

**DRAFT NAVAL AIR STATION ALAMEDA RESTORATION ADVISORY BOARD
MEETING SUMMARY**

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

Tuesday, January 8, 2002

ATTENDEES

See attached list.

MEETING SUMMARY

I. Approval of Minutes

Michael John Torrey, Community Co-Chair, called the meeting to order at 6:30 p.m.

Mr. Torrey asked for comments on the December 4, 2001, Restoration Advisory Board (RAB) meeting minutes. The minutes were approved, with the following corrections and one abstention:

- George Humphreys stated that "Environmental Impact Report" in the third line of the second page should be revised to "Draft Environmental Impact Report."
- Bert Morgan stated that his and Mr. Humphreys' corrections to the November 6, 2001, RAB meeting minutes should be reversed.

II. Installation Restoration (IR) Program Overview

Andrew Dick, U.S. Department of the Navy (Navy), provided an overview of the IR Program, which included current Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) field work and important dates, and Fiscal Year 2002 funded project descriptions. See Attachment C.

- Site 2 (West Beach Landfill and Associated Wetlands) ordnance and explosive waste (OEW) removal action: The objective of the removal is to excavate possible OEW burial area to 1 foot below ground surface (bgs). The Draft Action Memorandum will be distributed for public review about February 2002. Site preparation is underway and field work is expected to be conducted from January 2002 through April 2002 before the nesting season of the Least Tern.
- Site 25 (Coast Guard Housing) time-critical removal action (TCRA): The objective of the TCRA is to remove soil containing polynuclear aromatic hydrocarbons (PAH). Excavation began December 2001 and is expected to conclude May 2002. The 30-day notice of availability and public comment period on the action memorandum will be published in newspapers by January 19, 2002.

- Pesticide Storage Shed (Building 195) TCRA: The objective of the TCRA is to remove dieldrin and lead in soil. Field work commenced on November 12, 2001, and is expected to continue through January 2002. A public notice was published in newspapers on December 18, 2001. The site closure report is expected in March 2002.

Jo-Lynn Lee asked for clarification about the content and function of the 30-day notice. Anna-Marie Cook stated that there is a requirement to publish the public notice within 60 days of the TCRA commencement. This allows the public to comment on proposed or ongoing activities, and those comments are considered by the Navy when making long-term, remedial action decisions.

- Lead-contaminated soil emergency removal action at 530 and 550 Corpus Christi Road: Sod was placed over the lead-contaminated soil on October 13, 2001, and three concrete footings were removed on November 16, 2001. Public notice was published in newspapers on December 14, 2001.

Bert Morgan asked how extensive the lead in soil is, and Mr. Dick estimated that the area being excavated covers about 6,500 square feet. Ms. Lee asked for the original purpose for collecting the samples that resulted in the decision to excavate that area. Mr. Dick stated that samples originally were collected to support the preparation of an engineering evaluation/cost analysis (EE/CA) for the Water and Antenna Towers. The lead concentration in the soil samples were higher than expected; therefore the Navy subsequently agreed to carry out the emergency removal action to eliminate the immediate risk to residents.

- Nontime-critical removal action at the water tower and antenna sites: The draft EE/CA was distributed for public and regulatory review on December 21, 2001. Public notice for the EE/CA will be published in late January 2002. The Draft Action Memorandum will be distributed May 2002. Field work is pending funding availability.
- Soil removal actions at Sites 5, 14, and 15: Field work at Sites 5 and 14 began in early December 2001 and is expected to continue through January 2002. Based on data gap sampling results, (1) the volume of soil to be excavated has increased at Sites 5 and 14, (2) the Base Realignment and Closure (BRAC) Cleanup Team (BCT) agreed that the Site 15 RA was not necessary, and (3) the removal action at Site 15 was cancelled. The BCT agreed to begin preparation of a remedial investigation (RI)/feasibility study (FS) report for Sites 14 and 15, ahead of the rest of Operable Unit - 1. The Draft RI is scheduled to be completed by June 2002.

Ms. Lee asked what chemicals were targeted at Sites 5 and 14. Ms. Cook stated that the removal actions at Sites 5 and 14 are for cadmium and dioxins in soil, respectively. Ingrid Baur asked for clarification of past and ongoing activities at Site 15. Mr. Dick responded that the initial removal action targeted lead and polychlorinated biphenyls (PCB) in soil and the boundary of the 1996 removal was a fence on that site. However, an additional sample collected beyond the fence showed high PCBs. The Navy returned to the site to collect additional samples to delineate the extent of the PCBs in soil, but found no samples with PCBs above action levels. Accordingly, an additional soil removal action will not be conducted.

Fiscal Year 2002 funded project descriptions (totaling close to \$16 million [M]) were presented (see attachment C for specific allocation of award money):

- Awards to Bechtel (Navy Comprehensive Long-Term Environmental Action Navy [CLEAN] contractor) total about \$3,66M.
- Awards to IT Corporation (IT) (Navy response action contract [RAC] contractor) total approximately \$5.643M.
- Awards to Foster Wheeler (Navy RAC Contractor) total approximately \$5.5M.
- Awards to Battelle include nearly \$840,000 to continue the offshore investigation.

III. Co-Chair Announcements

Mr. Torrey, Community Co-Chair, read an article in a mailer he received from the Center for Public Environmental Oversight that shows additional funding has been provided for Department of Defense BRAC projects. Although Senators Diane Feinstein and Barbara Boxer and Congress Woman Barbara Lee have not responded to the letters the RAB wrote requesting additional funding, it appears additional funding has been provided. Community and RAB members may direct personal inquiries to the executive director of the Center for Public Environmental Oversight, Lenny Siegel, at:

Center for Public Environmental Oversight
San Francisco University
1600 Holloway Avenue
San Francisco, CA 94132

or by email at CPEO@CPEO.org

Information regarding the awards is also available at the center's website, CPEO.org.

There was discussion about the effectiveness of correspondence with senators and representatives and whether the RAB should follow up on the letters sent to Senators Feinstein, Boxer and Congresswoman Lee, possibly a thank you letter for the additional funding.

Various correspondence and documents were distributed to the RAB.

Ms. Lee asked when comments on the Draft Site 25 RI are due. Rick Weissenborn stated that comments will be due on February 18, 2002.

