

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

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

February 2, 2006

The following participants attended the meeting:

Co-Chairs:

Thomas Macchiarella	Base Realignment and Closure (BRAC) Program Management Office (PMO) West, BRAC Environmental Coordinator (BEC), Navy Co-chair
George Humphreys	Restoration Advisory Board (RAB) Community Co-chair

Attendees:

Jim Barse	Community Member
Andrew Baughman	BRAC PMO-West, Remedial Project Manager (RPM)
Doug Biggs	Alameda Point Collaborative (APC) Representative
Neil Coe	RAB
Anna-Marie Cook	U.S. Environmental Protection Agency (EPA)
Tommie Jean Damrel	Tetra Tech EM Inc. (Tetra Tech)
Robert De Luca	RAB Alternate for Ardella Dailey
Leora Feeney	Golden Gate Audubon Society
Jamie Hamm	Sullivan International Group (Sullivan)
Judy Huang	Regional Water Quality Control Board (Water Board)
Craig Hunter	Tetra Tech
Terry Iwagoshi	Weston Solutions
Elizabeth Johnson	City of Alameda
John Kaiser	Water Board
Joan Konrad	RAB
James D. Leach	RAB
Marcia Liao	Department of Toxic Substances Control (DTSC)
Patrick Lynch	Community Member
John McMillan	Shaw Environmental and Infrastructure Inc. (Shaw)

Bert Morgan	RAB
June Oberdorfer	Golden Gate Audubon Society
Tom Pleyton	APC
Claudia Richardson	BRAC PMO-West, RPM
Mark Ripperda	EPA
Christy Smith	U.S. Fish and Wildlife Service (USFWS)
Dale Smith	RAB/Sierra Club/Audubon Society
Jean Sweeney	RAB
Jim Sweeney	RAB
Michael John Torrey	RAB/Housing Authority of the City
Travis Williamson	Battelle

The meeting agenda is provided in Attachment A.

MEETING SUMMARY

I. Approval of Minutes

Mr. Humphreys called the meeting to order at 6:30 p.m.

Mr. Humphreys asked for comments on the minutes from the RAB meeting held on January 5, 2005.

Mr. Humphreys and Ms. Huang provided the following comments:

Mr. Humphreys comments

- Page 3 of 8, Section III, first paragraph; third sentence, the “and” before “Building 410 (Site 9)” will be deleted.
- Page 3 of 8, Section III, second paragraph; third sentence, the word “monitoring” will be deleted from the sentence.

Ms. Huang’s comment

- Ms. Huang’s name will be added to the list of attendees on the previous month’s meeting minutes.

Mr. Humphreys asked if changes made during the meeting to previous month’s meeting minutes are reflected in the minutes or only in the meeting minutes for that month. Mr. Macchiarella responded that the previous month’s minutes are changed; the final minutes are posted on the Navy’s website and are ultimately part of the information repository.

II. Co-Chair Announcements

Mr. Humphreys handed out a list of reports and correspondence received by the RAB during January (Attachment B-1). The most significant report is the draft final feasibility study (FS) for Installation

Restoration (IR) Site 1. He also noted that EPA, the Water Board, and DTSC have all commented on the draft FS for IR Site 27, Dock Zone.

Mr. Macchiarella noted that DTSC plans to submit a request for a schedule extension for review of the draft remedial investigation (RI) report for IR Site 2. This extension will delay the comment period by 15 days from February 6, 2006.

Mr. Macchiarella also announced that he needed to leave at 8:30 because of a prior engagement.

III. Draft Remedial Investigation Report for IR Site 2 Presentation

Mr. Baughman presented the draft RI report for IR Site 2. A handout was provided and is included as Attachment B-2. The outline for the presentation (Slide 2) includes discussion of the RI, general characterization, dry and wet season sampling, the nature and extent of contamination, the risk assessment, and the schedule, which has now changed as a result of a request by DTSC for an extension of the review period. Slide 3 shows a site map of the IR Site 2 landfill, located near the southwestern corner of Alameda Point. The purposes of the RI (Slide 4) were to enhance the existing dataset, evaluate the nature and extent of contamination, complete a human health risk assessment (HHRA) and ecological risk assessment (ERA), provide a basis for remedial action in the future, and implement all work in accordance with the final RI sampling work plan. The scope of the RI (Slide 5) included a preliminary field characterization with a general surface water quality assessment, geophysical surveying, and radiological surveying. The scope also included RI field sampling during the wet and dry seasons. Slide 6 presents a table that shows the types and number of samples collected from the landfill and wetland areas of the site and number of reference samples collected from China Camp State Park (CCSP) and Alameda Point background areas.

A water quality assessment (Slide 7) of the northern and southern ponds was conducted between July 2004 and March 2005 to evaluate the variability of the two on-site ponds. Parameters monitored included temperature, depth, dissolved oxygen, turbidity, pH, and salinity. The dissolved oxygen in the ponds is highly variable, with extreme highs and lows, and is the reason the Navy believes that there are not many species living in the ponds. Other field characterization activities (Slide 8) included a radiological survey to characterize the depth and presence of radium 226, geophysical surveys for below-ground metal anomalies or discrete disposal areas, and exploratory trenching based on the geophysical survey. Slide 9 depicts a map of the site showing the trenching locations; a video clip of trenching was shown with Slide 9.

Mr. Williamson discussed the dry- and wet-season sampling (Slide 10). Dry-season sampling included soil and groundwater in the landfill and wetlands, and sediment and surface water in the wetland ponds. The wet-season sampling included additional soil and groundwater in the landfill, sediment and surface water in the wetland ponds, tissue in landfill and wetlands, toxicity and bioaccumulation testing, and reference area sampling. Slide 11 shows Site 2 sampling locations and photographs of field personnel collecting the various types of samples.

The nature and extent of contamination is summarized on Slide 12. General trends in the data included more widespread occurrence of contaminants in the landfill compared with the wetland, more widespread occurrence of contaminants in subsurface soil as compared with surface soil, and more widespread occurrence of contaminants in the first water-bearing zone as compared with the second. Additionally, the wetlands appear to be relatively unaffected by contaminants. Overall conclusions for the site include a diffuse and widespread occurrence of contaminants throughout media rather than in discrete hot spots. Certain compounds, such as lead, exhibited hot spot behavior, and certain other compounds are likely

attributed to naturally occurring elements. Based on the investigation, it appears that the suspected discrete waste locations do not present a clear contaminant source for the site.

The HHRA (Slide 13) includes a contaminant of potential concern (COPC) screening that identified all chemical compounds that exceeded regulatory comparison criteria. The COPC screening was followed by a Tier 1 assessment that evaluates whether a site can be used for unrestricted use. Mr. Williamson said that the Tier 1 screening used the maximum concentrations of detected contaminants and concluded that the site was not suitable for unrestricted use. This initial screening further indicated that a baseline risk assessment (BRA) was needed for the site. A vapor intrusion assessment also was conducted using concentrations of volatile organic compounds (VOCs) in samples of soil gas vapor that were collected at the site. The conceptual site model (CSM) (Slide 14) for the project identified potential receptors that might be affected by on-site contaminants. The receptors were modeled based on recommendations that had been issued by DTSC in regard to a similar site in southern California.

