify the preferred alternative or select another cleanup alternative based on public comments or new information. Public participation is a vital part of the cleanup process and will influence the cleanup method ultimately selected. Therefore, the public is encouraged to review and comment on all the alternatives by July 20, 2000.

WHAT'S INSIDE?

SITE BACKGROUND

This proposed plan addresses two adjoining facilities in Alameda, California: Alameda Facility/Alameda Annex and Alameda Point. The history of each facility is described below.

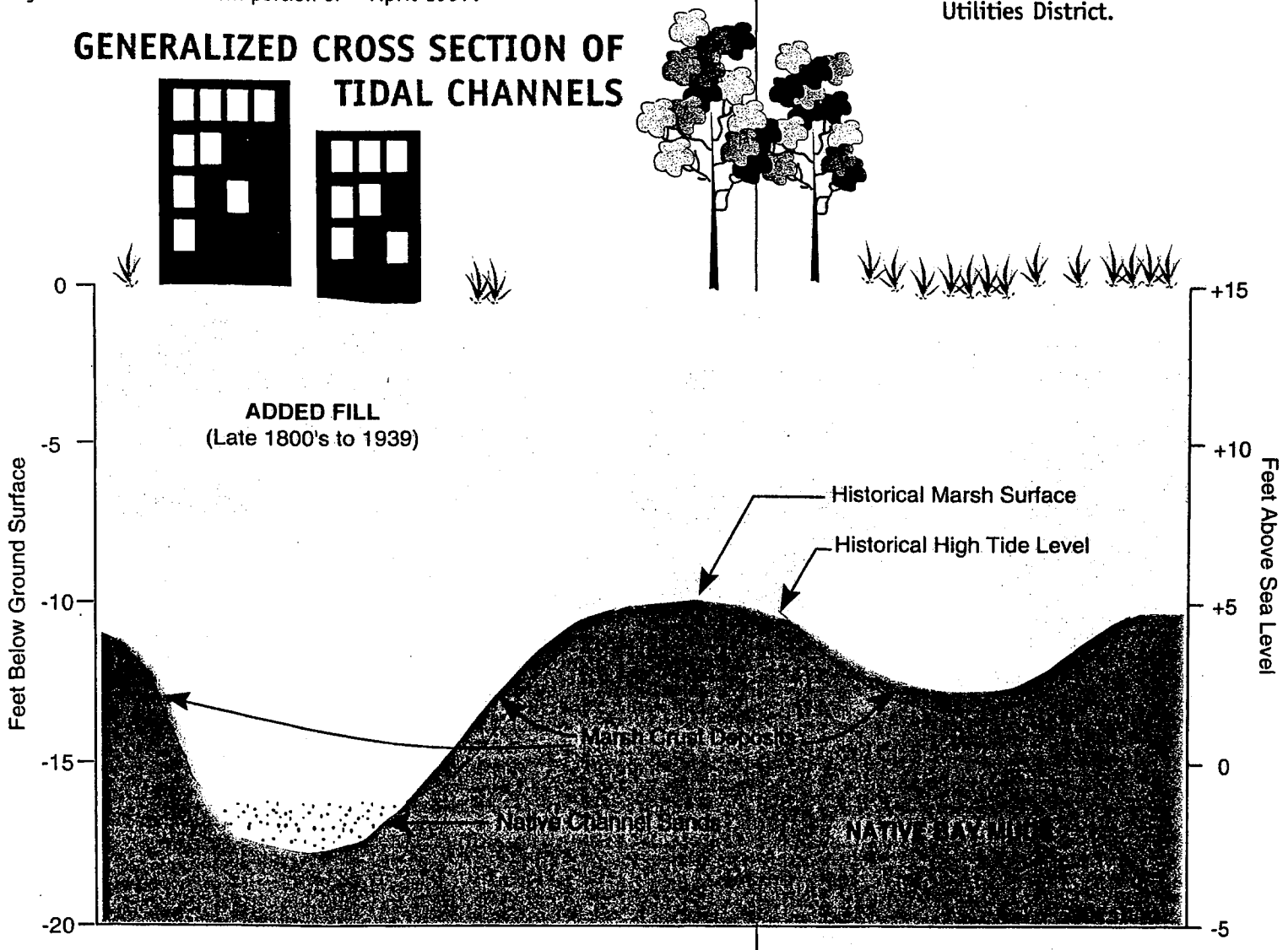
Alameda Facility/Alameda Annex covers about 143 acres along the southern shore of the Oakland Inner Harbor, southeast of the Port of Oakland and east of Alameda Point. Before 1920, Alameda Facility/ Alameda Annex and surrounding areas were undeveloped marshlands and tidal flats along San Francisco Bay. Regional sand and clay were used to fill the marshlands and tidal flats. The area was a commercial airport from 1920 to 1941; at that time, the University of California sold the property to the U.S. Government, and the U.S. Army used the property as a depot. The Navy obtained the southern portion of the area in 1946 and the northern portion in 1966 and used the property as a supply center. The base was closed in September 1998 as part of the federal **Base Realignment and Closure (BRAC)** Program.

Alameda Point occupies 2,675 acres and is adjacent to Alameda Facility/ Alameda Annex on the western end of Alameda Island. Filling existing tidelands, marshlands, and sloughs initially for use as farmland, and later for railroads, created Alameda Point. In 1936, the Navy acquired title to the land from the U.S. Army and began building the naval station in response to the military buildup before World War II. The installation was identified for closure under the BRAC Program in September 1993, and ceased operation in April 1997.

FROM WHERE DOES DRINKING WATER COME?

RWQCB has decided that shallow groundwater at Alameda Facility/Alameda Annex cannot be used as a drinking water source because it contains high levels of salt. Current and future residents and workers receive drinking water from the East Bay Municipal Utilities District.

GENERALIZED CROSS SECTION OF TIDAL CHANNELS



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Southwest Division
1230 Columbia Street, Suite 1100
San Diego, CA 92101-8517

DATE: 04/03/03
DO: 021
LOCATION:
Alameda Point, Alameda, California

FROM: _____
Michael Wanta, Contract Manager

DOCUMENT TITLE AND DATE:
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