Ms. Lee suggested that the RAB consider allocating some of the remaining funds in the TAP grant to hiring a technical advisor to review and comment on the Site 25 RI on behalf of the RAB. Kevin Reilly voiced concern with depletion of funds and asked for clarification about the use of TAP funds. Ms. Lee explained that a maximum of \$100,000 over 4 years, or \$25,000 over 1 year was available for use by the RAB. To date, about \$25,000 to \$35,000 from the TAP grant has been spent. A motion was made to begin the two-part process of applying for the allocation

of funds and hiring a technical advisor. The motion was approved. A committee to be responsible for the grant application and hiring the technical advisor will consist of Ms. Lee, Lyn Stirewalt, and Lea Loizos.

Tom Pinard, Navy, asked Mr. Torrey to confirm that the letters to the state senators and Congresswoman were sent just prior to September 11, 2001, and Mr. Torrey confirmed that was true. Mr. Pinard suggested to the RAB that the letters may not have been delivered because of the disruption of postal services following the September 11, 2001, attacks. Accordingly, the RAB may want to consider e-mailing PDF files of the letters with an attached note indicating the RAB's concern that the original copies may not have reached them. Mr. Torrey stated that Congresswoman Lee did receive hers, because he personally delivered it to her office.

IV. Site 25 Treatability Study Update

Bruce Marvin, IT and Aquifer Solutions, presented the following update on the Site 25 Treatability Study. One handout was provided.

The goals of the treatability study are to assess the level of treatment, determine the most effective way to deliver the oxidant, potassium permanganate ($KMnO_4$), and to evaluate the spatial variability of the oxidant demand and benzo(a)pyrene equivalent (B[a]P) equivalent. One month prior to each oxidant application, soil samples were collected so that pretreated soil could be compared to treated soil to determine the effectiveness (whether the PAHs were effectively destroyed) of the oxidant.

The oxidizing agent chosen for the study is $KMnO_4$. It is a moderately strong oxidizing agent that is inherently unstable and tends to transfer oxygen atoms to other compounds that have an affinity for oxygen. To determine the amount of oxidant to apply to each test cell, the maximum background level of manganese (Mn) at Estuary Park was subtracted from the preliminary remediation goal (PRG) limit of 1,800 milligrams per kilograms (mg/kg) of Mn in soil (determined by U.S. Environmental Protection Agency [EPA] Region IX guidance). This calculation resulted in the PRG-limited dose of 1,300 mg Mn per kg soil (or 1,600 kg $KMnO_4$). Next, the soil oxidant demand (SOD) was calculated to evaluate what percentage of oxidant needed could actually be applied. The PRG-limited dose is approximately 60 percent of the required SOD.

To evaluate the most effective oxidant delivery technique, a pair of cells (one test cell and one control cell), were prepared for each of the three alternatives. Natural changes were monitored in control cells, and compared to the changes induced in test cells by each of the delivery alternatives.

The first technique tested was surface application. A small pond was built in the test cell and irrigated with the oxidant dissolved in water. The oxidant should infiltrate the PAH-impacted soil as surface water is absorbed. The results of this alternative showed that the $KMnO_4$ was consumed faster than it was delivered; therefore it did not reach the targeted remediation depth of 4 feet bgs.

The second alternative was surface tilling. Following application of the oxidant over the surface of the cell, the soil was tilled until the chemical was mixed thoroughly with surface soils, and then the soil was watered. This method resulted in rapid, effective delivery of the oxidant to the

maximum depth reached by tilling equipment (2 feet bgs), however, it was not effective at the targeted depth of 4 feet.

The final alternative tested was shallow subsurface injection. The KMnO_4 was injected through a hollow rod driven into the ground in the test cell at 1, 2, and 3 feet bgs. The effectiveness of this alternative was limited by the low permeability of clay and silt soils. The infiltration rate again was slower than the consumption rate. In addition, the clay and silt layers have a higher SOD level than sandy layers, because of the higher levels of organic material found in clay or silt.

The comparison of test and control cell data indicates that applying the oxidant at 60 percent of the required SOD was not effective. None of the methods tested adequately delivered the oxidant to the targeted depths to meet remediation goals. The spatial variability of the oxidant demand was significantly higher than expected.

James Leach asked if a stronger oxidant would be tested. Mr. Marvin explained that the primary benefit of stronger oxidants is their ability to destroy chemicals that are more resistant to oxidation. However, they also will react with organic materials in the soil. Because only about 10 percent of the oxidant actually contributes to PAH destruction, the treatment process is only about 10 percent effective when it is conducted perfectly. The use of a stronger oxidant also may result in the oxidant self-reacting. Ultimately, because the soils in the test cells had more clay than expected, and therefore contained more organic material that has a high affinity for oxygen, they were at the upper limit of SOD. A larger amount of a moderately strong oxidant, such as KMnO_4 , therefore would be more effective than use of a stronger oxidant.

Mr. Leach stated that he has found that oxidants react most readily with organic compounds, then with compounds such as Mn and iron, and finally, with hexavalent compounds such as PAHs. He asked why this would not indicate the necessity of using a stronger oxidant. Mr. Marvin agreed that it would, but only if you could control it. If not, the oxidant becomes more likely to escape as a fugitive emission. Many simple, organically reduced compounds tend to be more readily oxidized than more complex compounds or cyclic compounds. The oxidant reacts first with simple compounds and is consumed before reacting with the more complex, targeted PAHs. This conclusion lends further support for the use of a greater amount of a moderately strong oxidant. However, the dose is limited by the PRG for Mn.

Mr. Humphreys asked what B(a)P equivalents are. Mr. Marvin stated that the B(a)P has the highest carcinogenic value of the known PAHs. The B(a)P equivalent concentration is calculated by multiplying a toxicity equivalency factor (relative to B(a)P) to the concentration of the individual PAH and totaling them. These toxicity equivalency factors are based on regulatory guidance.

Mr. Humphreys asked for clarification on the effects of clay versus sands on oxidation. Mr. Marvin explained that fine materials, such as clay, tend to collect more organic matter than materials such as sand. They also have a slower infiltration rate than sand, which results in consumption of the oxidant before thorough mixing with the soil.

Mr. Humphreys also asked about the strong odor that had been mentioned at a previous RAB meeting. Mr. Marvin stated that it might have been from the permanganate itself. Although he could not give a definitive answer, he was sure that no hazardous gasses had been detected by any of the safety monitoring equipment.