Slide 15 shows the cancer risks calculated in the BRA for each receptor in both the wetland and landfill. The receptor with the highest cancer risk would be a park ranger/tour guide. Slide 16 shows the noncancer risks identified in the BRA for each receptor. The receptor with the highest noncancer risk is a construction/excavation worker. Ms. Konrad asked about the types of contaminants that are considered noncancerous. Mr. Ripperda and other regulators identified metals such as arsenic and lead. Mr. Humphreys asked if the Navy identified areas in the wetland where waste from the Seaplane Lagoon was deposited. Mr. Williamson replied that the RI did not evaluate this area; instead, samples were collected over most of the wetland area. Ms. Smith asked why a site visitor would have greater cancer risk than a park ranger. Mr. Williamson replied that a site visitor receptor includes a child receptor, which would have a lower threshold tolerance for on-site contaminants. The HHRA (Slide 17) concluded that arsenic appears to be a naturally occurring constituent, that some of the organic compounds identified as risk drivers in soil might be related to non-Navy anthropogenic sources, and that levels of radium-226 in the wetland appear comparable to background concentrations at Alameda Point.

The approach for the ERA (Slide 18) included selecting appropriate habitat types and receptor categories for the upland, wetland, and wetland pond habitats. The approach then selected the representative receptors, such as a red fox for carnivorous mammals and least sandpiper for benthic-feeding birds. Exposure pathways include root contact with soil, ingestion of soil or food, and inhalation. The screening-level risk assessment concluded that further evaluation of specific combinations of receptors and contaminants was needed (see Slide 19). The BRA incorporated more realistic exposure assumptions, contaminant concentrations, and ecological effects thresholds. The BRA also calculated baseline hazard quotients and estimated ambient exposure and associated risk.

Results of the toxicity and bioaccumulation testing (Slide 20) revealed that the survival rate of test organisms exposed to on-site pond sediment indicated that the sediment was non-toxic. The survival rate and growth of test organisms exposed to pond surface water indicated nontoxic acute and chronic response. Additionally, the 28-day bioaccumulation test of sediment and soil indicated generally acceptable survival of test organisms. However, clam survival was below the threshold criteria in both control samples and clam and worm survival was at 0 percent for one sediment sampling location in the South Pond (SED16). The reason for the low clam control survival is not known. The sediment sample from SED16 had the highest initial porewater salinity of any sediment sample that was evaluated during the testing. While porewater salinity adjustments were made prior to the testing, it is hypothesized that the high level of porewater salinity in SED16 affected clam and worm survival for the sample.

The results of the ERA (Slide 21) indicated potential risk drivers for at least one ecological receptor in the landfill, wetland, and pond. The highest hazard quotients were for chromium, lead, mercury, nickel, high molecular weight polycyclic aromatic hydrocarbons (PAH), and total dichlorodiphenyldichlorethane,

dichlorodiphenyltrichloroethane, and dichlorodiphenyldichloroethylene (DDD/DDT/DDE). Several of the compounds that were determined to be potential risk drivers at the site were also compared to the background reference media at Alameda Point and CCSP. Considerations associated with the ERA (Slide 22) include inherent conservatism, incomplete pathways (because no fish were observed in the ponds) and the background assessment. One fish was observed near the culvert but could not be caught for analysis. Furthermore, the toxicity and bioaccumulation results provide direct evidence of the lack of ecological toxicity in pond surface water and sediment. Uncertainties associated with the ERA included exposure assessments and effects assessments; toxicity data; and surrogate species data.

Slide 23 shows the schedule for the report; agency and RAB comments are due to the Navy by February 6, 2006; the draft final RI report will be issued April 7, 2006, followed by the final RI report on May 8, 2006. However, this schedule will be delayed by the DTSC review extension of 15 days.

Mr. Humphreys asked why background samples were collected from CCSP. Mr. Williamson replied that the ecosystem at CCSP is similar to IR Site 2 and relatively uncontaminated media were used to compare reference concentrations. Ms. Sweeney asked about the method that was used to search for buried metal drums. Mr. Williamson responded that a geophysical survey was conducted using electromagnetic equipment attached to a trailer. The equipment can detect metal anomalies 8 to 10 feet below ground surface and would cover the depth where buried drums are expected. Ms. Sweeney asked if the metal that was found at the landfill was associated with unexploded munitions. Mr. Williamson replied that no unexploded munitions were found, generally only construction material debris.

Mr. Humphreys asked about an area near the northwestern corner of the site that previously caught fire, and that previously was used for disposal of drums. He noted that it is not depicted on the site map showing the discrete disposal locations. He also asked about a groundwater plume for organic compounds that is located in this former drum disposal area. Ms. Richardson noted that this information was included in the initial 1983 site assessment. Mr. Williamson replied that areas had been investigated based on the 1983 site assessment report and that the report had not indicated the presence of a discrete disposal area in the northwestern corner. Mr. Humphreys responded that this area might be outside of the landfill boundary. Mr. Williamson said that the geophysical survey was extended beyond the limits of the landfill; however, he will look into how much of this area was covered. Mr. Humphreys mentioned that Doug Delong (Navy Caretakers Office) described this area as a drum disposal area during the RAB tour in 2005. Mr. Macchiarella responded that the geophysical data will be reviewed and Mr. Delong will be consulted. The geophysical survey used 50-foot transects vertically and horizontally over the area; whenever metal subsurface anomalies were found a full coverage sweep was conducted. Mr. Biggs asked about the source of the information on the discrete disposal locations. Mr. Williamson replied that the information is contained in the 1983 site report, which used interviews with former base employees. Field crews tried to find these discrete disposal locations but were not able to identify gross indications that these locations existed.

Mr. Humphreys commented that the 1983 report also indicated that sand blasting grit was used along some of the roadways and that the grit would have been mixed with paint that contains lead and potentially tin compounds, which were formerly used to kill barnacles. He noted that he did not believe that samples were analyzed for these types of compounds in the wetland; however, if present, these types of compounds would inhibit invertebrate growth, which might be the reason there are no invertebrates in the wetland area. Mr. Williamson responded that he believed samples were collected and analyzed for these tributyl tin compounds in the wetland and the landfill. Additionally, it appears that poor water quality and the lack of water during the dry season probably impede invertebrate growth in the ponds.

IV. Presentation on the Potential Removal Action at Site 1 for Radiological and Lead Contamination

Mr. Baughman and Ms. Richardson distributed a handout (Attachment B-3) for the presentation on the potential radiological and lead removal action at Site 1. The last page of the handout is a map that also appears in the FS and shows how the areas within Site 1 have been subdivided. Ms. Richardson said that Site 1 is divided into six areas. The six areas were created to present remedial alternatives that would address the unique conditions in each area. Area 1 is the disposal area, Area 2 is the paved runways, Area 3 is unpaved areas outside of the disposal areas, Area 4 is the small arms firing range with the lead berm, Area 5 is the shoreline and rip-rap area, and Area 6 is site-wide. She said that this presentation discusses one of the alternatives under Area 6 (site-wide), which could be completed as a removal action before the record of decision (ROD) is issued. Mr. Macchiarella said that the Navy has the option to conduct a removal instead of a remedial action, which would occur when the ROD is implemented. Within the realm of removal actions are time-critical removal actions (TCRA) and non-time critical removal actions (NTCRA). The Navy is presenting both options so that the RAB can provide input into which, if any, alternative is preferred.

