

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

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

Tuesday, May 1, 2001

ATTENDEES

See attached list.

MEETING SUMMARY

I. Approval of Minutes

Michael John Torrey, Community Chairperson, called the meeting to order at 6:40 p.m. It was determined that only seven Restoration Advisory Board (RAB) members were in attendance; therefore, approval of the March and April 2001 meeting minutes was postponed until after the Co-chair announcements, when a quorum was present. At that time, the RAB Meeting Minutes from March 6, 2001, were approved with no comments.

The RAB Meeting Minutes from April 3, 2001, were approved, with Douglas deHann abstaining. The following comments were made:

- “Not” should be deleted from the first sentence of the second paragraph under Co-chair Announcements. The sentence should read, “. . . the Air Force had an objection to three documents that were listed as primary documents.”
- “Not” should be added to the second sentence of the second paragraph on Page 2. The sentence should read, “. . . stating that it is not now an enforceable schedule.”
- The last sentence in the second paragraph under Status of Offshore Investigations should read, “. . . which was not an environmentally conservative approach.”
- The last sentence on Page 10 under Base Realignment and Closure Cleanup Team Activities should read, “Ms. Cassa stated that they are always looking for topics for future RAB meetings.”
- The second to last sentence on page 10 should read, “RWQCB is concerned about Warner Brothers . . .”

II. Co-Chair Announcements

Mike McClelland, Navy Co-chair, stated that comments on the Draft Alameda Annex Site IR02 Proposed Plan and Remedial Action Plan/Record of Decision are due tomorrow.

Mr. McClelland and Jo-Lynne Lee will attend a RAB workshop this month and will give a presentation on the workshop at the June 2001 RAB meeting.

Andrew Dick, lead remedial project manager for Alameda Point, was introduced.

Mr. Torrey stated that the RAB began on April 19, 1994, and wished those who had been involved for the past 7 years a happy anniversary.

Mr. Torrey distributed various correspondence and documents to the RAB. A letter from Bill Mitchell was read. He requested suspension of his membership for a year (until June 2002). A copy of a letter to Saul Bloom from the RAB, dated April 17, 2001, and a copy of a letter from the East Bay Conversion and Reinvestment Commission regarding the 5th Annual Base Workers Classic Golf Tournament will be included with the minutes in the mid-month mailing. The letter to Mr. Bloom requests that a representative from ARC Ecology participate on the RAB.

Dianne Behm asked if the Fish Tissue Report evaluated risk to human health. Brad Job responded that the sampling has not been conducted yet.

III. City and U.S. Environmental Protection Agency Grant Project Update

Elizabeth Johnson provided an update on the City of Alameda's (City) Superfund Redevelopment Pilot Project grant. The City was provided a \$100,000 grant to evaluate potential remedies that could be proposed for the Seaplane Lagoon and Site 1, the future marina and golf course, respectively. A kickoff meeting for the grant was held at the end of January 2001 with two design experts, Charles Rauw and Kyle Phillips. Mr. Rauw is a marina designer, and Mr. Phillips is a golf course designer who also was selected by the City to design the golf course. They are now in the environmental review stage, which includes evaluating the placement of dredge material from the Seaplane Lagoon beneath a Site 1 landfill cap and determining if dredging is a suitable remedial action for the Seaplane Lagoon. The Berkeley Environmental Restoration (BERC) data was not in a suitable format for this evaluation, so the Navy directed Batelle to take bathymetric measurements. Although additional data is necessary to characterize the Seaplane Lagoon and determine how much sediment needs to be dredged to develop a marina, preliminary bathymetric results indicate that less sediment would need to be dredged than originally thought. In addition, an aerial survey will be conducted by the City in the next 3 to 4 weeks, so a topographic map of the Seaplane Lagoon shoreline can be developed. Mary Sutter, Kevin Reilly, and Bert Morgan are working with the City on this project and representing the RAB. A public workshop is planned for a Saturday in late June 2001.

Mr. deHann asked if the \$100,000 grant would be enough money to characterize the Seaplane Lagoon and asked for clarification of Mr. Job's statement in the April 2001 RAB Meeting Minutes (Page 5) regarding the Navy not wanting to clean up any more than they have to, as regulated under the Comprehensive Environmental Response, Compensation, and Liability Act. Ms. Johnson responded that the City received the maximum grant award possible. The grant will be used to evaluate data collected by the Navy, not recharacterize the Seaplane Lagoon, which is the Navy's responsibility. The City is concerned that capping will be the selected remedy for the Seaplane Lagoon, because it would preclude development of a marina. Mr. McClelland responded that it is the Navy's responsibility to remediate the Seaplane Lagoon to be protective of the environment in a fiscally responsible manner. Additional dredging required by the City to develop a marina would be the City's responsibility. Mr. Job stated that Regional Water Quality Control Board (RWQCB) disagrees and the Navy should remediate the site to the level necessary for planned reuse. In addition, the extent of contamination has not been delineated, and additional characterization is necessary.