Mr. Marvin concluded his presentation by stating that the oxidant did not move as quickly or as far as was expected, and that IT recommended shortening the treatability test because all of the KMnO_4 has been consumed. The project most likely will conclude ahead of schedule and under budget.

V. Site 25 TCRA Update

Mr. Weissenborn presented an update of the TCRA being conducted at Site 25. The leading remedial alternative for in situ methods described in the treatability study update is excavation of PAH-impacted soil, which currently is being implemented at Site 25. The proposed timeline for the phased approach to the TCRA began with mobilization in mid-November 2001, followed by excavation, backfilling, and resodding of one structure per day and demobilization occurring mid- to late March 2002.

The actual schedule began later than expected, and has progressed at a significantly slower rate than anticipated. To date, December 13 and 14, 2001, have been the only two consecutive workdays since commencement of the TCRA. One week (December 13 through 20, 2001) was required to conduct the removal for the first structure, instead of the one day, as was expected. In addition, to preserve the larger trees on Moseley Street, excavation of soil to the roots, backfilling, and sod placement above the roots was conducted. The rainfall during the month of December 2001 was significantly higher than anticipated. To avoid surface water runoff from contaminated excavation soils, the TCRA was delayed until the rain stopped. In addition, the top 6 to 8 inches of soil were saturated completely, making the use of heavy trucks and machinery problematic.

Additional delay in the schedule was caused by results of chemical analysis of backfill material and topsoil which indicated that these materials were not suitable for use as clean fill material. Arsenic in the proposed backfill material was slightly higher than the material being excavated. The results of analysis of the topsoil indicated the presence of chromium, lead, dichlorodiphenyltrichloroethane (DDT), and motor oil. The schedule was delayed until suitable backfill and topsoil were located.

Because daily progress will be slower than expected, the approach to sod placement also has been altered. Backfill and topsoil will be placed in front and back yards each night before crews leave the site, and a minimal layer of sod will be placed over excavated areas in front of each house. Completion of front yard sod placement and sod placement in backyards will be postponed until the morning following the excavation, when work can be finished in daylight.

The TCRA resumed on January 7, 2002. The Navy is attempting to locate a closer source for backfill material, and the removal should conclude by the end of May 2002.

Mr. Humphreys asked where the excavated soil is being disposed of. Mr. Weissenborn stated that the soil is loaded onto trucks and covered with tarps. Then the trucks are decontaminated before leaving the site to travel to Altamont landfill (a nonhazardous waste landfill).

Ms. Stirewalt asked if complaints had been received by residents regarding the removal action being conducted at night (ending at about 9 p.m.). Mr. Weissenborn explained that the decision to complete sod placement in the morning was made partially to avoid inconveniencing residents.

Ms. Cook clarified that equipment is stopped at 5 p.m. Only manual labor continues after regular business hours, which is significantly less intrusive for residents.

Ms. Loizos asked why the excavation limit was set at 2 feet. Mr. Weissenborn explained that the limit was based on the most likely extent of possible residential exposure risks (including homegrown produce).

Ms. Baur asked if the level of the water table had been measured during the recent rains, and if the backfilled soil would be affected by PAHs during the rise in the water table. Mr. Weissenborn stated that the water table had not been measured recently, but that PAHs should not be transported through groundwater because they are absorbed into heavier soil constituents that do not rise with the water table.

Kevin Reilly asked if the residents in Site 25 will be displaced while excavation at their homes is conducted. Mr. Weissenborn stated that they will have safe access through their front entrances throughout the excavations.

VI. Project Teams Round the Table

Membership

Mr. Torrey stated that Steven Lee, who previously had expressed interest in being a RAB member, had not contacted him after having received a copy of the RAB's mission statement, brochure, and membership application. Ms. Stirewalt or Mr. Torrey will follow up with him.

Mr. Torrey was unable to attend a meeting scheduled with Mike McClelland, Ms. Lee, and Steve Edde to discuss orientation for new recruits. Ms. Lee stated that an orientation should be organized, and she will be responsible for e-mailing RAB members to find a convenient time for a tour and an orientation session for those members who have not yet attended either or both of those events.

Mr. Torrey announced that the Alameda Point base workers golf tournament will be held on June 14, 2002, and postcards with information about the tournament will be mailed to RAB members.

The RAB agreed that the ESS Tiered Screening Committee should be dismantled.

VII. BCT Activities

Mr. McClelland provided the following report on BCT activities for December 2001.

The BCT monthly tracking meeting was held on December 18, 2001; it included brief discussions of the dioxin removal action at Site 14 and the TCRA for the Pesticide Storage Shed.

The RAP/ROD for the benzene plume beneath Alameda Annex and Site 25 was discussed. Mr. McClelland proposed preparing two separate RODs that would each recognize the continuous plume. Actions detailed in the RODs would be consistent. After the meeting, following internal Navy discussions and consultation with DTSC and EPA, the Navy and EPA agreed to the preparation of a single RAP/ROD for groundwater underlying both sites, prepared under the Alameda Annex program. The document will be presented to the RABs for Alameda

Point and Alameda Annex for review. Marina Village and Miller School groundwater will be included in this RAP/ROD.

There were also discussions about expediting the RI/FS for Sites 14 and 15 and the OEW removal action at Site 2, both of which were covered earlier in Mr. Dick's presentation.

Representatives from IT gave a presentation on the DNAPL removal actions at Sites 4 and 5. Confirmation sampling results indicate that the 10,000-parts per billion (ppb) contour is larger than previous estimates from delineation of the entire plume indicated.

Greg Lorton presented an overview of current total petroleum hydrocarbons (TPH) corrective actions.

There was a discussion regarding dissolved-phase, chlorinated solvents at Sites 9, 11, 16, and 21. The second alternative outlined in the EE/CA (in situ oxidation) will be conducted instead of air sparge/soil vapor extraction, and the action memorandum will be revised.

A brief update on the Site 25 TCRA, similar to the one presented earlier by Mr. Weissenborn, was presented.

VIII. Community and RAB Comment Period

Patrick Lynch stated that IT did not seem to implement proper controls to prevent surface water runoff from contaminated excavation soils during the heavy rains that occurred over the last month. It appeared to Mr. Lynch that the condition of the sites where IT was working may have increased the amount of petroleum volatilized in an uncontrolled manner into the atmosphere. Mr. Lynch observed that safety fences used by IT as barriers around these sites had blown over.