Ms. Richardson continued to Slide 2; she said that the radiological removal action would include removal of hot spots in Areas 3a, 3b, 5a, and 5b. It also would include the delineation and the removal of possible radiological contamination in an area believed to be a disposal pit (in Area 1B) and will transport all contamination off the base for disposal. The remaining areas will likely be covered with a cap. The lead removal would be conducted in accordance with the FS alternative, that would involve the removal, screening, and off site disposal of any lead contamination associated with the former pistol range berm. Areas 3a and 3b contain seasonal wetlands and the Navy will need to develop mitigation measures to minimize impacts. In addition, the Navy intends to conduct the removal action field work outside of the least tern nesting season that runs April 1 through September 30. Ms. Smith asked if the Navy has decided to mitigate wetlands on a one-to-one basis or if the Navy had decided where they would move any wetlands that might be impacted. Ms. Richardson replied that the Navy has not reached a decision nor planned that far ahead in the project. Wetland mitigation would be settled with the Water Board before remedial actions begin.

Mr. Baughman presented Slide 3, which shows a timeline of both the TCRA and the NTCRA. Both schedules assume a contract award date of March 1, 2006. The TCRA would allow 180 days to prepare a work plan, including an internal Navy review followed by the agency comment period. The final work plan and response to agency comments would require 15 days, and contractors would mobilize to begin the field work on October 26, 2006, 240 days after the assumed start date. The NTCRA would follow the same schedule, except that there is an extra 74 days added for an engineering evaluation and cost analysis (EE/CA) before the work plan is prepared. An EE/CA is similar to a FS and a draft final FS already has been prepared; therefore, an EE/CA may not benefit the project. With the added 74 days for the EE/CA, the field work start date for a NTCRA would be January 8, 2007.

Assumptions in these timelines include a start date of March 1, 2006, that no issues will arise in the contracts, and that the Navy or the agencies will not request an extension. Meeting the timeline will depend on whether the BRAC cleanup team develops and agrees on the remedial action objectives for the project. Additionally, the radiological survey of IR Sites 1, 2, and 32 will need to be completed 30 days before field work begins.

If the Navy does not complete a removal action and instead waits until a remedial action is conducted under the ROD, the current schedule for the project would include a draft final proposed plan with response to comments in June 2006, a draft final ROD in January 2007, and a final ROD in April 2007. The Navy encourages the RAB to provide comments and suggestions about the preferred course of action.

Mr. Humphreys commented that other hot spots are depicted on the map and asked if they also would be cleaned up. Ms. Richardson replied that the potential removal action would also occur at sites in Area 5. Mr. Humphreys commented that the Navy should excavate all the radiation and not only the top 2 feet of soil. Mr. Baughman replied that the Navy will continue to excavate until the source of radium is removed. Ms. Richardson noted that the anomalies are based on the most recent (2004) radiological survey at the site, which was accomplished using survey equipment mounted on the back of all-terrain vehicles. This survey resulted in 3 million data or anomaly points. Of those 3 million points identified during the survey, roughly 900,000 of the anomalies were some form of radium-226. Approximately 200,000 of these anomalies were radium-226 at levels above background concentrations. All of these points are presented on the map.

Mr. Coe asked when this process began and why the City of Alameda commissioned the design of a golf course when this contamination is present. Mr. Macchiarella responded that the FS is almost final and the project is in progress; as such, the City of Alameda is moving forward with its redevelopment plans, which considered this area suitable for a golf course. Mr. Coe asked when the site would be ready for development of the golf course. Mr. Macchiarella responded that, under the current schedule, he estimates that it will be ready within a year or two after the final ROD in April 2007. Ms. Johnson added that the City of Alameda is working with the Navy to begin building up the site with dredge material before the property is transferred but this work depends on several other reports and permits. However, the golf course would not begin construction until there is enough interest from the hotel market in the area. Ms. Sweeney asked whether the site would still need a land cap if the radiological and lead berm materials are removed. Mr. Macchiarella speculated that there would be a cap on Site 1 that would focus on the areas of waste. These removal actions under discussion will be based on areas outside of the presumed location of the land cap. Mr. Macchiarella noted that the other concerns at the site will follow the normal cleanup process completed after the ROD is implemented; he also added that the radiological and lead berm areas would be cleaned up even if the Navy decides not to complete a removal action. Ms. Smith asked if the regulators had concurred with the surveying at the site. Mr. Ripperda responded that the survey is acceptable.

Mr. Lynch noted that a TCRA typically occurs in less than 6 months, which is shorter than the Navy's timeline, which allots 6 months alone for the planning of this removal action. Additionally, a NTCRA has a 30-day comment period, which includes public participation and is one of the main differences between a TCRA and an NTCRA. The other principal difference is that the TCRA would not require the Navy to comply with state laws; state law requires, however, that lead-contaminated soil must be placed in a Class I landfill if it contains more than 130 parts per million of lead. He would therefore prefer an NTCRA.

Mr. Humphreys asked about sampling that is being conducted along the beach area, and whether any lead or PAH contamination had been found in Area 1. Ms. Richardson responded that Mr. Williamson represents the contractor for sampling along the beach area, and that he has been involved with completing the RI for Site 2. Although the data generated during the beach sampling were provided to the contractor that prepared the FS for Site 1, the Navy has yet to issue a separate report on the results of the beach sampling. Ms. Sweeney made a motion to vote on the TCRA and NTCRA processes. Mr. Ripperda noted that since there is only a small difference in schedule between the TCRA and NTCRA process, the RAB should focus the vote on whether the Navy should first undertake either of these actions instead of the current course. Mr. Biggs asked about the Navy circumventing state laws to accomplish a TCRA. Mr. Ripperda noted that the Navy always must comply with all applicable state and federal laws in regard to waste disposal laws and that the Navy would follow those laws during the removal action. Mr. Humphreys commented that there is no site in California that will accept radium-contaminated soil and that the Navy would have to transport it to another state. Based on a question from

Ms. Sweeney, Mr. Ripperda said that he would accept the removal. Ms. Konrad asked how DTSC felt about the removal action. Ms. Liao responded that DTSC prefers the NTCRA because there does not appear to be enough community involvement in the TCRA. Mr. Macchiarella and Mr. Baughman noted that the ROD would be more straight-forward if the work is completed under a TCRA because the work would be complete prior to the draft ROD issuance and therefore the work could be properly documented in the draft ROD. Mr. Biggs asked about the schedule for the removal action. Ms. Richardson replied that the field work would require approximately 1 to 2 months. Mr. Biggs added that field work would be completed before the least tern nesting season and he recalls other RODs that have been delayed in the past.

Ms. Konrad noted that the main difference for the RAB to consider between the TCRA and the NTCRA is its input on the document and she questioned the importance of the input to the process.

Mr. Macchiarella noted that the alternative is fairly straightforward. Other sites might be more complicated and the RAB would need to be involved in choosing an alternative. Mr. Ripperda noted that any concerns that the RAB might have with the removal action can be voiced during the comment period for the ROD. Mr. Macchiarella commented that the proposed plan will be completed near the end of 2006 and will include a response for public concerns. Mr. Ripperda commented that the proposed plan will note that these areas are undergoing a removal action. Ms. Richardson said that one of the purposes of this discussion was to formulate objectives for the project. Ms. Smith commented that the public might not be involved in the process even if given the option.