Ms. Stirewalt stated that the remediation should support the reuse plan, but the City should have realistic expectations. In addition, she is not comfortable with a layer of soil covering contaminated soil and does not consider it to be protective. There are no assurances that it will not be disturbed and pose a future risk.

IV. OU-3 and -4A Next Steps

Rick Weissenborn gave a presentation on the next steps being taken by the Navy at Operable Units (OU) -3 and -4A. For OU-3, a Final OU-3 Remedial Investigation (RI) Report was submitted in August 1999, and a RI Addendum Report, Volume 1 was submitted in December 2000. Future submittals include Volumes II and III of the RI Addendum. Volume II will include a Radiological Closure Report and is scheduled for submittal in December 2001 or January 2002. Radiation above 15,000 counts per minute will be removed. Volume III will include a geotechnical characterization and an unexploded ordnance (UXO) survey and removal report. The geotechnical characterization will be performed by Foster Wheeler and will evaluate how much weight can be placed on the landfill and earthquake engineering. Submittal of the draft UXO survey and removal work plan is scheduled for May 2001. The Revised Feasibility Study (FS) is scheduled for submittal in October 2001, prior to completion of Volume III of the RI. The FS will evaluate excavation and a monolithic cap as remedial alternatives, and a survey of the shoreline and mean water level will be included.

A Draft OU-4A RI Report (West Beach Landfill) was submitted in December 2000. Because of significant data gaps and extensive comments from the regulatory agencies and Golden Gate Audubon Society, a Revised Draft RI Report will be prepared. Bechtel will replace the previous consultant, and extensive data gap sampling will be performed.

Field work will include a radiological survey before additional site characterization is conducted; a UXO survey; installation of new monitoring wells; and collection of new soil, sediment, surface water, and landfill gas data. All data, including geotechnical, UXO and radiological, will be incorporated into one RI, and new ecological and human health risk assessments will be performed. Characterization of the entire landfill is not planned. Instead, hot spot removal and evaluation of a presumptive remedy, which includes an appropriate engineered cap and long-term monitoring, will be performed. In order to evaluate the remedy, perform removals, or remediate the site, habitat destruction is expected. The Navy will be working with U.S. Fish and Wildlife Service and the Audubon Society to reduce the impact to the environment and on reconstruction alternatives. The field work is tentatively scheduled for October 2001, which will help reduce impact to the environment and provide good weather for the UXO and radiological surveys. Submittal of the Revised Draft RI for OU-4A is scheduled for October 2002.

A discussion ensued regarding the cost of the additional field work and preparation of a revised RI for OU-4A and the Navy's funding priorities and budget. Mr. Weissenborn responded that Site 25 remains the highest priority and Site 2 now has a higher priority than before. The OU-4A RI Work Plan has been budgeted. Ms. Lee stated that she is pleased that the Navy is starting over; however, she is concerned that the Navy will run short of money. In addition, she asked what is the appropriate way for the RAB to address the issue. Mary Rose Cassa, Mr. Dick, and Anna-Marie Cook responded as follows. The RAB could comment on the federal facilities agreement (FFA) schedules and provide their priorities. Signing of the FFA and an approved work plan could be drivers for funding. Congressional members could be contacted by the RAB, and the City could exert pressure on Congress.

Ms. Stirewalt asked if the Navy had always assumed that OU-4A would be excavated, expressed concern that nothing would remain after excavation, and asked if capping was being considered. Mr. Weissenborn responded that the Navy is trying to determine if excavation is a viable remedial alternative.

Mr. deHann expressed his concern regarding preparation of a poor document by the original OU-4A consultant and the waste of the money spent on the document. A discussion ensued regarding the Navy's recourse when substandard reports are submitted by consultants. Ardella Dailey expressed concern that the consultant was still working on the Alameda project.

Ms. Cassa stated that human health risk for school children and workers must also be evaluated in the OU-4A RI.

Ms. Behm asked if the field work scheduled for October 2001 would be impacted by the rainy season. Mr. Weissenborn responded that from April to September, the Least Terns could not be disturbed. Mr. Job stated that there should not be runoff concerns, because it is only an investigation.

V. Project Teams

Ms. Lee suggested that the focus groups use the technical assistance grant to hire outside technical assistance. The RAB will try to discuss this further during the June 2001 meeting. The grant has a cap of \$100,000 and a yearly cap of \$25,000.

Administration

Mr. Edde received an inquiry about membership on the RAB. Ms. Stirewalt revised the membership application, and it will be included in the mid-month mailing. There are a total of 16 current RAB members and six vacancies. Ms. Johnson will include the membership information in the City's publication, and Ms. Stirewalt will work with Mr. Edde and Mr. McClelland to get it published in the newspaper.

Tony Dover and Jim Leach have excused absences from today's meeting.