Mr. Lynch also noted California Communications, a tenant on Alameda Point, and believed subcontractor to Alameda Power and Telecom, as being a significant offender of the Storm Water Pollution Prevention Ordinance. Mr. Lynch reported having witnessed the company storing on their leased property, without proper controls, large piles of soil excavated from contaminated areas (marsh crust, CERCLA sites, and former gas stations). Mr. Lynch questioned why these activities have not been monitored by either the City of Alameda (City) or the Navy. He also stated that the failure to control contaminated soil on the base has resulted in surface water runoff from the uncovered contaminated soil piles into the Seaplane Lagoon, which may increase the cost of excavating sediment from the Seaplane Lagoon.

Ms. Stirewalt requested information about who California Communications is and where they are tenants. Elizabeth Johnson (City) responded that they are tenants near, but not on, the Seaplane Lagoon. Mr. Leach stated that he believed they are a contractor of the City, and should have secured excavation permits to excavate soil from anywhere on the base. Ms. Johnson stated that she will investigate this matter further.

Ms. Stirewalt asked if California Communications has been excavating soil from the base. Mr. Lynch stated that they are excavating soil from within the base; have left excavated, contaminated soil from Site 13 uncovered; and have discharged unclean water from manholes directly into the Bay.

There was a brief discussion about the involvement of the Regional Water Quality Control Board and representatives from the City in resolving the matter and about a possible agreement the City may have made to avoid incurring a financial loss as a result of the attempt to improve the City's communications infrastructure. A conclusion on that matter was not reached.

Ms. Baur asked if IT is contracted by the Navy and about the status is of the sites they are working on, relative to California Communications. Mr. Lynch explained that IT works for the Navy and they have taken many safety precautions that California Communications has not. There have been incidents where better monitoring of equipment and remedial activities could have prevented possible exposure to excavated materials. For example, fences could be secured such that the wind does not blow them over.

Mr. McClelland stated that he will contact Mr. Lorton, the Navy Remedial Project Manager for the petroleum program, about the concerns regarding IT. Mr. Lynch also suggested that there may be a more suitable location for the three storage tanks located along the fence, by the skateboard park.

The meeting was adjourned at 8:40 p.m.

ATTACHMENT A

NAVAL AIR STATION ALAMEDA
RESTORATION ADVISORY BOARD MEETING AGENDA
January 8, 2002

(One Page)

RESTORATION ADVISORY BOARD

NAVAL AIR STATION, ALAMEDA

AGENDA

8 JANUARY, 2002 6:30 PM

ALAMEDA POINT - BUILDING 1 - SUITE 140

COMMUNITY CONFERENCE ROOM

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

<u>TIME</u>	<u>SUBJECT</u>	<u>PRESENTER</u>
6:30 - 6:40	Introductions	All
6:40 - 6:45	Approval of Minutes	Michael-John Torrey
6:45 - 6:55	Co-Chair Announcements	Co-Chairs
6:55 - 7:15	IR Program Overview	Andrew Dick
7:15 - 7:35	Site 25 Treatability Study Update	IT Corporation
7:35 - 8:05	Site 25 TCRA Update	Rick Weissenborn
8:05 - 8:15	Project Teams, Round the Table	Team Leaders
8:15 - 8:20	BCT Activities	Mike McClelland
8:20 - 8:30	Community & RAB Comment Period	Community & RAB
	RAB Meeting Adjournment	
8:30 - 9:00	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: January 8, 2001

Please initial by your name

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

Lea Loizos (Arc Ecology) LL

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	✓											
REGULATORY AND OTHER AGENCIES	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Anna-Marie Cook	<i>ame</i>											
David Cooper	<i>DCC</i>											
Elizabeth Johnson	<i>terry</i>											
Patricia Ryan	<i>PR</i>											
Sophia Serda												

* Denotes excused absence

U.S. NAVY	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Glenna Clark												
Andrew Dick												
Steve Edde												
Greg Lorton												
Mike McClelland	<i>MSM</i>											
Tom Pinard	<i>TP</i>											
Rick Weissenborn	<i>RW</i>											
TETRA TECH EMI	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Courtney Colvin	<i>CC</i>											
Tracy Craig	<i>TC</i>											
Marie Rainwater												
Leah Waller	<i>LW</i>											
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 Maximilian Aguirre Solano	8/1/01											

* Excused absence
 ** Attended but did not sign roster

* Denotes excused absence

ATTACHMENT C

NAVAL AIR STATION ALAMEDA RESTORATION ADVISORY BOARD MEETING HANDOUT MATERIALS

**IR Program Overview. January 8, 2002. Andrew Dick, Lead Remedial Project Manager.
NAVFAC Southwest Division.**

**Alameda IR Site 25 Treatability Study of Chemical Oxidation of Benzo(a)pyrene Equivalents.
December 8, 2001. Bruce Marvin, IT Corporation, Aquifer Solutions, Dan Baden, IT
Corporation, and Amy Astey, IT Corporation.**

**Site 25 Status Update. January 8, 2002. Rick Weissenborn, Remedial Project Manager.
NAVFAC Southwest Division.**

IR Program Overview
(Seven Sheets)



ALAMEDA POINT
ALAMEDA, CALIFORNIA



IR Program Overview

Andrew Dick, P.E.
Lead Remedial Project Manager
Southwest Division NAVFAC

January 8, 2002



ALAMEDA POINT
ALAMEDA, CALIFORNIA



Outline of the Presentation

- Current CERCLA Fieldwork and Important Dates
 - FY 02 Funded Project Descriptions
 - Questions?
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ALAMEDA POINT
ALAMEDA, CALIFORNIA



Site 2 OEW Removal Action

- Site 2 (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
 - The Draft Action Memorandum will be distributed for public review approximately February 2002
 - Clearing and grubbing of the site is underway in anticipation of the surface sweep and removal action
 - Fieldwork is targeted for January 2002 and we will try to complete by 1 April 2002 to avoid interfering with migratory birds' nesting season
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ALAMEDA POINT
ALAMEDA, CALIFORNIA



Site 25 Time Critical Removal Action

- IR Site 25 (Coast Guard Housing)-the objective of this project is to remove PAH contaminated soil from various areas of North Village
 - Excavation started December 2001 and is expected to continue through May 2002
 - The 30 day notice of availability and public comment period on the Action Memorandum will be published in the Alameda Journal, Alameda Times-Star and the Oakland Tribune by 19 January 2002
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**ALAMEDA POINT
ALAMEDA, CALIFORNIA**