Ms. Johnson stated that she does not understand why other activities, such as car shows and movie productions have been allowed at the site but not the removal action. Ms. Richardson responded that the Navy is being cautious because it does not want to disturb the nesting terns or the predators that live at Site 1, causing them to seek food options closer or in the nesting area. Navy work during the least tern nesting season would likely require consultation with USFWS, which could require an additional 134 days. The Navy would avert this consultation period by avoiding the nesting season.

Mr. Biggs asked how the waste would be transported off the site. Mr. Ripperda replied that this information would be contained in the work plan. Mr. Biggs asked about the reaction from the residents who live along the roads when radiological-contaminated soil is moved past the houses.

Mr. Macchiarella responded that the soil would probably be driven off the base, and Mr. Humphreys added that the soil would probably be containerized. Mr. Biggs noted that the public would be interested to know and discuss that information during a public comment period. Ms. Sweeney made a motion to adopt the TCRA timeline; this motion was seconded by Mr. Torrey. Seven were in favor of the TCRA, while three were opposed, and none abstained. Mr. Macchiarella noted that the Navy must develop the remedial action objectives and will share them with the RAB when they have been accepted.

V. BCT Activities

Ms. Huang provided an update on the BCT activities for January; a handout is included as Attachment B-4. The BCT had three meetings; the first was a teleconference concerning DTSC's comments on the basewide groundwater monitoring program technical memorandum. At least some of the regulatory agencies decided during the meeting that their perspective on the objective of the groundwater program differs with the Navy's view. The program was initially developed to provide limited information on the base, and the regulators feel that it should be more extensive so that the data can be used in developing the RI and FS for some of the sites. The BCT will meet with the Navy during the week of February 6 to revisit these issues.

The BCT discussed the Site 2 draft RI and the TCRA versus the NTCRA. Ms. Huang noted that the Alameda Reuse and Redevelopment Authority (ARRA) have set June 2007 as the new date for the Navy to transfer the phase one parcels.

The third meeting addressed the response to comments on the benzene plume at Operable Unit 5 and IR 02 on Alameda Annex. The Navy and the regulators are still discussing those comments.

Ms. Huang also thanked Mr. Lynch for his comments on the noise from the soil vapor extraction equipment on the base, during last month's meeting. Mr. Huang visited the site after the meeting and noted that the machines are loud; she has been working with the consultants to implement measures to control the noise levels.

VI. Community and RAB Comment Period

Ms. June Oberdorfer, with the Golden Gate Audubon Society, described comments that she and Mr. Lynch had prepared in regard to the draft RI for IR Site 2. She handed out a summary of the comments (Attachment B-5) to the RAB members and noted that a more comprehensive version of the comments will be mailed to the Navy on February 6. Anyone who wishes to receive those comments should contact Samantha Murray, whose information is at the bottom of the handout. She recognized Battelle and the Navy for the quality of this RI. However, she considers the report deficient, because it provides only a snapshot analysis of the site and not a historical view of concentration trends, which limits the focus. In addition, review of the report was encumbered by a lack of basic data and evaluations that were needed to support many of the conclusions. There is inadequate assessment of the groundwater migration pathways and data and a lack of discussion of the governing regulations associated with these types of sites. The report did not define the spatial extent of the landfill, and there is a lack of data from offshore studies, such as groundwater discharge or sediment/surface water exchange through the culvert.

She added that the risk assessment is incomplete because it does not evaluate risk from asbestos waste. It also needs to justify the recreational use scenario. The risk assessment needs to increase the exposure limits for the park ranger/tour guide from 10 to 40 hours per week. The screening values for ecological risk in wetlands soil are not conservative and a more stringent value should have been used. The report also needs an analysis of impacts of surface runoff on surface water quality in the pond.

The Audubon Society believes that the Navy should resolve uncertainties in regard to credible risk in the RI report instead of deferring them to the FS report. She referred to the comment at the top of the summary of comments (Attachment B-5) to define the Golden Gate Audubon Society's opinion on the RI: "We urge the RAB to recommend that the Navy revise the report to address these and other deficiencies before accepting this document."

Mr. Humphreys commented that he wanted to discuss with Mr. Macchiarella options on a grant to retain a Navy-approved consultant to help explain some of the complex site reports to the RAB members. Mr. Lynch noted that he works with an Air Force base in San Antonio, Texas, which has identified three consultants that have all been pre-approved by the Air Force to review documents. The Air Force issues a purchase order to the consultant. This process allows reports with tight deadlines to be reviewed efficiently and in a timely manner. Mr. Humphreys noted that consultants had been used effectively to explain issues with the Coast Guard Housing Area. Mr. Ripperda mentioned that Mr. Humphreys should contact Mr. Macchiarella directly within the next week.

The meeting was adjourned at 8:45 p.m.

ATTACHMENT A

**NAVAL AIR STATION ALAMEDA
RESTORATION ADVISORY BOARD MEETING AGENDA
February 2, 2006**

(One Page)

RESTORATION ADVISORY BOARD

NAVAL AIR STATION, ALAMEDA

AGENDA

FEBRUARY 2, 2006, 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 - 6:45	Approval of Minutes	Mr. George Humphreys
6:45 - 7:00	Co-Chair Announcements	Co-Chairs
7:00 – 7:45	Site 2 Remedial Investigation Report Presentation	Mr. Andrew Baughman & Mr. Travis Williamson
7:45 – 8:00	Site 1 Potential Radiological and Lead Removal Action RAB Discussion	Mr. Andrew Baughman
8:00 – 8:10	BCT Activities	Ms. Marcia Liao
8:10 – 8:30	Community & RAB Comment Period	Community & RAB
8:30	RAB Meeting Adjournment	

ATTACHMENT B

NAVAL AIR STATION ALAMEDA RESTORATION ADVISORY BOARD MEETING HANDOUT MATERIALS

- B-1 List of Reports Received during January 2006, George Humphreys, RAB Community Co-Chair, February 2, 2006 (1 page)
- B-2 Draft Remedial Investigation Report, Installation Restoration Site 2, West Beach Landfill and Wetlands, presented by Andrew Baughman (Navy) and Travis Williamson (Battelle). February 2, 2006. (12 pages)
- B-3 Potential Radiological and Lead Removal Action at Site 1, presented by Andrew Baughman and Claudia Richardson. Navy. February 2, 2006. (4 pages)
- B-4 January 2006 BCT Activities, presented by Judy Huang, Water Board. February 2, 2006. (2 pages)
- B-5 Summary of Comments on the Draft Remedial Investigation Report IR for Site 2, West Beach Landfill and Wetlands, presented by June Oberdorfer, Golden Gate Audubon Society. February 2, 2006. (1 pages)

ATTACHMENT B-1

RESTORATION ADVISORY BOARD REPORTS RECEIVED DURING JANUARY 2006

(One Page)

Restoration Advisory Board
Reports and Correspondence
Received During January 2006

Reports

1. January 13, 2006, Draft Final Feasibility Study Report, Installation Restoration Site 1, 1943-1956 Disposal Area, Alameda Point, Alameda, California, Volume 1, Part A and Part B, Prepared by Bechtel Environmental Inc., 1230 Columbia Street, Suite 400, San Diego, CA 92101-8502.
2. January 17, 2006, Final Remedial Investigation Work Plan, Installation Restoration Site 34, Alameda Point, Alameda, California, Prepared by SuiTech, a Joint Venture of Sullivan Consulting Group and Tetra Tech EM Inc, 1230 Columbia Street, Suite 1000, San Diego, California, 92101.
3. January 26, 2006, Draft Final Remedial Investigation /Feasibility Study Work Plan for Site 35, Alameda Point, Alameda, California, Prepared by Bechtel Environmental Inc, 1230 Columbia St, Suite 400, San Diego, California, 92101-8502.

