

**MINUTES OF
PEARL HARBOR RESTORATION ADVISORY BOARD (RAB) MEETING**

MARCH 26, 2003

AIEA PUBLIC LIBRARY

ATTENDANCE: SEE ATTACHMENT.

OPENING OF THE MEETING

Mr. John Muraoka, representing Commander Navy Region Hawaii (NAVREGHI), opened the meeting at 7:05 p.m. by introducing himself as the Navy Pearl Harbor (PH) Restoration Advisory Board (RAB) Co-Chair. Meeting participants then introduced themselves. In keeping with the tradition of asking attendees to respond to a general environmental question, Mr. Muraoka asked the question, "What is the most important environmental issue facing Hawaii?" Responses included, water and soil runoff and regulation enforcement, trash, clean water and streams, health of our reefs, overdevelopment, recycling and invasive species.

Mr. Muraoka reviewed the agenda and mentioned he will try and keep the meeting to about an hour-and-a-half.

OLD BUSINESS

Minute meetings from the Pearl Harbor RAB meeting held on 29 January 2003 were ratified.

1. RAB COMMUNITY FORUM

Mr. Mike Miura, the community Co-Chair, announced that the board had received two new membership applications that are being reviewed. He explained that in the past, the RAB community members met to review new applications based on a set of membership criteria for selecting community RAB members. The priority criteria required, 1) an organization only have one member on the RAB, 2) RAB members not sit on multiple RABs, and 3) the Pearl Harbor RAB be limited to approximately nine community RAB members. Because the number of applications for community members has changed since the criteria was established, Mr. Miura suggested that the community RAB members review the current membership criteria to determine if it still meets the needs of the current RAB and community.

Mr. Miura then introduced Mr. Tom Lenchanko as one the new applicants for PH RAB membership. Mr. Lenchanko was then given the opportunity to express his interest in becoming a RAB member. Mr. Lenchanko explained that he is very concerned about: 1) regional ground water quality and use, and 2) the preservation of Hawaiian historical and cultural resources. He hopes to work with the Navy and his local community of Wahiawa to ensure that Navy environmental restoration efforts consider these concerns. RAB members then asked Mr. Lenchanko a few questions about his interest in joining the PH RAB:

QUESTION: Are you a member of any other RAB?

ANSWER: Yes; I am on the Central Oahu RAB, formerly known as the "Wahiawa RAB."

QUESTION: Are you also a member of any community neighborhood board or group?

ANSWER: Yes; I serve on the Whitmore Community Association and the Hawaiian Civic Club of Wahiawa.

QUESTION: You have also applied to serve on the Waianae RAB; please explain.

ANSWER: I am concerned about local and regional environmental issues related to all of the Hawaiian Islands. I am particularly concerned about cultural resources that are sacred to all Hawaiians no matter where they happen to be located.

COMMENT: Your RAB application indicates that you wish to participate in the process to transfer Navy land back to the State of Hawaii. However, the RAB deals mostly with environmental issues, not transfer and cultural issues.

[The RABs support the Navy Installation Restoration (IR) Program. This program does not typically deal with property transfers. Land transfers are primarily conducted under the Navy Base Realignment and Closure (BRAC) program.]

RESPONSE: I believe that environmental and cultural resources are related. Hawaiian cultural values are tied very closely with the land and environment.

Several RAB participants expressed similar sentiments. It was also stated that federal and state laws require the Navy to consider potential impacts to cultural resources when conducting environmental restoration activities.

The RAB then approved Mr. Lenchanko membership on the PH RAB.

Mr. Miura stated that the PH RAB had recently gained a new member. However, this member had failed to attend any of the RAB meetings. Mr. Bill Roome, NAVREGHI Environmental Public Affairs Office, offered to contact this member to encourage him/her to participate in the meetings.

2. TECHNICAL PRESENTATIONS

2.1. SUMMARY OF INSTALLATION RESTORATION ACTIVITIES AT PEARL HARBOR NAVAL COMPLEX (PHNC) — MR. PETER NAKAMURA (PACIFIC DIVISION, NAVAL FACILITIES ENGINEERING COMMAND)

Mr. Nakamura introduced himself and explained that, per a request from the RAB, the Navy will now provide a short status report of all IR activities recently completed or on-going at the PHNC and Naval Magazine (NAVMAG) Waikele. Mr. Nakamura then presented maps showing the locations of all NAVREGHI installations and the various geographic study areas (GSAs) within the PHNC and NAVMAG Waikele. He also mentioned that there would be a RAB meeting in

late-April for Navy-retained lands at the former NAS Barbers Point. The Navy will also be reactivating the Pacific Missile Range Facility (PMRF) Kauai RAB in the near future.