Site 25

Ms. Dailey asked if there was an update. Ms. Lee asked if a periodic update could be provided for all project areas (for example, OU-1 and OU-2) during the RAB meetings.

VI. Base Realignment and Closure Cleanup Team (BCT) Activities

Ms. Cook provided an update on the BCT activities. An OU-4 meeting was held on April 12, 2001.

A conference call was held on April 16, 2001, to discuss the OU-1 and -2 Data Gap Field Sampling Plan. The draft final will be submitted the week of May 14, 2001, and there will be a 30-day review period before going final.

The BCT Monthly Tracking Meeting was held on April 17, 2001. The Navy expressed that the upland polynuclear aromatic hydrocarbons (PAH) study being conducted by Pacific Gas and Electric would not be relevant to Alameda Point, and the BCT agreed that addressing PAH issues is critical. A removal for the pesticide shed and surrounding lead- and dieldrin-impacted soil at Parcel 98 were discussed. IT

Corporation gave a presentation on six-phase heating and the removal pilot study. Bechtel presented an overview of the RI Work Plan for Site 26.

Ms. Lee asked why the upland PAH study was not relevant. Ms. Cassa responded that PAHs at Alameda Point are not from typical combustion but are from the Oakland Bay; therefore, the same cleanup criteria should not be used.

Mr. deHann asked if the BCT considered collecting PAH data from fill areas near Alameda. Ms. Cook responded that the Navy and the BCT have considered this option but have questioned the need for spending the time and energy on this option. The BCT believes that a PAH background number can be developed with current information.

A conference call was held on April 24, 2001, to resolve comments on the OU-5 Work Plan.

The Site 15 Action Memorandum was discussed during a conference call on April 26, 2001.

Mr. Job stated that the Navy and the RWQCB have almost finalized the total petroleum hydrocarbon strategy, and the Navy will begin capturing petroleum under the corrective action plan for the Jet Engine Test Cell Site, Building 397.

VII. Community and RAB Comment Period

The RAB discussed scheduling an extra meeting to discuss the technical assistance grant, but decided to include it as an agenda item during the June 5, 2001, RAB meeting.

Ms. Behm asked to be excused from the June RAB meeting.

Ms. Stirewalt noticed that Catellus is developing property at Alameda Annex and asked if they have any remediation contracts with the Navy. Catellus is a real estate, not a remediation, contractor. Ms. Cassa stated that East Housing was transferred to the City as clean property, and the development of this property is outside of the jurisdiction of the RAB. The BCT currently is addressing the presence of chlordane at the site, which is consistent with household use. Mr. McClelland added that the RAB was established to provide public input on remediation, not reuse or development.

Mr. deHann asked if master developer candidates for Alameda Point have been meeting with the Navy or the City and whether the RAB should be meeting with the candidates. A discussion ensued about whether the candidates should be invited to speak to the RAB for educational purposes. Ms. Johnson responded that the RAB should contact Dina Tasini, because the City will be selecting the master developer.

Mr. Torrey wished all the mothers a happy Mother's Day, and the meeting was adjourned at 9:16 p.m.

ATTACHMENT A

**NAVAL AIR STATION ALAMEDA
RESTORATION ADVISORY BOARD MEETING AGENDA
May 7, 2002**

(One Page)

RESTORATION ADVISORY BOARD

NAVAL AIR STATION, ALAMEDA

AGENDA

7 MAY, 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 - 6:35	Approval of Minutes	Michael-John Torrey
6:35 - 6:45	Co-Chair Announcements	Co-Chairs
6:45 - 7:05	PAH Risk Assessment	Dr. Sophia Serda
7:05 - 7:40	PAH Sampling Workplan & PAH Background	Rick Weissenborn
7:40 - 7:50	BCT Activities	Anna-Marie Cook
7:50 - 8:00	Community & RAB Comment Period	Community & RAB
8:00 - 8:30	RAB Administrative Issues	RAB Members
	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 2002**

Date: May 7, 2002

Please initial by your name

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

* Denotes excused absence

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	*	X	X	<i>AMC</i>							
David Cooper	X	X	X									
Elizabeth Johnson	X	X		X	<i>est</i>							
Marcia Liao			*	X								
Laurent Meillier												
Patricia Ryan	X	X		X	<i>PR</i>							
Sophia Serda												

was there →

* Denotes excused absence

U.S. NAVY	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Glenna Clark												
Andrew Dick	**			X								
Steve Edde		X	X									
Greg Lorton												
Mike McClelland	X	X	X	X								
Tom Pinard	X	X		X	<i>TPP</i>							
Rick Weissenborn	X			X								
TETRA TECH EMI	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Courtney Colvin	X	X	X		<i>CC</i>							
Tracy Craig	X	X	X									
Marie Rainwater												
Leah Waller	X	X	X									
Corinne Crawley				X								
GPI	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Michael Stone	**	**	**	**								
Jack Clemes												