Pesticides Shed Time Critical Removal Action

- Building 195 of Parcel 98 – The objective of this project is to remove dieldrin and lead contaminated soil
 - Fieldwork started November 12, 2001 and is expected to continue through January 2002
 - The 30 day notice of availability and public comment period was published in the Alameda Journal, Alameda Times-Star and the Oakland Tribune 18 December 2001
 - The Site Closure Report is expected March 2002
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**ALAMEDA POINT
ALAMEDA, CALIFORNIA**



**Lead Contaminated Soil Emergency
Removal Action**

- This action took place at 530 and 550 Corpus Christi Road of Parcel 98
 - Sod was placed over lead contaminated surface soil 13 October 2001, and three concrete footings were then removed 16 November 2001
 - The 30 day notice of availability and public comment period on the Action Memorandum was published in the Alameda Times-Star and the Oakland Tribune 13 December 2001, and in the Alameda Journal 14 December 2001
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**ALAMEDA POINT
ALAMEDA, CALIFORNIA**



**Non-Time Critical Removal Action at the
Water Tower and Antenna Sites**

- The Draft Engineering Evaluation and Cost Analysis (EE/CA) was distributed for public and regulatory review 21 December 2001
 - The 30 day notice of availability and public comment period for the EE/CA will be published approximately late January 2002
 - The Draft Action Memorandum will be distributed May 2002
 - Fieldwork is pending availability of funding
-



**ALAMEDA POINT
ALAMEDA, CALIFORNIA**



Soil Removal Actions at Sites 5, 14, & 15

- Fieldwork at Sites 5 and 14 began early December 2001 and is expected to continue through January 2002
 - Based on the Data Gap Sampling Results the excavation quantities for both Sites 5 and 14 has increased
 - In addition, based on the Data Gap Sampling Results the BCT agreed that no removal action was necessary at Site 15
 - Further, the BCT agreed that an RI/FS would be started for Sites 14 and 15 because they are much further ahead of schedule than the rest of OU-1
 - A Draft RI is scheduled to be completed by June 2002
-



ALAMEDA POINT
ALAMEDA, CALIFORNIA



FY 02 Funded Project Descriptions

- Awards to Bechtel (Navy CLEAN Contractor)
 - \$3,063,663 funding for preparation of work plan, fieldwork, eight SI reports, and background study for Base-wide Polynuclear Aromatic Hydrocarbons (PAHs)
 - \$661,633 funding for preparation of FS, Proposed Plan, and ROD for Site 25
-



ALAMEDA POINT
ALAMEDA, CALIFORNIA



FY 02 Funded Project Descriptions

- Awards to IT Corporation (Navy RAC Contractor)
 - \$2,039,974 funding for the full scale Dense Non Aqueous Phase Liquid (DNAPL) and dissolved source groundwater removal action at Sites 4 and 5
 - \$1,569,299 funding for free product corrective action at Site 7 and Parcel 37
 - \$450,000 funding for RCRA Part B Permit closure at Industrial Wastewater Treatment Plant (IWTP) for Buildings 25 and 32
-



ALAMEDA POINT
ALAMEDA, CALIFORNIA



FY 02 Funded Project Descriptions

- Awards to IT Corporation (Navy RAC Contractor) continued
 - 1,484,000 funding (award pending) for the full scale removal action for chlorinated solvents in groundwater at Sites 9, 11, 16, and 21
 - \$131,096 funding to complete the treatability study at Site 25
 - \$62,229 funding for additional RI sampling at Site 25
-



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FY 02 Funded Project Descriptions

- Awards to Foster Wheeler (Navy RAC Contractor)
 - \$3,726,307 funding for the time critical removal action at Site 25
 - \$1,800,000 funding to continue the geotechnical and seismic evaluation, and OEW removal at Site 2
 - Awards to Battelle
 - \$839,666 funding to continue the offshore investigation
 - Total FY 02 awards to date = \$15,827,867
-



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Questions?



**Alameda IR Site 25 Treatability Study of Chemical Oxidation of Benzo(a)pyrene
Equivalents**

(Seven Sheets)

Alameda IR Site 25 Treatability Study of Chemical Oxidation of Benzo(a)pyrene Equivalents

Bruce K. Marvin (Aquifer Solutions, El Cerrito, CA, USA)

Dan Baden (The IT Corporation, Concord CA, USA)

Amy Estey (The IT Corporation, Concord, CA, USA)

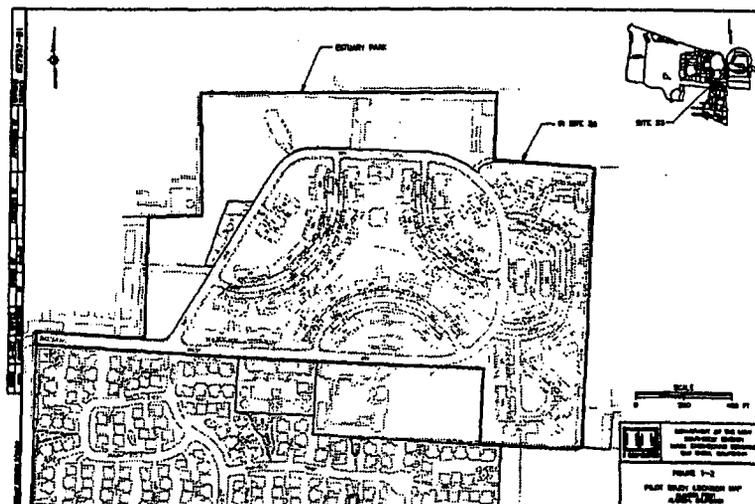
Site 25 - Estuary Park Background

- **Shallow soils are impacted with PAHs expressed as B(a)P equivalents**
 - **Hydrodredged sediments**
 - **Potential manufactured gas plant residuals**
 - **Heterogeneous distribution**
- **Residential risk drives the remediation**
 - **0 to 2 feet**
 - **2 to 4 feet**
- **Leading alternative**
 - **Excavation**