Mr. Nakamura then presented a summary of Navy restoration activities and their current status in the following PHNC GSAs: Shipyard, Halawa-Main Gate, Pearl City Peninsula, Ford Island, West Loch, Waipio Peninsula, and other areas such as the Former Aiea Laundry, Former Manana/Pearl City Junction (PCJ), Red Hill Oily Waste Disposal Facility, and the marine sediments of PH. Sites being investigated by the Navy in these GSAs include, but are not limited to: landfills, transformers, fuel pipelines, underground storage tanks (USTs), industrial facilities, a metal foundry, a former dry cleaning facility, areas contaminated by subsurface oil, and contaminated marine sediment in PH. Highlights of Mr. Nakamura's presentation and related public inquires are summarized below:

PHNC Subsurface Oil Projects (various locations). The Navy is currently operating fuel extraction systems at Magazine Loch, Quarry Loch, Hotel Pier, NEX Gas Station, Building 8, and Oscar 2 Pier. The Navy has made a lot of progress in its cleanup efforts, but has encountered obstacles such as the viscosity of the fuel product. To date, these systems have removed approximately 50,000 gallons of product, thus preventing it from reaching the harbor.

Building 6 Foundry (Shipyard). The Navy completed additional investigation activities at the site about four months ago and is preparing a draft "Expanded SI" report. This report should be available to the public for review in April 2003.

QUESTION: Why did the Building (Bldg.) 6 SI need to be expanded?

ANSWER: Because the State of Hawaii Department of Health (HDOH) requested that more sampling be conducted.

QUESTION: Was this additional sampling required because new (i.e., different) contaminants were found?

ANSWER: No; it was required to further delineate the extent of contamination discovered at the site. The initial SI just covered one large paved area in one portion of the building. The Navy and DOH wanted a better understanding of the extent of contamination throughout the site.

Building 394 Former Battery Acid Pit (Shipyard). The Navy is preparing a final report that discusses the effectiveness of electrokinetics soil treatment conducted at this site. The study found that the pilot treatment system effectively removes lead from subsurface soils, but the power costs of operating the treatment unit are very high. The upcoming Engineering Evaluation and Cost Analysis (EE/CA) study may evaluate the use of other treatment methods (e.g., stabilization/solidification) to address contamination at the site.

Oahu Sugar Company (OSC) Herbicide/Fertilizer Mixing Area (Waipio Peninsula). The draft remedial investigation (RI) report prepared by Brewer Environmental Services is currently under review by regulatory agencies and the Navy and is available for public review. The Navy and USEPA will submit comments on the report to HDOH.

[The DOH issued an Administrative Order to OSC to investigate and cleanup the site. The Navy is involved in reviewing OSC's reports since the property is Navy-owned and was formerly leased to OSC at the time that chemical releases occurred.]

The draft OSC report is available for public inspection at the administrative file repository (i.e., the Pearl City Public Library and the University of Hawaii Hamilton Library, Hawaiian and Pacific Collection). A copy of the report can also be obtained by contacting the Health Department's Environmental Planning Office (919 Ala Moana, Room 312) at telephone number 808-586-4337. A copy of the RI report was also provided by the Navy to the PHNC RAB for review.]

QUESTION: What is the HDOH deadline for receiving comments on this draft RI report?

ANSWER: Comments are generally submitted within sixty days after publication of the draft report.

Waipahu Ash Landfill (Waipio Peninsula). The City and County of Honolulu (City) will construct a cap over the landfill in accordance with federal and state municipal solid waste landfill regulations. The Navy is working with the HDOH and City to develop a Memorandum of Understanding (MOU) to define the City's responsibilities under CERCLA/NCP (since most of the landfill is within the PHNC NPL site), particularly investigating and addressing potential off-site contamination that may have migrated from the landfill.