* Denotes excused absence

OTHER	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Charlene Washington-EBCRC												
Janet Argyres-Bechtel					X							
Bart Draper-Bechtel												
Stephen Quayle-Bechtel												
Bruce Marvin - IT, Aquifer Solutions	X											
Rezsing Jaulus-Alameda Point Coll.				X								
<i>Eric Johansen, Bechtel</i>					X							
<i>ROD RINEHART, PACIFIC</i>			X	X	X							
<i>AIDAN BARRY, APCP</i>					X							
<i>Bill Howell 3-D Environmental</i>					X							

* Excused absence

** Attended but did not sign roster

Add Sweeney

* Denotes excused absence

ATTACHMENT C

**NAVAL AIR STATION ALAMEDA
RESTORATION ADVISORY BOARD MEETING HANDOUT MATERIALS**

Polycyclic Aromatic Hydrocarbons, Presentation to the Alameda Point RAB. May 7, 2002.
Presented by Dr. Sophia Serda, EPA Region IX Toxicologist.

Polycyclic Aromatic Hydrocarbons (PAH). September 1996. Agency for Toxic Substances and
Disease Registry ToxFAQs.

PAH Sampling Work Plan and PAH Background. May 7, 2002. Presented by Eric Johansen,
Bechtel National, and Rick Weissenborn, Remedial Project Manager, NAVFAC
Southwest Division.

**Polycyclic Aromatic Hydrocarbons, Presentation to the Alameda Point Restoration
Advisory Board. May 7, 2002.**

(One Page)

TOXICOLOGY & RISK ASSESSMENT

The Most Important Concept in Toxicology:

"Only the dose makes the poison"

Paracelsus, 16th Century

Polycyclic Aromatic Hydrocarbons

Presentation to the Alameda Point RAB

Sophia Serda, Ph.D.
Toxicologist
(415) 972-3057
serda.sophia@epa.gov

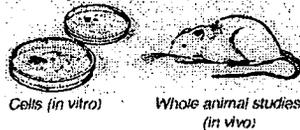


Where We Get Our Data

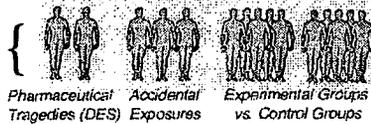
Observation of Wildlife



Laboratory Studies



Human Studies/
Epidemiology



Pathways

- Air
- Groundwater
- Soil
- Foodchain
- Cultural

Factors

- Is there a Completed pathway?
- What is the Concentration?
- What is the Frequency of contact?
- What is the Duration of contact?

Risk Topics

- **Risk Assessment** is how we measure and quantify excess risk
- **Risk Management** is the decision-making process to control excess risk
- **Risk Communication** is how we talk and include other agencies and communities in the risk management process

Polycyclic Aromatic Hydrocarbons (PAHs), September 1996

(Two Pages)



POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)

Agency for Toxic Substances and Disease Registry ToxFAQs

September 1996

This fact sheet answers the most frequently asked health questions (FAQs) about polycyclic aromatic hydrocarbons (PAHs). For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

SUMMARY: Exposure to polycyclic aromatic hydrocarbons usually occurs by breathing air contaminated by wild fires or coal tar, or by eating foods that have been grilled. PAHs have been found in at least 600 of the 1,430 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What are polycyclic aromatic hydrocarbons?

(Pronounced pŏl'i-sī'klīk ār'ə-măt'īk hī'drə-kar'bənz)

Polycyclic aromatic hydrocarbons (PAHs) are a group of over 100 different chemicals that are formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances like tobacco or charbroiled meat. PAHs are usually found as a mixture containing two or more of these compounds, such as soot.

Some PAHs are manufactured. These pure PAHs usually exist as colorless, white, or pale yellow-green solids. PAHs are found in coal tar, crude oil, creosote, and roofing tar, but a few are used in medicines or to make dyes, plastics, and pesticides.

What happens to PAHs when they enter the environment?

- PAHs enter the air mostly as releases from volcanoes, forest fires, burning coal, and automobile exhaust.
- PAHs can occur in air attached to dust particles.
- Some PAH particles can readily evaporate into the air from soil or surface waters.
- PAHs can break down by reacting with sunlight and other chemicals in the air, over a period of days to weeks.

- PAHs enter water through discharges from industrial and wastewater treatment plants.
- Most PAHs do not dissolve easily in water. They stick to solid particles and settle to the bottoms of lakes or rivers.
- Microorganisms can break down PAHs in soil or water after a period of weeks to months.
- In soils, PAHs are most likely to stick tightly to particles; certain PAHs move through soil to contaminate underground water.
- PAH contents of plants and animals may be much higher than PAH contents of soil or water in which they live.

How might I be exposed to PAHs?