Correspondence

1. January 15, 2006, Draft Final Investigation Work Plan, IR Site 34, Alameda Point, Alameda, California, Comments by Department of Toxic Substances Control, Marcia Lao, Remedial Project Manager, Office of Military Facilities.
2. January 23, 2006, Draft Feasibility Study Report, IR Site 27, Dock Zone, Alameda Point, Alameda, California, Comments by Department of Toxic Substances Control, Marcia Lao, Remedial Project Manager, Office of Military Facilities.
3. January 23, 2006, Draft Feasibility Study Report, IR Site 27, Dock Zone, Alameda Point, comments by U. S. EPA , Region IX, Anna-Marie Cook, Remedial Project Manager.
4. January 24, 2006, Comments on the Draft Feasibility Study Report, IR Site 27, Dock Zone , Alameda Point, Alameda, California, Comments by California Regional Water Quality Control Board, Judy C. Huang, PE, Project Manager.

ATTACHMENT B-2

**DRAFT REMEDIAL INVESTIGATION REPORT, IR SITE 2,
WEST BEACH LANDFILL AND WETLANDS**

(Twelve Pages)



Welcome

BRAC
PMO WEST

Draft Remedial Investigation Report Installation Restoration (IR) Site 2 West Beach Landfill And Wetlands Alameda Point, California



Andrew Baughman
Navy BRAC PMO West



02 February 2006



Presentation Outline

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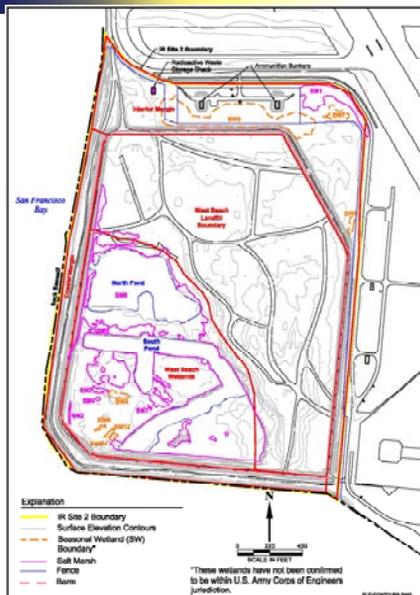
- Remedial Investigation (RI)
- General Characterization Activities
- Dry and Wet Season Sampling
- Nature and Extent of Contamination
- Risk Assessments
- Schedule

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Site Map

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Purpose of the RI

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- Enhance existing IR Site 2 dataset
- Evaluate nature and extent of contamination
- Complete a comprehensive Human Health Risk Assessment (HHRA)
- Complete a comprehensive Ecological Risk Assessment (ERA)
- Provide basis for potential remedial actions in the future
- Implement all work in accordance with Final RI Sampling Work Plan

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Scope of the RI

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- Preliminary field characterization activities
 - General surface water quality assessment
 - Geophysical surveying
 - Radiological surveying

- RI field sampling
 - Dry season sampling
 - Wet season sampling

Near-shore Sediment Sampling



Soil Sampling



Geophysical Surveying



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Overall RI Characterization/Assessment

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Media	Site 2 Landfill	Site 2 Wetland	China Camp State Park	Alameda Background
Soil	142	61	6	6
Groundwater	24	18	--	--
Sediment	--	30	5	--
Surface Water	--	22	5	--
Plant Tissue	10	12	10	--
Terrestrial Invertebrate Tissue	10 ^(a)	12 ^(a)	10 ^(a)	--
Aquatic Invertebrate Tissue	--	0	--	--
Mammal Tissue	1 ^(a)	0	--	--
Fish Tissue	--	0	--	--
Toxicity/Bioaccumulation Tests	--	17	5	--
Exploratory Trenches	5	0	--	--

Comprehensive analytical program:

VOCs, SVOCs, metals, PCBs, pesticides, hexavalent chromium, TPH, tributyltin, dioxins/furans, radionuclides, explosives, total organic carbon, grain size, chloride, alkalinity, nitrate, nitrite, sulfate, and sulfide.

(--) Indicates sample type is not applicable or not part of Final RI Sampling Work Plan.

(a) Total tissue mass ranged from 0 to 50 grams, which is less than the 70 grams required for laboratory analysis.

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Water Quality Assessment July 2004 – March 2005

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Parameter	General Observations
Temperature	Daily and seasonal variability
Depth	Seasonal variability likely resulting from precipitation and hydrogeologic equilibration
Dissolved Oxygen (DO)	Daily and seasonal variability likely resulting from photosynthesis/respiration by microorganisms
Turbidity	Daily and seasonal variability likely resulting from cyclical biomass growth, wind mixing, and precipitation
pH	Daily variability likely resulting from photosynthesis/respiration by microorganisms
Salinity	Generally increasing salinity through late fall, then decreasing salinity from late fall to early spring likely resulting from dissolution of salts with onset of precipitation followed by dilution with additional precipitation



North Pond – July 2004



South Pond – July 2004



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Other Field Characterization Activities

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Activity	Objective(s)	Results/Findings
Radiological Surveying (Aug – Sept 2004)	<ul style="list-style-type: none"> Characterize the extent and depth of potential Radium 226 impacts Determine background concentration of Radium 226 	<ul style="list-style-type: none"> Background Radium 226 concentration in surface soil = 0.365 pCi/g IR Site 2 scan activities generally consistent with background locations
Geophysical Surveying (Sept – Oct 2004)	<ul style="list-style-type: none"> Evaluate the presence and extent of buried waste Evaluate the presence of discrete waste types and disposal areas Provide protection to site workers during subsequent sampling activities 	<ul style="list-style-type: none"> Little to no elevated response in the wetland Generally widespread occurrence of elevated response in landfill No clear evidence suggesting specific type(s) of waste present Subsequent sampling locations were positioned in areas free of but near geophysical anomalies to provide worker protection against encountering hazards while still characterizing worst-case locations
Exploratory Trenching (Mar 2005)	<ul style="list-style-type: none"> Determine the nature, type, and condition of waste present in the landfill by focusing trenches in suspected discrete disposal areas Determine the typical depth of waste placement 	<ul style="list-style-type: none"> Waste first encountered between 1.5 and 3.5 feet Waste extends to and below water table in the wet season Numerous waste types encountered including glass, plastic, metal, wood, canvas, paper, concrete, rubber, cable, clothing, carpet, film, microfiche, styrofoam, newspaper, etc.. No hazardous materials identified (ordnance and explosives waste, drums, cylinders, or radiological waste)

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Exploratory Trenching Locations & Video

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Dry and Wet Season Sampling

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- Dry season sampling (October 2004)
 - Soil and groundwater sampling in landfill and wetlands
 - Sediment and surface water sampling in wetland ponds
- Wet season sampling (March 2005)
 - Additional soil and groundwater sampling in landfill
 - Sediment and surface water sampling in wetland ponds
 - Tissue sampling in landfill and wetlands
 - Toxicity and bioaccumulation testing
 - Reference area sampling