PH Sediment Study. The Navy is conducting the risk characterization phase of the baseline human health and ecological risk assessment. In response to a request from the RAB, a list of chemicals tested for in harbor sediments and a map showing the distribution of Polychlorinated Biphenyls (PCBs) concentrations in the harbor were provided to meeting attendees.

[Note that a high concentration of a chemical in harbor sediment does not necessarily indicate that the chemical presents a threat to human health or the environment. Other risk factors to consider are the chemical's toxicity, the rate of exposure to the chemical, bio-availability of the chemical, and ability for the chemical to bioaccumulate in ecological receptors. The risk assessment will consider these factors and determine realistic health risks associated with the contamination. These risks will be presented as ranges of hazard quotient numbers overlaid on a map of the harbor.]

QUESTION: Is the chemical list shown on the handout site-specific or generic to all Navy environmental investigation sites?

ANSWER: The list is site-specific based on historical use of the harbor and surrounding lands and what contaminants may have been released into the harbor.

[The project team first conducted a thorough survey of known chemical releases and industrial, commercial, and residential activities and processes conducted upgradient of the harbor and within Navy installation areas. Chemicals typically associated with these activities were then identified and included in the analytical program. This list was developed from the input of the cleanup team, scientists, regulators, natural resource trustees, and the public.]

COMMENT: On the map there is a "hot-spot" of PCBs located near Bishop Point and the Hickam Air Force Base. The U.S. Air Force has stated at its RAB meetings that it is not a potential responsible party for PCBs in the harbor. However, the Air Force has outfall pipes that discharge treated wastewater near the hot-spot location. This discharge may be the source of the PCB contamination.

RESPONSE: The "hot-spot" is located on Navy property. Therefore, the Navy is conducting the sampling and risk assessment associated with this area. Study data may later show that the PCBs are originating from non-Navy sources. The Navy and Air Force are conducting various environmental studies of the potential contaminant inputs into the harbor in collaboration with one another.

QUESTION: When will the Waikele Watershed Total Daily Maximum Load (TDML) report be published?

ANSWER: It may be delayed until the end of March. The project team for the PH sediment study has a great interest in the TDML data and how it might relate to environmental conditions in the harbor.

[Per HDOH, the final draft Waikele Watershed TDML report has been submitted for agency review; it is not yet available for public review. The anticipated publication date for this report is not known.]

TDML reports for other Hawaii streams are available for public inspection at the Health Department's Environmental Planning Office, 919 Ala Moana, Room 312. A copy of these reports can be obtained by calling telephone number 808-586-4337 or going online at www.hawaii.gov/health/eh/epo. Additional information regarding the Waikele watershed can be found at: <http://www.aecos.com/CPIE/WaikeleStr.html>]

Mr. Nakamura also reviewed the status of several investigation and remediation sites at NAVMAG Waikele. These sites include former USTs and transformer locations, a burn pit disposal area, and a small arms range. Cleanup activities and documentation for the bluff area sites at Waikele will be completed this year. The Navy plans to transfer the bluff portion of its Waikele property in late 2003 to a private developer as part of the Ford Island Development Project. Cleanup of the gulch areas should be completed by 2005 and transferred to the Ford Island developer. As required by CERCLA, the Navy will be responsible for any investigations and clean up actions that become necessary in the future (e.g., if new contamination is discovered). Highlights of the NAVMAG Waikele presentation and related public inquiries are summarized below:

UST 76, Small Arms Range, Bldg(s). 13 and 21 (Auto Shops). Removal actions have been completed at these bluff area sites. The Navy is now preparing post-cleanup and closeout documents. A public meeting to discuss the Proposed Plan for these sites is tentatively scheduled for June 2003.

QUESTION: When will the guard towers be dismantled?

ANSWER: The property will probably be transferred to the state "as-is" without dismantling the guard towers. The Navy will provide notice in the transfer documents on the potential presence of such items as lead paint asbestos containing materials.

USTs 50/51 and Bldg. 21: The tanks and contaminated soils have been removed from the site. The Navy is preparing draft planning documents for further investigation of the sites due to groundwater contamination discovered beneath the Bldg. 21 site.

QUESTION: Has the Navy tested for perchlorate at any of the environmental investigation sites? This chemical is commonly used as rocket propellant and is a problem in California at investigation sites where munitions were previously stored.