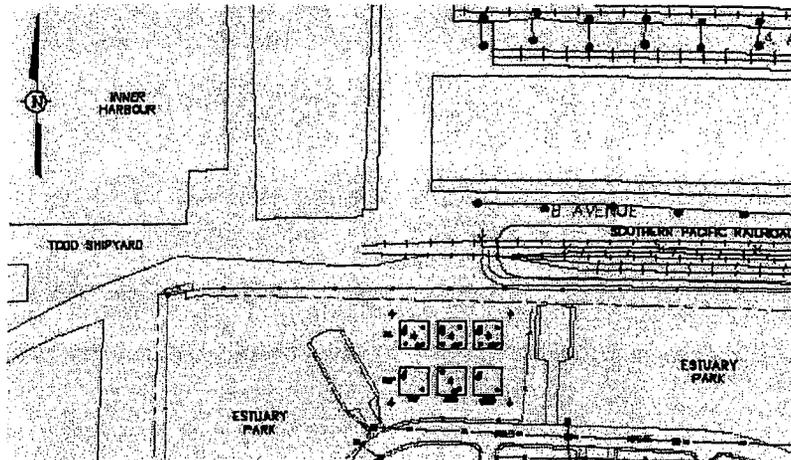
Treatability Study Goals

- Assess the level of $B(a)P_{equiv}$ treatment under conditions that mimic full-scale conditions
- Determine the most appropriate oxidant delivery technique
- Evaluate spatial variability of the oxidant demand and $B(a)P_{equiv}$.

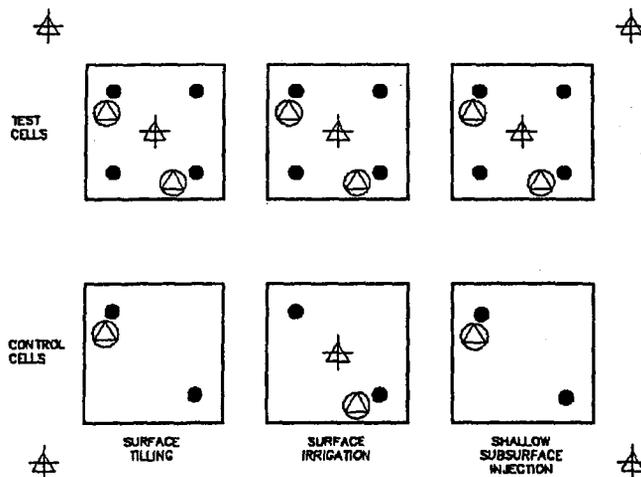
Site 25 - Estuary Park



Treatability Study Location



Sampling and Monitoring Program



What is Permanganate? And Why.....

- **Permanganate (MnO_4^-) is a moderately strong oxidizing agent**
 - **Commonly used in drinking water treatment to remove iron and manganese**
- **Destroys contaminants**
- **A stronger oxidant is not required**

Treatability Study Activities

- **Prepare site and equipment - Aug. 01**
- **Surface Application and Till - Sept. 01**
- **Shallow Subsurface Injection - Oct. 01**

- **Injection Monitoring - Sept. to Oct. 01**
- **Performance Monitoring - Oct. 01**
 - **One month after treatment**

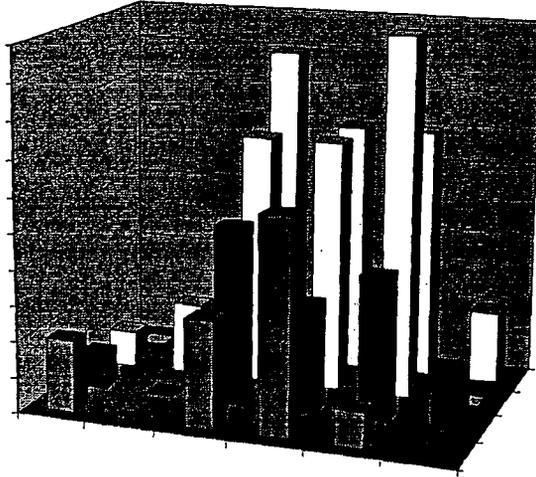
Chemical Dose - Part I

- **Preliminary Remedial Goal Limit**
 - EPA IX PRG = 1,800 mg Mn/kg soil
- **Background Manganese at Estuary Park**
 - Maximum = 584 mg Mn/kg soil
 - 95% UCL of Mean = 298 mg Mn/kg soil
- **Difference is the PRG-limited dose**
 - PRG minus Max. = 1,300 mg Mn/kg soil
 - Equals 1,600 kg (3,520 lbs.) KMnO_4

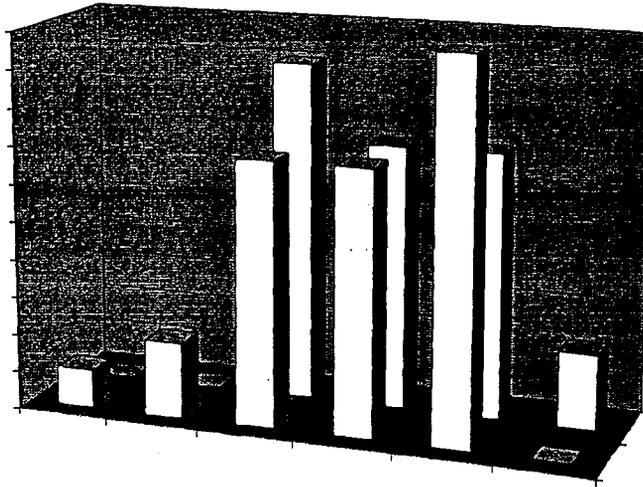
Chemical Dose - Part II

- **How much does the soil require?**
 - Soil oxidant demand is the amount of KMnO_4 consumed by soil in 48 hr test.
- **Six samples tested**
 - Maximum = 2,330 mg KMnO_4/kg
 - 95% UCL of Mean = 2,169 mg KMnO_4/kg
- **PRG-limited dose ~60% of required SOD**

Benzo(a)pyrene Equivalents in Soil



Benzo(a)pyrene Equivalents - Test



Delivery Techniques

- **Surface Application**
 - Infiltration rate was slower than consumption of KMnO_4
- **Surface Tilling**
 - Rapid effective delivery of KMnO_4
- **Shallow Subsurface Injection**
 - Soil matrix had low permeability
 - clay and silt dominated

Overview of Results

- **B(a)P removal was not observed**
 - PRG-limited dose < SOD
- **Clay and silts limited effectiveness**
 - Infiltration rate slower than consumption
 - Unable to inject - fine grained AND shallow
 - High soil oxidant demand (SOD)

Site 25 Status Update

(12 Sheets)