IR Site 2 Sampling Locations

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Soil Sampling



Fish Sampling



Sample Processing



Aquatic Invert Sampling

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CCSP Sampling



Nature and Extent of Contamination

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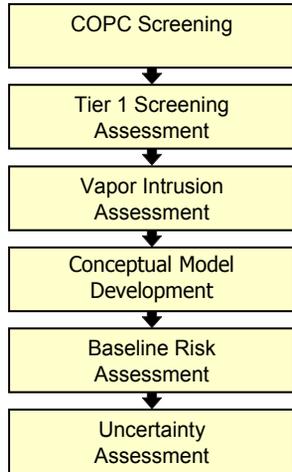
- General data trends
 - More widespread occurrence of contaminants in landfill compared to wetland
 - More widespread occurrence of contaminants in subsurface soil compared to surface soil
 - More widespread occurrence of contaminants in first water bearing zone groundwater compared to second water bearing zone groundwater
 - Wetland ponds appear relatively unimpacted by contaminants despite observed seasonal variability and variability between the ponds
- Overall conclusions
 - Generally a diffuse and widespread occurrence of contaminants in media at IR Site 2 rather than discrete hotspots
 - Certain compounds (e.g., lead in soil) exhibit hotspot behavior
 - Certain compounds detected in site media (e.g., metals) are likely to be the result of naturally occurring elements
 - For the most part, the suspected locations of discrete waste at IR Site 2 do not appear to represent clear contaminant source areas

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HHRA Approach

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Conceptual Exposure Model for Human Health Baseline Risk Assessment (BRA)

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Exposure Media	Exposure Route	Receptor			
		Site Worker (Ranger/Guide)	Site Worker (Restoration Supervisor)	Site Visitor (Adult/Child)	Construction/Excavation Worker
Surface Soil in Wetland and Landfill Area	Dermal Contact	●	●	●	●
	Ingestion	●	●	●	●
	Inhalation (Dust and VOCs)*	●	●	●	●
	External Radiation	●	●	●	●
Subsurface Soil in Landfill and Wetland Area	Dermal Contact	--	●	--	●
	Ingestion	--	●	--	●
	Inhalation (VOCs)*	●	●	●	●
	External Radiation	●	●	●	●
Surface Water/Sediments in Wetland Area Ponds	Dermal Contact	--	●	--	--
	Ingestion	--	--	--	--
	Inhalation (VOCs)*	--	--	--	--
Shallow Groundwater beneath Landfill and Wetland Areas	Dermal Contact	--	●	--	●
	Ingestion	--	--	--	--
	Inhalation (VOCs)*	--	--	--	--

● Potentially significant exposure pathway evaluated in the risk assessment.
 -- Pathway not likely to be complete or not likely to be significant (not evaluated).
 * Indicates soil to outdoor air or water to outdoor air cross media transfer (i.e., exposure media is outdoor air).

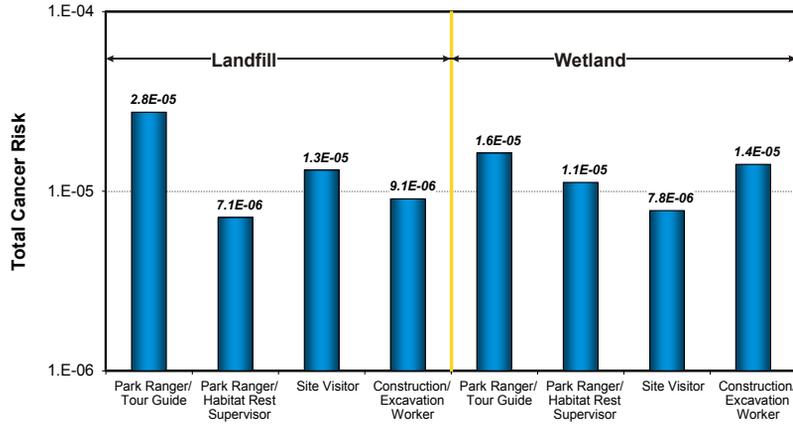
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BRA Results (Cancer Risk)

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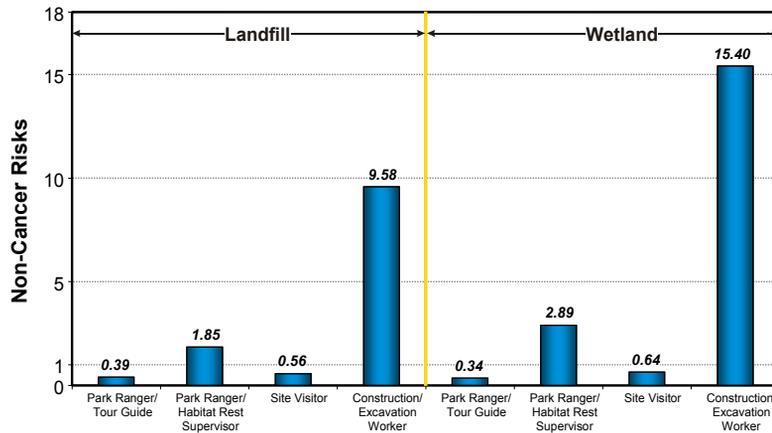
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BRA Results (Non-Cancer Risk)

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HHRA Considerations

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- Arsenic (potential risk driver in surface soil) appears to be naturally occurring constituent
 - Alameda Point background concentration = 9.4 mg/kg
 - Landfill surface soil 95% upper confidence limit (UCL) concentration = 5.33 mg/kg
 - Wetland surface soil 95% UCL = 8.46 mg/kg
- Some organic compounds that were identified as potential risk drivers in soil may be related to anthropogenic sources other than IR Site 2
 - Average benzo(a)pyrene concentration at CCSP > 95% UCL at IR Site 2
- Radium 226 (potential risk driver in surface soil) levels detected in wetland soil at IR Site 2 are comparable to background concentration for Alameda Point
 - Alameda Point background concentration = 0.365 pCi/g in 3 reference areas sampled by TTFW during radiological survey
 - Wetland surface soil 95% UCL = 0.52 pCi/g

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ERA Approach

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- Selected appropriate habitat types and receptor categories
 - Upland habitat
 - Wetland habitat
 - Wetland pond habitat
- Selected appropriate representative receptors
 - Red fox for carnivorous mammals
 - Least sandpiper for benthic-feeding birds
- Selected appropriate exposure pathways
 - Root contact with soil
 - Ingestion of soil or food (plant/prey)
 - Inhalation

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ERA Approach (continued)

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- Screening level risk assessment indicated further evaluation of specific receptor/contaminant combinations appropriate
- Baseline risk assessment
 - Incorporated more realistic exposure assumptions, contaminant concentrations (e.g., 95% UCLs), and ecological effects thresholds such as low and high effect benchmarks
 - Calculated baseline Hazard Quotients
 - Estimated ambient exposure and associated risk

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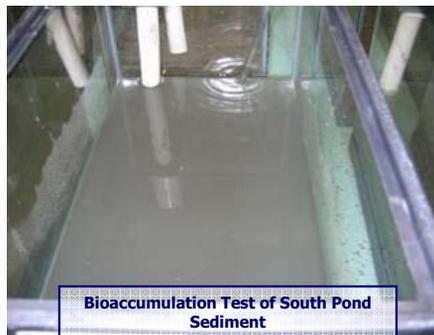
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Toxicity and Bioaccumulation Testing Results