- Breathing air containing PAHs in the workplace of coking, coal-tar, and asphalt production plants; smoke-houses; and municipal trash incineration facilities.
- Breathing air containing PAHs from cigarette smoke, wood smoke, vehicle exhausts, asphalt roads, or agricultural burn smoke.
- Coming in contact with air, water, or soil near hazardous waste sites.
- Eating grilled or charred meats; contaminated cereals, flour, bread, vegetables, fruits, meats; and processed or pickled foods.
- Drinking contaminated water or cow's milk.

ToxFAQs Internet address via WWW is <http://www.atsdr.cdc.gov/toxfaq.html>

- Nursing infants of mothers living near hazardous waste sites may be exposed to PAHs through their mother's milk.

How can PAHs affect my health?

Mice that were fed high levels of one PAH during pregnancy had difficulty reproducing and so did their offspring. These offspring also had higher rates of birth defects and lower body weights. It is not known whether these effects occur in people.

Animal studies have also shown that PAHs can cause harmful effects on the skin, body fluids, and ability to fight disease after both short- and long-term exposure. But these effects have not been seen in people.

How likely are PAHs to cause cancer?

The Department of Health and Human Services (DHHS) has determined that some PAHs may reasonably be expected to be carcinogens.

Some people who have breathed or touched mixtures of PAHs and other chemicals for long periods of time have developed cancer. Some PAHs have caused cancer in laboratory animals when they breathed air containing them (lung cancer), ingested them in food (stomach cancer), or had them applied to their skin (skin cancer).

Is there a medical test to show whether I've been exposed to PAHs?

In the body, PAHs are changed into chemicals that can attach to substances within the body. There are special tests that can detect PAHs attached to these substances in body tissues or blood. However, these tests cannot tell whether any

health effects will occur or find out the extent or source of your exposure to the PAHs. The tests aren't usually available in your doctor's office because special equipment is needed to conduct them.

Has the federal government made recommendations to protect human health?

The Occupational Safety and Health Administration (OSHA) has set a limit of 0.2 milligrams of PAHs per cubic meter of air (0.2 mg/m³). The OSHA Permissible Exposure Limit (PEL) for mineral oil mist that contains PAHs is 5 mg/m³ averaged over an 8-hour exposure period.

The National Institute for Occupational Safety and Health (NIOSH) recommends that the average workplace air levels for coal tar products not exceed 0.1 mg/m³ for a 10-hour workday, within a 40-hour workweek. There are other limits for workplace exposure for things that contain PAHs, such as coal, coal tar, and mineral oil.

Glossary

Carcinogen: A substance that can cause cancer.

Ingest: Take food or drink into your body.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 1995. Toxicological profile for polycyclic aromatic hydrocarbons. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop E-29, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 404-639-6359. ToxFAQs Internet address via WWW is <http://www.atsdr.cdc.gov/toxfaq.html> ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.



**Polynuclear Aromatic Hydrocarbon (PAH) Sampling Work Plan and PAH Background,
May 7, 2002**

(11 Pages)

PAH Sampling Work Plan and PAH Background

Restoration Advisory Board (RAB)
Meeting
May 7, 2002

Eric Johansen, Bechtel National
Rick Weissenborn, SWDIV

Overview

- Introduction
- PAH Work Plan
- Site Background
 - Industrial History
 - Fill History
- Sampling Program
 - Sample Locations
 - Protocol and Methodology
 - Laboratory Analysis
- Data Analysis and Reporting
- Schedule

Introduction

- Historic sampling indicates that Alameda Point soils contain Polynuclear Aromatic Hydrocarbons (PAHs)
- These PAHs potentially cause risk to human health and the environment
- The Navy will assess impacts of PAHs to the fill soil and the potential risk of these PAHs

PAH Work Plan

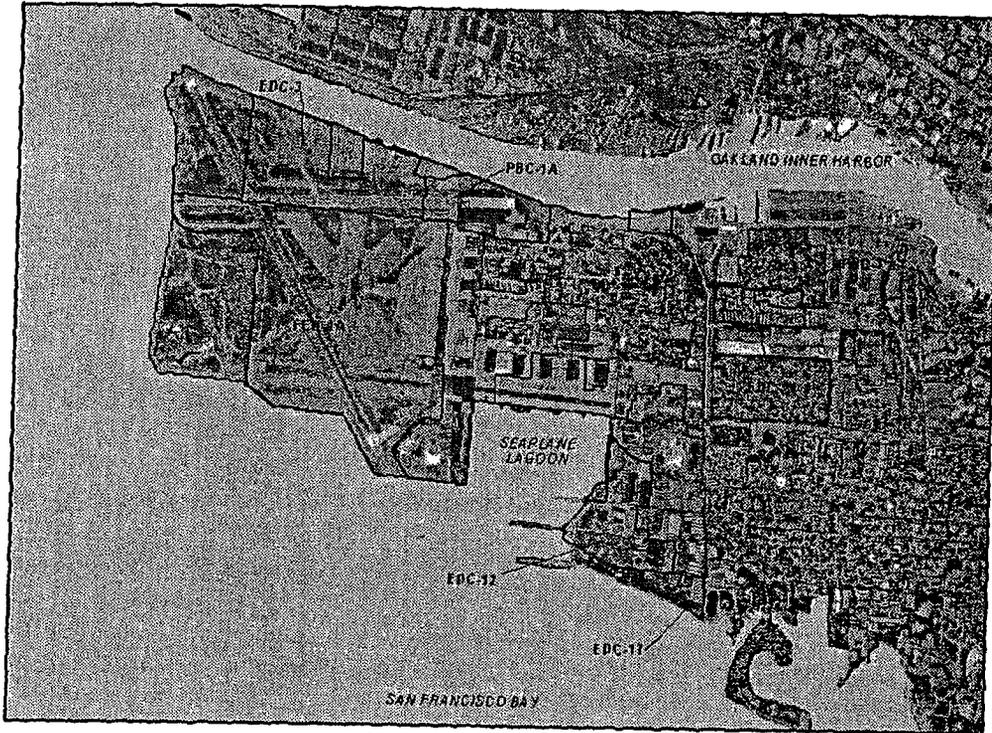
- Draft Work Plan submitted to Agencies 4/1/02
- Work Plan includes:
 - Work Plan
 - Sampling and Analysis Plan
 - Data Management Plan
 - Site-Specific Safety and Health Plan
 - Investigation Derived Waste Management Plan