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Site 25 Status Update

Rick Weissenborn
Remedial Project Manager
NAVFAC Southwest Division

January 8, 2002

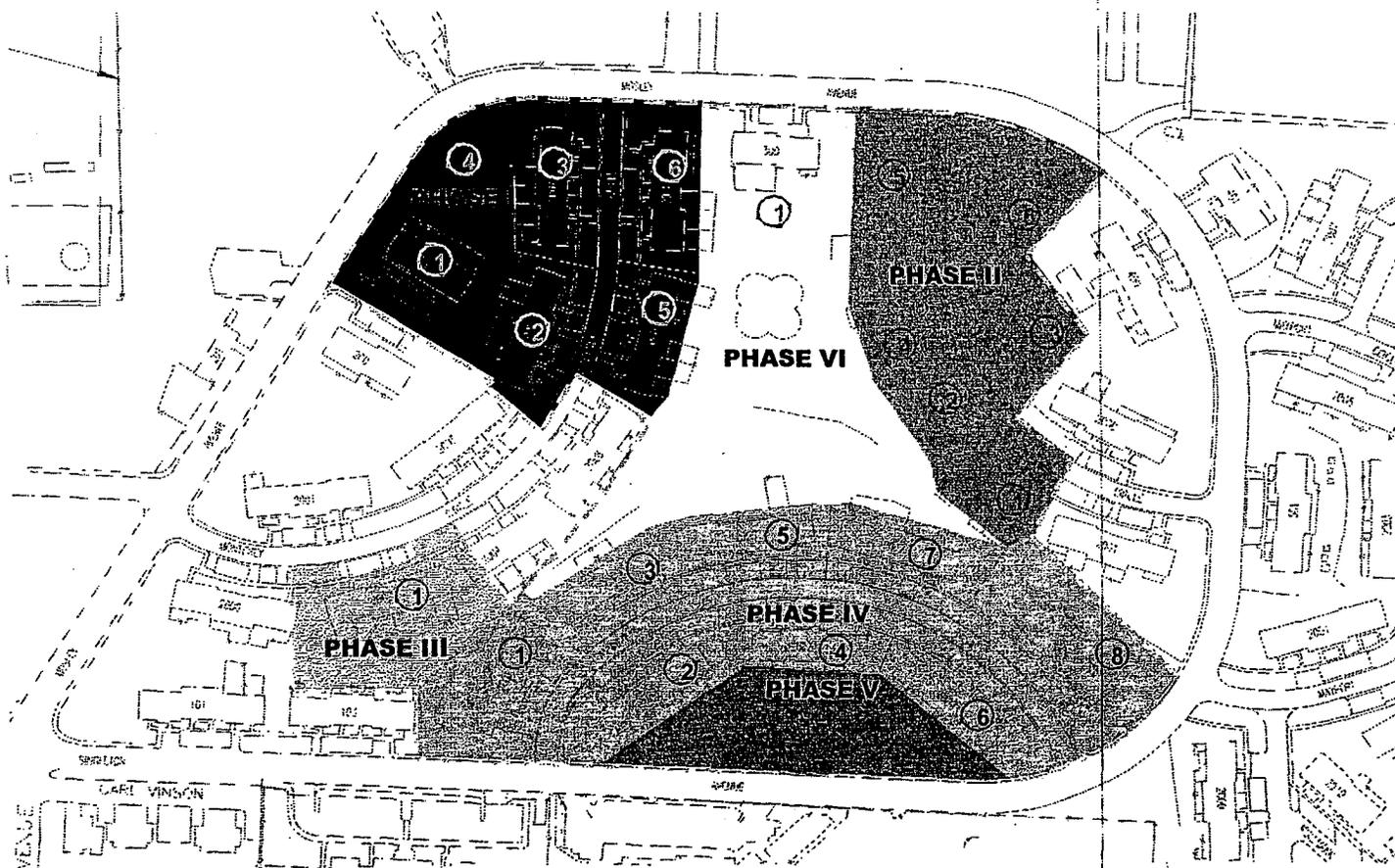




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Phased Approach





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Timeline

Mobilization

November 16 to November 26, 2001

Excavate, Backfill, Resod

One structure per day

Demobilization

March 19 to March 25, 2002





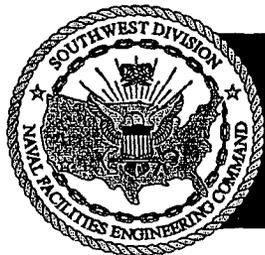
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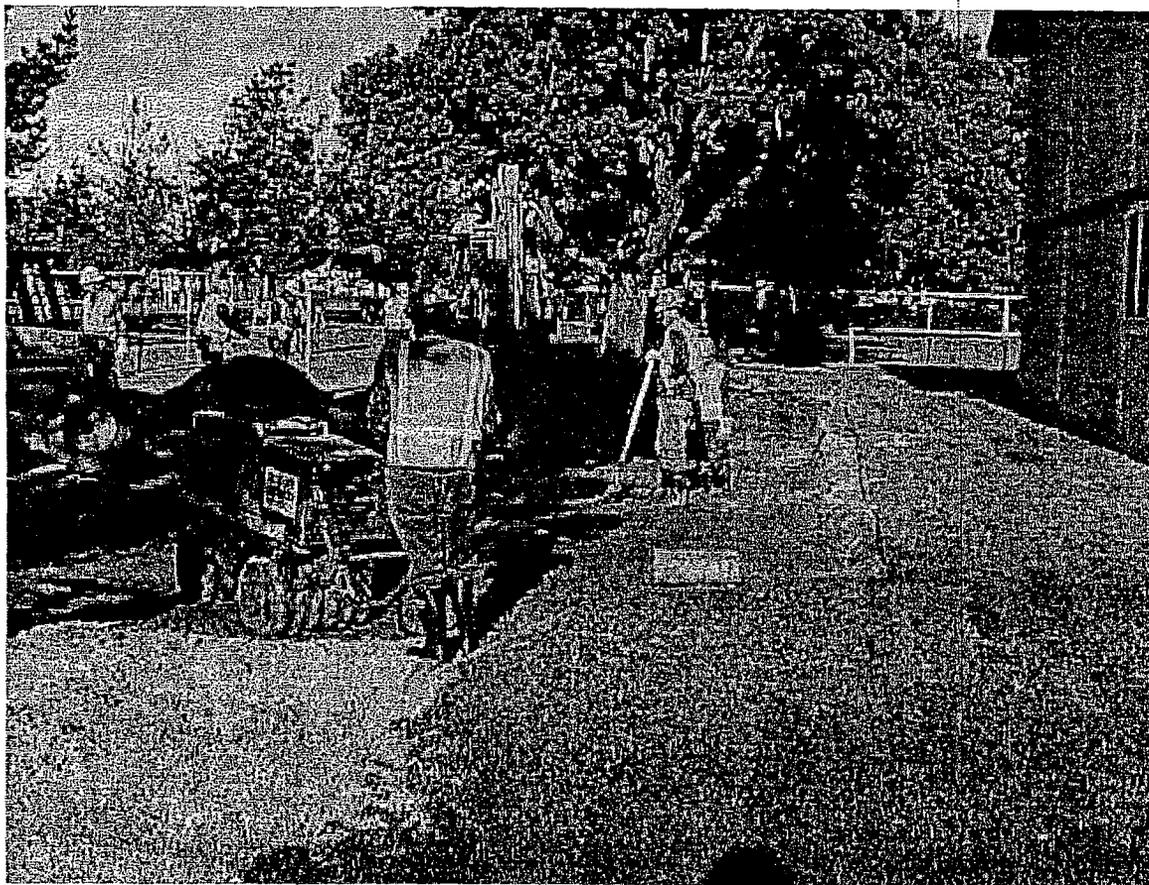