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- Survival rate of test organisms exposed to IR Site 2 pond sediment indicated non-toxic response
- Survival rate and growth of test organisms exposed to IR Site 2 pond surface water indicated non-toxic acute and chronic response
- 28-day bioaccumulation testing of sediment and soil indicated generally acceptable survival of test organisms



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ERA Results

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- Potential risk drivers to at least one ecological receptor (mammals, birds, terrestrial or aquatic invertebrates, or plants) in the landfill, wetland, or ponds:
 - Some metals, SVOCs/PAHs, total PCBs, pesticides, dioxins/furans
- Highest Hazard Quotients (HQs):
 - Chromium, lead, mercury, nickel, high molecular weight PAHs, total DDD/DDT/DDE
- Several compounds determined to be potential risk drivers at IR Site 2 were characterized in reference media at Alameda Point and China Camp State Park (CCSP)

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ERA Considerations/Uncertainties

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- Inherent conservatism
- Incomplete pathways
- CCSP data and background assessment
- Toxicity and bioaccumulation results provide direct evidence of lack of ecological toxicity in IR Site 2 pond surface water and sediment
- ERA uncertainties
 - Exposure assessments
 - Effects assessments
 - Toxicity data, surrogate species data

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Near Term Schedule

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Milestone	Site Management Plan Date
Agency and RAB Comments on Draft RI Report Due to the Navy	February 6, 2006
Draft Final RI Report with RTCs	April 7, 2006
Final RI Report	May 8, 2006

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Contact Information

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For More Information Contact:

Andrew Baughman, P.E.
Remedial Project Manager for IR Site 2
BRAC Program Management Office West
1455 Frazee Road, Suite 900
San Diego, CA 92108
(619) 532-0902
andrew.baughman@navy.mil

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ATTACHMENT B-3

POTENTIAL RADIOLOGICAL AND LEAD REMOVAL ACTION AT SITE 1

(Four Pages)



Welcome

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Site 1 Potential Radiological and Lead Removal Action RAB Discussion

Andrew Baughman and Claudia Richardson
Navy BRAC PMO West

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Basic Objectives

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Radium

- Remove hotspots in Areas 3a and 3b (seasonal wetlands outside of disposal area) and Areas 5a and 5b (shoreline area).
- Implement a Removal Action in accordance with the Site 1 FS, Alternative 6-4
- Delineate and remove possible radiological contamination in the area believed to be the disposal pit (ISA 1983).
- Off base disposal of contamination.

Lead

- Removal of lead in the Site 1 Former Pistol Range berm in accordance with the Site 1 FS Alternative S4-4 (removal, screening, and off-site disposal).
- Off base disposal of contamination.

Note:

- Areas 3a and 3b contain several seasonal wetlands. Navy will derive mitigation measures to minimize the impact to these wetlands.
- The Removal Action will avoid fieldwork during the Least Tern nesting season (approximately April 1 through September 30).

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Projected Timelines

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Time-Critical Removal Action Timeline

- **Contract Initiation – 60 Days**
- **Preparation of Work Plan – 180 days**
 - Preparation of Draft, including Navy and RASO Reviews – 120 days
 - Agency Comment Period – 45 days
- **Preparation of Final Work Plan and RTCs – 15 days**
- **Mobilization Begins 240 Days After Assumed Start Date, Field Work Estimated to Begin October 26, 2006**

Non Time-Critical Removal Action Timeline

- **Contract Initiation – 60 Days**
- **Preparation of EECA – 74 days**
 - 30 days to prepare internal drafts and reviews
 - 30 days for agency comments
 - 14 days for RTCs and submittal of Final
- **Preparation of Work – 180 days**
 - Preparation of Draft, including Navy and RASO Reviews – 120 days
 - Agency Comment Period – 45 days
- **Preparation of Draft Final and RTCs – 15 days**
- **Mobilization Begins 314 Days After Assumed Start Date, Field Work Estimated to Begin January 8, 2007**

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Assumptions

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- Project Timeline is based on a start date of March 1, 2006, and no extensions are built into the schedule
- BRAC Cleanup Team develops and agrees on the Remedial Action Objectives
- Radiological Survey of IR Sites 1, 2, (Shoreline) and 32 is completed 30-days prior to field work

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Document Schedule

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Document	Estimated Date
Draft Final Proposed Plan with RTCs	June 2006
Draft Final Record of Decision (ROD) with RTCs	January 2007
Final Record of Decision	April 2007

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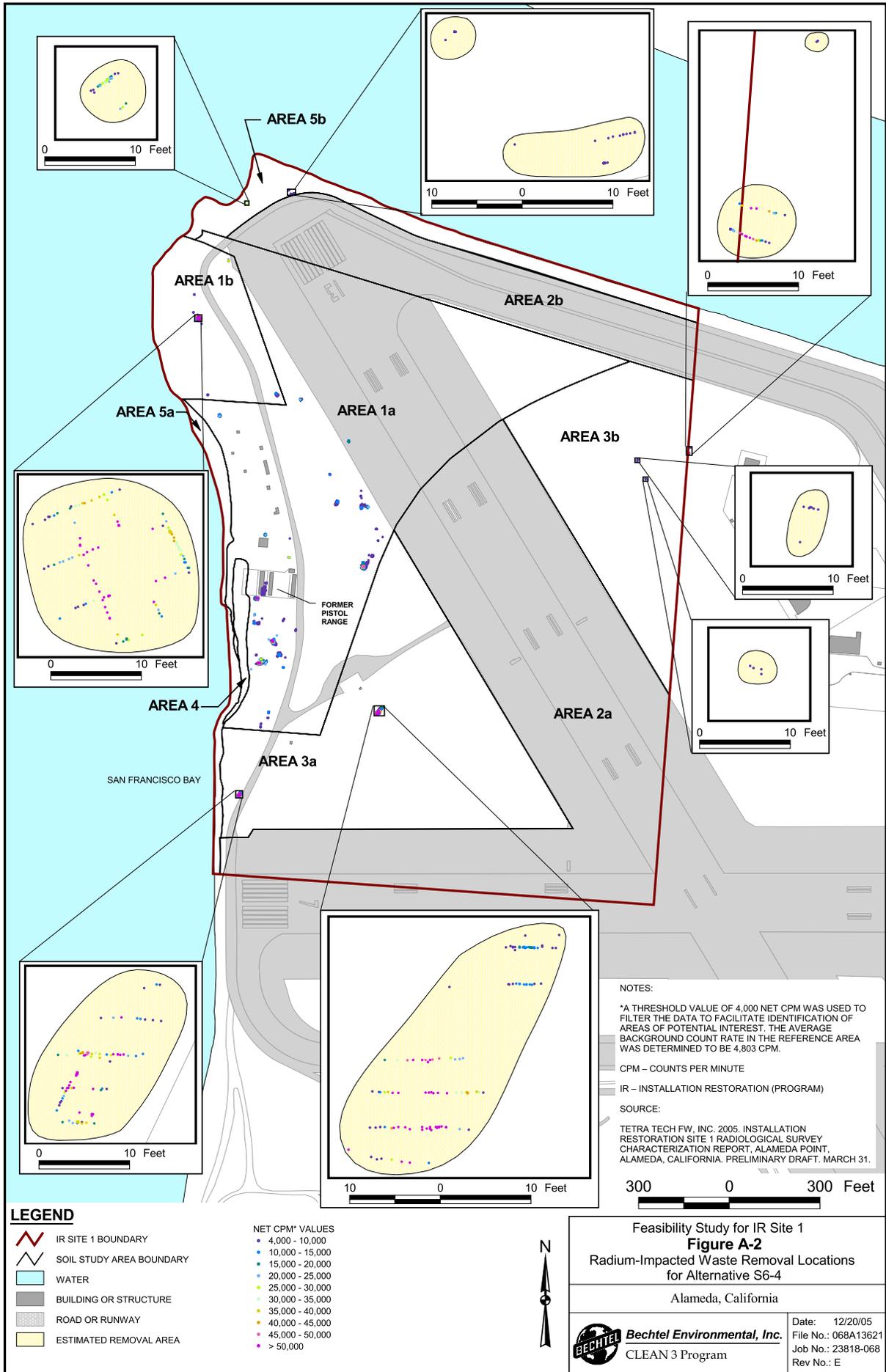