ANSWER: The Navy tests for perchlorate in environmental media where munitions, thought to contain this chemical, were stored or used. To date, perchlorate has only been suspected to be present at the Former Rocket Test Facility (Buildings 472 & 473) located at NAVMAG Lualualei. Perchlorate was tested for, but not detected in soil samples collected at this investigation site.

QUESTION: When will the Navy conduct the next public site visit?

ANSWER: There is no site visit currently scheduled. The Navy recently conducted a site tour to a fuel recycling facility, bilge water treatment facility, and the the aviation gasoline (AVGAS) pipeline restoration project on Ford Island. Feedback from the tour participants was very positive. The Navy is happy to arrange additional site visits to investigation sites, possibly on a quarterly basis. Please let us know if there are any particular sites you would like to visit.

QUESTION: Can the Navy arrange a tour to the Red Hill Fuel Storage Facility?

ANSWER: Possibly. We will inquire about the current security issues of such a visit.

COMMENT: Another RAB participant suggested a site visit to the NAVMAG Waikale.

2.2 UPDATE ON CONSOLIDATED PCB THERMAL TREATMENT PROJECT, VARIOUS LOCATIONS, OAHU, HAWAII — Ms. JANICE FUKUMOTO, (REMEDIAL PROJECT MANAGER, NAVAL COMPUTER AND TELECOMMUNICATIONS AREA MASTER STATION PACIFIC [NCTAMS PAC])

Ms. Fukumoto introduced herself and summarized Navy efforts to clean up the many small, localized areas of PCB contamination found in soil and concrete (hereinafter, referred to collectively as "soil") near old transformer sites at Navy Installation Restoration sites on Oahu. As part of these efforts, the Navy conducted an Engineering Evaluation/Cost Analysis (EE/CA) to evaluate various methods of treating PCB-contaminated soil. Based on this EE/CA, the Navy recommended to excavate contaminated soil, consolidate this soil in stockpiles at two central locations, and use thermal desorption (i.e., heat) technology to treat the soil.

Ms. Fukumoto presented a map showing the general location of the cleanup sites. Excavated soils will be identified as originating from "Group A," "Group B," or "Group C" transformer sites. Group designations indicate where the soil was removed from and when it was removed (not the types or concentrations of contamination found in the material). Approximately 5,600

cubic yards (cy) of soil have already been excavated from 21 Group A transformer sites and are stockpiled at former Naval Air Station (NAS) Barbers Point and Naval Radio Transmitting Facility (NRTF) Lualualei awaiting to be treated. Contaminated soil has been delineated at 28 Group B investigation sites, but has not yet been excavated. It is estimated that approximately 7000 cy of soil will be removed from these sites. Contamination at 48 Group C sites is still being delineated. It is estimated that approximately 13,000 cy of soil will be removed from the Group C sites. In total, roughly 26,000 cy of soil will be excavated from the various cleanup sites for stockpiling and subsequent treatment.

Ms. Fukumoto then briefly explained the Navy's PCB delineation and excavation process at the Group C investigation sites. Soil at suspected PCB sites are first sampled to delineate the horizontal and vertical extent of contamination. Based on the analytical results from these sampling events, contaminated soil will be excavated from the sites. After excavation, the soil in the pit is sampled and analyzed to confirm that PCBs have been removed to cleanup levels of ≤ 1 parts per million (ppm) where the site will be used for residential purposes or ≤ 10 ppm where the site will be used for industrial purposes. PCB-contamination has generally been found to depths ranging from 2 to 6 feet below the ground surface at the investigation sites.

Excavated soil and debris is being consolidated into stockpiles on Navy-retained property at the former NAS Barbers Point and NRTF Lualualei. The Navy plans to transport contaminated soils to a treatment area located near the west border of the former NAS Barbers Point and treat them using thermal desorption technology. A contractor has been hired to install and operate a treatment unit beginning in August 2003. The treatment activities are expected to be completed around December 2004 and will reduce PCB levels in soil to ≤ 1 ppm. Ms. Fukumoto presented a schematic explaining the treatment process and a map showing the general location of the planned treatment unit. She then presented a schedule of the treatment project.