PAH Work Plan

- Work Plan describes procedures for two separate but related studies:
 - PAH background determination
 - Three PAH-specific site inspections (SIs) that encompass eight parcels designed for transfer

PAH Work Plan

- Eight transfer properties included:
 - FED-1A
 - EDC-3
 - PBC-1A
 - PBC-3
 - EDC-21
 - EDC-17
 - EDC-12
 - EDC-5



Site Background

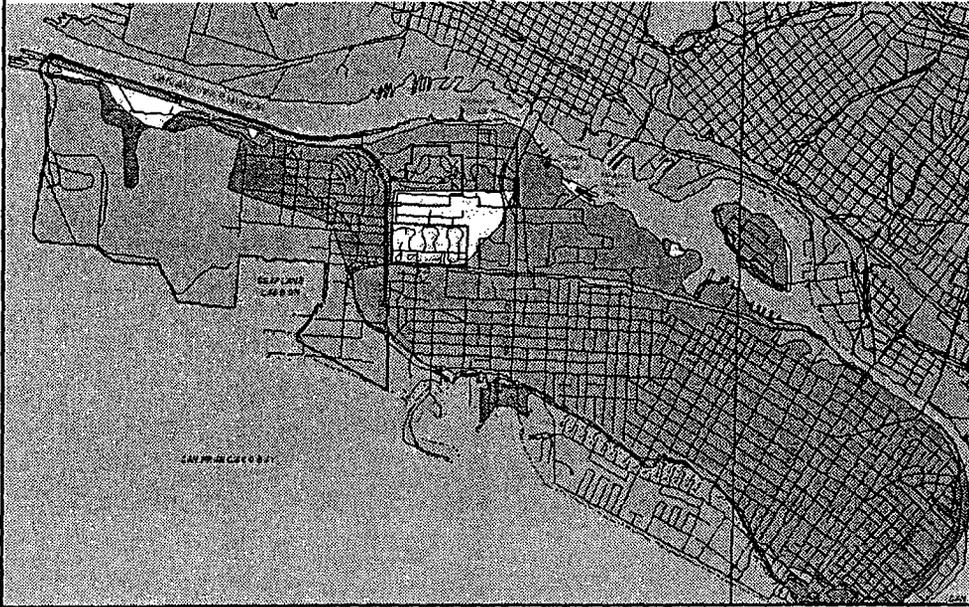
- **Industrial History of Alameda and Oakland Inner Harbor**
 - Industrial development began mid-1850s
 - Alameda Peninsula was developed as industrial and transit center
 - Industrial activities included: manufactured gas plants, refineries, coal storage units, railroad yards, asphalt industries
 - Byproducts of industries contain potential sources of PAHs

Site Background

- Fill History

- Alameda Peninsula was originally 2200 acres (4.5 by 1.5 miles)
- Dredging/Fill Events began in 1859 and continued through 1936