Actual Schedule

- Start 202 Mosley - December 13, 2001
- Finish 202 Mosley - December 20, 2001



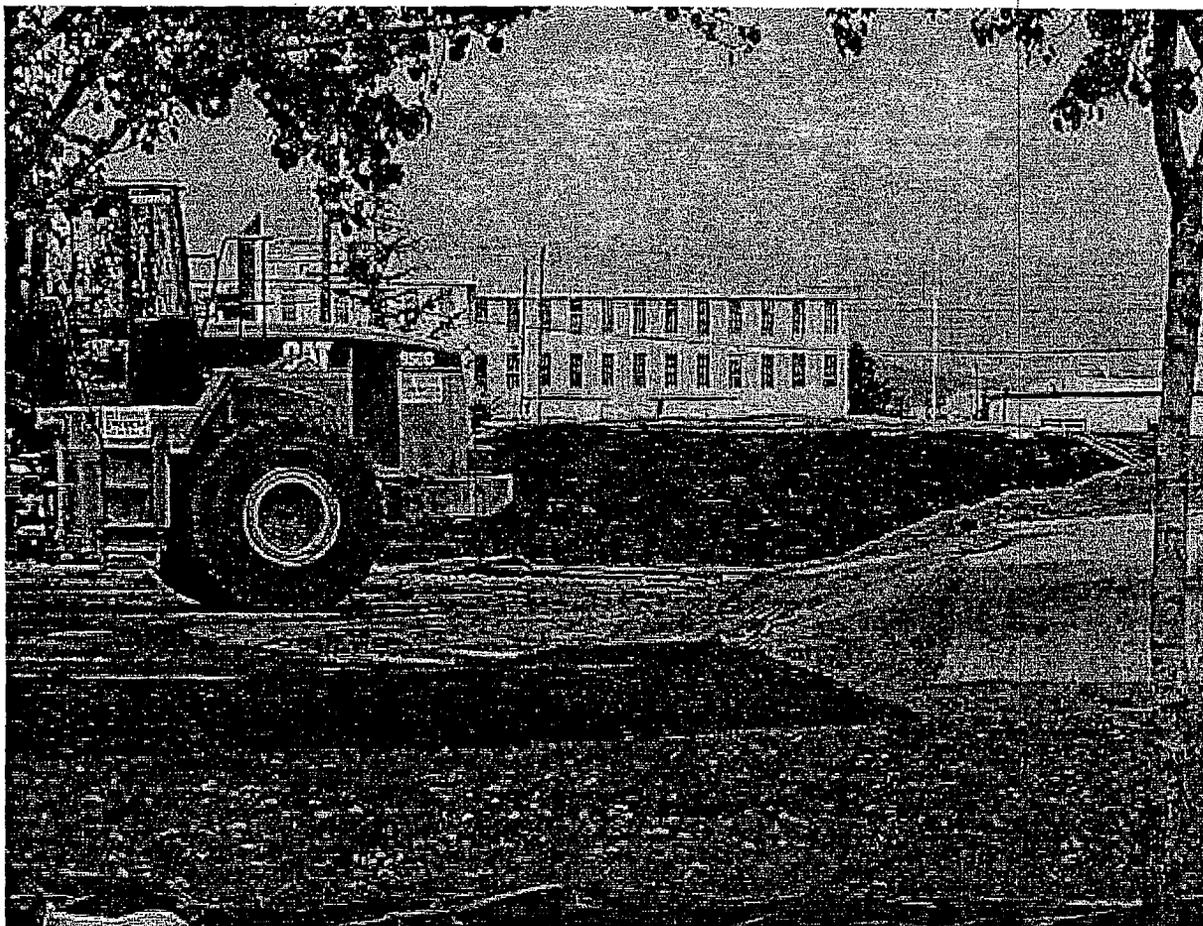
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What Happened?

- Weather
- Planned Approach
 - Excavate Out, Backfill In
- Actual Approach
 - Excavate In, Backfill Out
 - Saturated top 6 - 8 inches, equipment sinks



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What Else Happened?

- Backfill Material
 - Analyzed before placed
 - Indicated [As] Slightly Greater Than Site Condition
- Navy Directive
 - [As] Must Match Site
 - Find Another Source



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What's Next

- Restart January 7, 2001
- New Backfill Source
 - 6,000 cubic yards on hand
 - Four to Five Weeks
- Continue Backfill Search
- Lay Sod Day After Building Completed
- Complete by May 31, 2002



TRANSMITTAL/DELIVERABLE RECEIPT

Contract No. N68711-00-D-0005

Document Control No. TC . A021 . 10074

TO: Mr. Ron Fuller, Code 02R1.RF
Contracting Officer
Naval Facilities Engineering Command
Southwest Division
1230 Columbia Street, Suite 1100
San Diego, CA 92101-8517

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

FROM: [Signature]
Michael Wanta, Contract Manager

DOCUMENT TITLE AND DATE:

Restoration Advisory Board Meeting Summaries for 2002, April 2, 2003

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(e.g., Draft, Draft Final, Final)

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