[PCBs are oily liquids consisting of chlorine atoms that are attached to biphenyl. PCBs were commercially produced in the U.S. from 1929 until their production was legally banned under the Toxic Substances Control Act (TSCA) in January 1979. They are not known to occur naturally.]

QUESTION: What type of soil affects the mobilization of PCBs?

ANSWER: PCBs tend to be relatively more mobile (i.e., they can migrate slightly more) in sandy, coarse-grained soil and less mobile in clayey, fine-grained soil. However, the ability of PCBs to migrate may depend on other factors such as the volume of the spill and erosion and runoff processes that occur at the site.

[In general, PCBs do not migrate readily under most conditions. PCBs with fewer chlorine atoms are more water soluble and likely to migrate to due rainfall infiltration and leaching process; PCBs that are tightly sorbed by soil remain significantly immobile against leaching.]

Site characteristics may also determine the potential of PCBs to migrate. For example, PCBs in an oil spill will be mobile if the released volume is large enough to physically move a significant distance from the source. Soil density, particle size distribution, organic carbon and moisture content, and permeability may also affect the mobility of PCBs.]

QUESTION: Does the excavated soil contain other chemicals in addition to PCBs?

ANSWER: Based on the use and history of the transformer sites, other chemicals are not expected to be present. Therefore, at most investigation sites, soil samples were only tested for PCBs. However, some of the Group A stockpiled soil contains low concentrations of Polynuclear Aromatic Hydrocarbons (PAHs) due to activities unrelated to transformers. Soils known to contain PAHs will be tested after treatment to confirm that cleanup goals were achieved.

[Some of the stockpiled soil also contains chlordane, and total petroleum hydrocarbons [TPH] as diesel and motor oil. In addition, contaminated soil located at the former drum crushing area at former NAS Barbers Point also contains pesticides and arsenic concentrations greater than applicable regulatory criteria; this soil will not be treated on-island and instead will be transported to a mainland treatment and disposal facility.]

QUESTION: Will the thermal desorption treatment unit remove PAHs from the soil?

ANSWER: Yes; it should since the boiling point of PAHs [a semi-volatile chemical] is less than that of PCBs. The treatment unit should also remove other chemicals if they are present in the soil. The soil will be tested after treatment to confirm that PCBs, PAHs, and other chemicals of potential concern have been reduced to levels that are safe for human health and the environment.

QUESTION: What will be done with the excavated soil once it has been treated?

ANSWER: It will be used as backfill at its original excavation site or at a coral pit located adjacent to the treatment area.

QUESTION: Why is a temporary [and not a permanent] treatment site being planned?

ANSWER: The treatment unit is a mobile unit owned by the contractor hired to treat the soils. The treatment unit is currently in Saipan and will be transported to Hawaii around August 2003. Once the soils are treated, the contractor will remove the unit from the site.

QUESTION: What is the production rate of the treatment unit?

ANSWER: The unit can treat an average of 7 cy per hour or 160 cy per day.

[This is roughly equivalent to 10 tons per hour or 240 tons per day.]

QUESTION: What is the down time for the treatment unit?

ANSWER: The unit is designed to work 24 hours per day, seven days a week, except when maintenance or repair is required. Historically, the unit has been operating about 85 percent of the time.

QUESTION: Can the thermal desorption unit handle the 26,000 cy planned for treatment?

ANSWER: Yes; this is a mid-range amount of soil for this type of treatment unit.

QUESTION: Is the treatment area located adjacent to the Barbers Point Elementary School?

ANSWER: No. [The location of the school relative to the treatment area was identified on a map of former NAS Barbers Point.]

[The school is located about 4,500 feet north-northeast of the treatment site and should not be affected by the treatment operation.]

QUESTION: Are the soil stockpiles located within the white area shown on the map?

ANSWER: No; the stockpiles are or will be located near the planned treatment unit area at former NAS Barbers Point and at NRTF Lualualei (approximately 15 miles northwest of the former NAS Barbers Point treatment site). The white area on the map identifies land that has been transferred from the Navy to other federal agencies or the state and City and County of Honolulu.

QUESTION: Are the stockpile areas lined [to prevent the downward migration of PCBs]?

ANSWER: Yes; the stockpile areas are lined, covered with plastic, and surrounded by a berm to prevent such migration.

QUESTION: Will the coral pit area designated to receive treated soil also be lined?