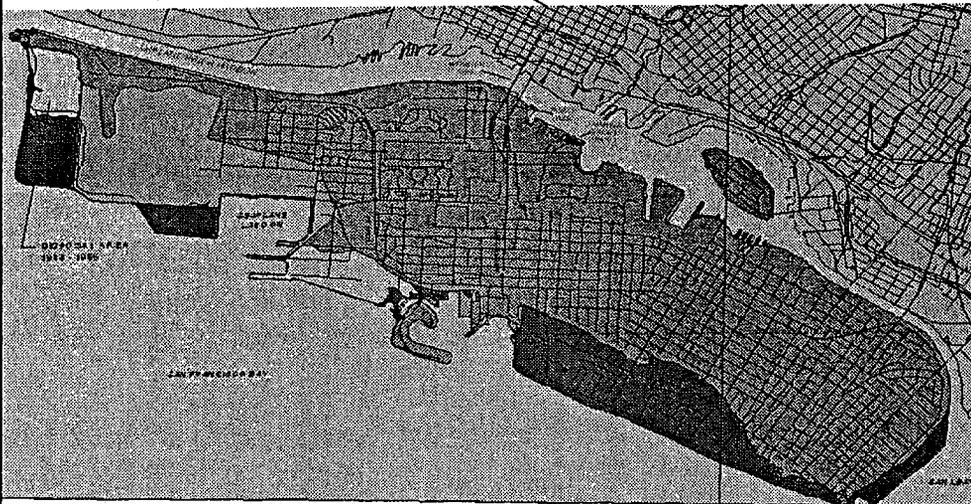
Fill History 1859 to 1936



Site Background

- Alameda Point Fill History
 - Navy began filling Alameda Point in 1936 and continued up through 1973
 - Today Alameda Island is about 6 miles long
 - It is believed that the fill material used was impacted with PAHs from former industrial activities prior to Navy development

Fill History 1936 to 1973



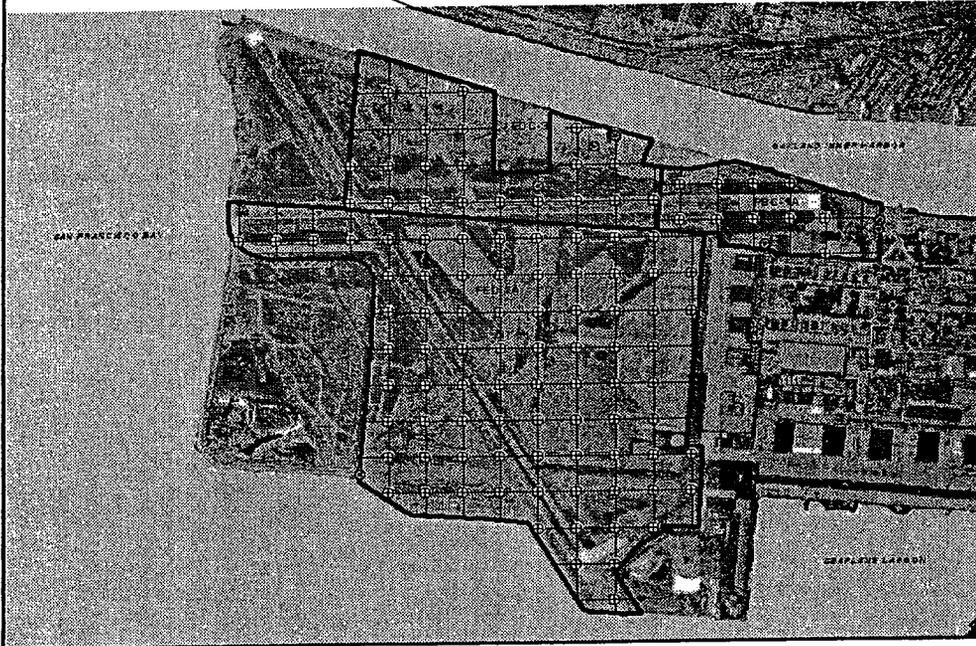
Sampling Program

- Pre-sampling activities
 - Land surveying
 - Geophysics
 - Concrete Coring
- Drilling and Sampling
 - Direct Push Drilling Techniques

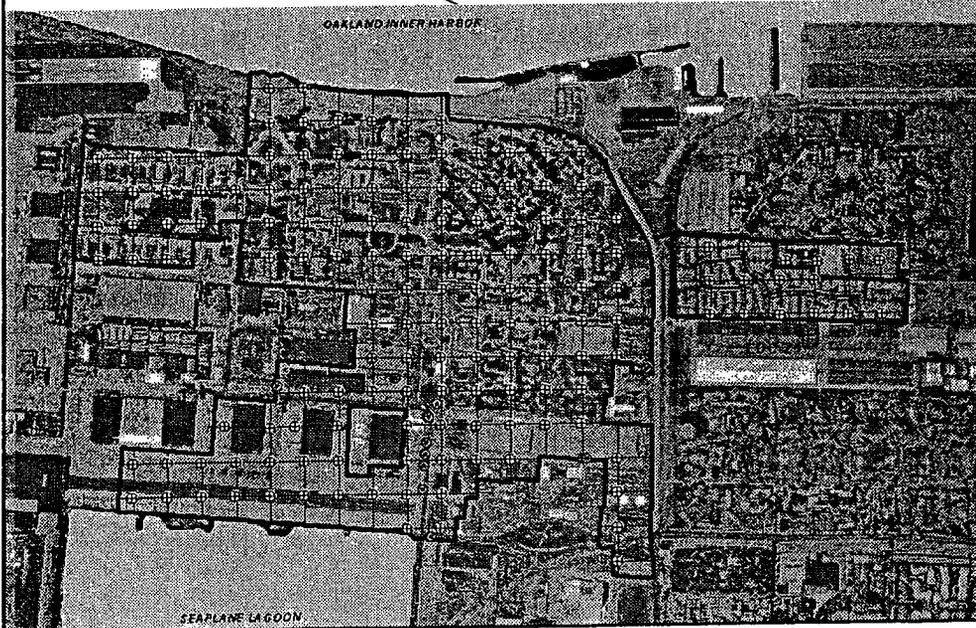
Sampling Program

- Over 300 boreholes
- Boreholes placed on a grid system across each transfer parcel
- Borehole spacing
 - 2 acre centers (areas with residential usage)
 - 5 acre centers (areas with industrial usage)

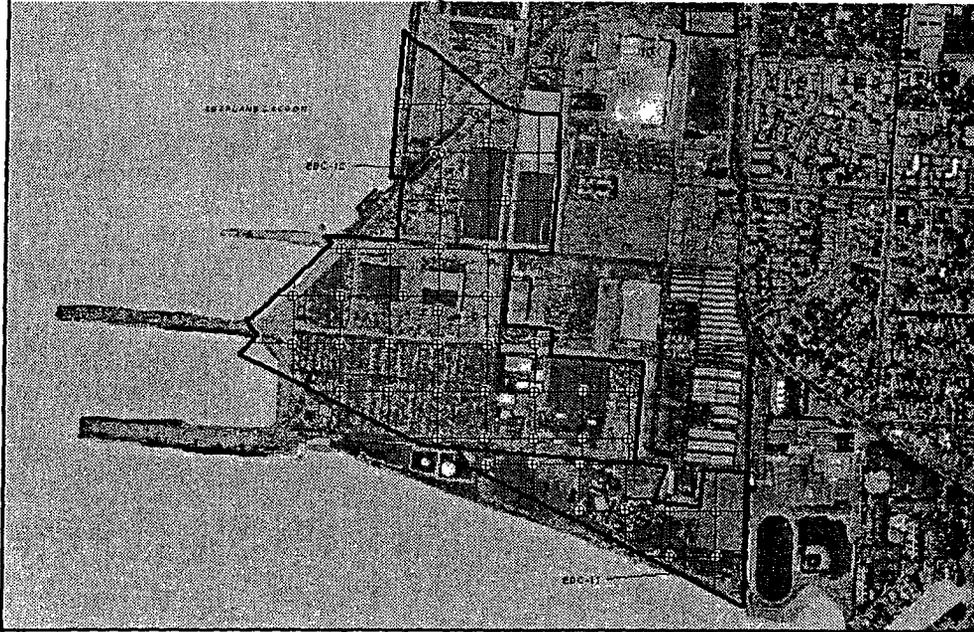
Sample Grid (FED-1A, EDC-3, and PBC-1A)



Sample Grid (EDC-5, EDC-21 and PBC-3)



Sample Grid (EDC-12 and EDC-17)



Sampling Program

- 4 samples/hole
 - 0 to 0.5 feet
 - 0.5 to 2.0 feet
 - 2.0 to 4.0 feet
 - 4.0 to 8.0 feet
- Samples will be homogenized in the field
- 1200+ samples plus QC samples

Sampling Program

- Samples will be submitted to the analytical laboratories and analyzed for PAHs via USEPA Method 8270 SIM
- Samples on rapid turn-around-time
 - 2 day preliminary results
 - 14 day results

Data Analysis and Reporting

- Convert results to benzo(a)pyrene equivalents
- Data Analysis
 - general statistics
 - graphical techniques
 - outlier tests
- Document Preparation
 - Technical Memorandum
 - 3 Site Inspection Reports

Schedule

- Draft Work Plan: April 1, 2002
- Began field activities: April 27, 2002
- Complete field activities: May 31, 2002
- Draft Tech Memorandum due to EPA:
August 23, 2002
- Draft SIs Reports to EPA: November 15,
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

TYPE: [] Contractual Deliverable [] Technical Deliverable (DS) [X] Other (TC)

VERSION: NA REVISION #: NA
(e.g., Draft, Draft Final, Final)

ADMIN RECORD: Yes [X] No [] CATEGORY: Confidential []

SCHEDULED DELIVERY DATE: NA ACTUAL DELIVERY DATE: 04/03/03

NUMBER OF COPIES SUBMITTED TO NAVY: 0/3C/4E
O = original transmittal form
C = copy of transmittal form
E = enclosure

COPIES TO: (Include Name, Navy Mail Code, and Number of Copies)

NAVY: M. McClelland (06CAMM) 0/1E
Diane Silva (05G.DS)* 3C/3E
TETRA TECH: File/Doc Control 1C/1E (w/QC)
Courtney Colvin 1C/1E
OTHER:

Date/Time Received