ANSWER: No; a liner is not required because the soil will be treated to levels that are safe for human health and the environment (i.e., ≤ 1 ppm).

[The treatment unit shall also treat contaminated soil to the following criteria determined to be safe for human health and the environment:

<i>TPH (as diesel and motor oil)</i>	<i>60 mg/kg</i>
<i>Benzo(a)pyrene (a fuel constituent)</i>	<i>0.062 mg/kg</i>
<i>Benzo(b)fluoranthene (a fuel constituent)</i>	<i>0.62 mg/kg</i>
<i>Chlordane (Total, Alpha-, and Gamma)</i>	<i>1.6 mg/kg]</i>

QUESTION: How many years does it take for PCBs to break down?

ANSWER: It can take many years for PCBs to naturally break down. However, the cleanup goal of 1 ppm is considered safe for any future planned land use.

3. OPEN DISCUSSION ON TECHNICAL PRESENTATIONS AND OTHER ISSUES

Mr. Miura opened the meeting to other questions and discussion.

QUESTION: Does the Navy have inactive (or "mothballed") ships in PH? Are they contributing to the contamination in the harbor?

ANSWER: Yes; there are inactive ships anchored in the harbor. The environmental impacts from these ships were investigated during the PH sediment study and it was discovered that some of the ships are releasing metals to the harbor.

COMMENT: Mr. Miura explained that in the past, inactive U.S. ships have been transferred to foreign countries for metal recycling. However, this practice often resulted in the contamination of foreign land and is now discouraged. The federal government is currently searching for other methods of ship disposal [*also known as "ship scrapping"*].

[A new federal program now provides grant money to states that wish to decontaminate inactive ships and sink them to make artificial reefs.]

COMMENT: At previous RAB meetings, participants questioned whether Navy IR funding supports Hawaii-based companies. In response, Mr. Nakamura stated that of the \$15 million awarded in Fiscal Year (FY) 2001 to FY 2002 to Earth Tech, Inc. and its local subcontractors for environmental investigation and remediation design, approximately 75 percent (%) of this money had been spent in Hawaii. About 25% of the funds were awarded to mainland analytical laboratories since there are no local laboratories that meet the federal standards for operation and data quality that are required for the Navy IR program.

During the same period, about \$20 million was awarded to Shaw Group, Inc. and its local subcontractors for remediation activities. Approximately 94% of these funds were spent in Hawaii.

Mr. Nakamura stated that the Navy could arrange for community members to meet with Navy contract personnel to provide additional IR contract information. Mr. Miura encouraged subcontractor participants to contact the Navy contracts department rather than RAB members for contracting information. He also reiterated his desire for shorter RAB meetings.

The meeting was adjourned at 9:05 p.m.

[The Navy posts RAB meeting minutes and other IR information on the Navy environmental restoration website: <http://www.hawaii.navy.mil/CNBDATA/n4/rabpage.htm>.]

LIST OF ATTENDEES
PEARL HARBOR RESTORATION ADVISORY BOARD (RAB) MEETING
MARCH 26, 2003
AIEA PUBLIC LIBRARY

<u>NAME</u>	<u>ORGANIZATION</u>
Mr. Ron Boyle	Earth Tech
Ms. Kat Brady	Life of the Land
Mr. David Cavagnol	ECC
Mr. Henry Curtis	RAB member, Life of the Land
Mr. Paulo Fujishiro	Uku Mehame, Maui
Mr. Kyle Kajihira	RAB member, American Friends Service Committee
Mr. Tom Lenchanko	Central Oahu RAB, Hawaiian Civic Club Wahiawa
Mr. Mike Miura	RAB community co-chair
Mr. Mike Miyasaka	RAB member, Hawaii State Department of Health
Mr. Mike Muraoka	RAB Navy co-chair, Commander Navy Region Hawaii
Mr. Peter Nakamura	Pacific Division, Naval Facilities Engineering Command, Commander Navy Region Hawaii
Mr. Jim Naylor	RAB community member
Dr. Ross Prizzia	RAB community member
Mr. Bill Roome	Commander Navy Region Hawaii
Mr. Al Streck	RAB community member
Mr. Ken Vinson	Earth Tech
Mr. Leighton Wong	Pacific Division, Naval Facilities Engineering Command