Discussion

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Comments/Questions/Suggestions?

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ATTACHMENT B-4
JANUARY 2006 BCT ACTIVITIES
(Two Pages)

January 2006 BCT Activities

I. **Basewide Groundwater Monitoring Program Technical Memo Teleconference, January 04, 2006**

BCT members participated in a teleconference to discuss DTSC's comments on the Basewide Groundwater Monitoring Program Technical Memo. At the conclusion of the teleconference, BCT members agreed that there is a philosophical difference between the Regulators and the Navy's views on the objectives of the basewide groundwater monitoring program. BCT members also agreed further meetings are necessary to discuss and re-evaluate the objectives of the basewide groundwater monitoring program. This meeting is scheduled to occur on Tuesday, February 7th.

II. **Monthly BCT Meeting, January 17, 2006**

- a. **Sub-Slab Soil Gas Sampling in OU-2B Update:** Steve Peck, Navy project manager, joined the BCT via teleconference to present an update on the sub-slab soil gas sampling activities at OU-2B. Mr. Peck stated that Tetra Tech is conducting the soil gas sampling and has marked and made the necessary clearances for the sampling location. The soil probes will be installed at Buildings 13, 14, 152, 163, and 398 the week of January 17th. The samples will be collected the week of January 23rd.
- b. **Discuss potential Site 1 and Site 2 Removal Actions in 2006:** In addition to the regular BCT members, Mr. Matthew Slack and Mr. Steve Doremus of the U.S Navy Radiological Affairs Support Office (RASO), and Ms. Penny Leinwander and Mr. Robert Wilson of the California Department of Health Services (DHS) participated in the discussion via teleconference. Mr. Baughman, Navy Project Manager for Sites 1 and 2, distributed the projected timeline for a time-critical removal action (TCRA) and a non time-critical removal action (NTCRA) for the radiological and munitions of explosive concern and lead impacted areas of Site 1.

Potential TCRA Schedule: The original potential TCRA had a start date of February 1, 2006 with field mobilization on July 30, 2006. This includes a 45-day agency comment period. However, due to restrictions imposed by the Least Tern nesting and breeding season, the field mobilization date will have to be extended as there is a 135-day consultation period with the United States Fish and Wildlife Service (USFWS) due to Least Tern activity.

Potential NTCRA Schedule: The potential NTCRA has the same start date of February 1, 2006. The field mobilization would start on December 28, 2006.

Site Management Plan (SMP) Schedule: The current SMP schedule has the Site 1 mobilization in November – December 2007.

Considering the limited timesavings, Navy is questioning the need of the removal actions. Regulatory agencies still express interest in the removal actions but have expressed concerns over the regulatory oversights and authorities during the removal actions. At the conclusion of the discussion, Navy agreed to develop removal action objectives, e-mail them to the regulatory agencies, and conduct a discussion of the removal action objectives during the February 2006 BCT meeting.

- c. **Site 2 Draft RI Report Presentation:** Mr. Baughman presented the draft remedial investigation (RI) report for Installation Restoration Site 2, the West Beach Landfill and wetlands area. The site is located near the southwestern tip of Alameda Point and bordered to the north and east by runways/tarmacs and to the south and west by the San Francisco Bay. The site consists of approximately 110 acres of which 77 acres are the West Beach Landfill and 33 acres are the West Beach Wetlands. Most of the waste disposed at the site is commingled, except for some suspected discrete disposal areas such as a pesticide disposal area, ordnance and explosives waste (OEW) burial site, chemical drum disposal area, asbestos area, oil pits, PCB-contaminated oil spreading area, radioactive waste storage shack, dredge spoils disposal, and scrap metal disposal area. The Draft RI comments are due on February 6, 2006.
- d. **Site 35 Update:** Fieldwork at Site 35 has been completed and the analytical data are being validated. The Draft RI for Site 35 is scheduled to be released in the spring.
- e. **Navy/ARRA Transfer Update:** The most recent letter from the ARRA to the Navy suggested a June 2007 transfer date. Up until this letter they had been planning on January 2007.

III. Alameda Point OU-5 and Alameda Annex IR 02 Groundwater Proposed Plan Response to Comments (RTC) Discussion, January 17, 2006

BCT members met to discuss Navy's RTC to Regulator's comments on the Draft Proposed Plan for OU-5/IR-02 Groundwater, Former NAS Alameda and Alameda Annex. The Regulators are still discussing the RTCs.

ATTACHMENT B-5

**SUMMARY OF COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION REPORT FOR
IR SITE 2, WEST BEACH LANDFILL AND WETLANDS**

(One Pages)



Golden Gate Audubon Society

2530 San Pablo Avenue, Suite G • Berkeley, California 94702

Phone: (510) 843-2222 • Fax: (510) 843-5351 • Email: ggas@goldengateaudubon.org

Americans Committed to Conservation • A Chapter of the National Audubon Society

Summary of Comments on Draft Remedial Investigation Report IR Site 2, West Beach Landfill and Wetlands, Alameda Point, California Battelle, December 2005

*Prepared and Presented by June A. Oberdorfer, PhD, PG, ChG and Patrick G. Lynch,
PE for February 2, 2006 RAB Meeting*

It is the position of Golden Gate Audubon that this Remedial Investigation Report, while an improvement over the 2000 Draft, is still incomplete. It lacks adequate historical data to predict future contamination trends, underestimates exposure to chemicals, and does not resolve uncertainties in the Risk Assessment, but rather puts this critical element of the RI off until the Feasibility Study. We urge the RAB to recommend that the Navy revise the report to address these and other deficiencies before accepting this document.

- **This RI document is an improvement over the previous one, dated December 2000.**
 1. Lower detection limits for toxic chemicals that may impact wildlife and humans
 2. Filled some data gaps (ex., new monitoring well in north)
 3. Better presentation of concentration data (plots of different media and chemicals)

- **However, there are still significant shortcomings.**
 1. Snapshot analysis – no historic view of concentration trends
 2. Lack of presentation of basic data and evaluation for many conclusions
 3. Inadequate assessment of groundwater migration pathway
 4. Lack of discussion of governing regulations (ARARs)
 5. Undefined spatial extent of landfill
 6. Unidentified source of contamination to northwest of landfill
 7. Lack of link to offshore studies (groundwater discharge, sediment or surface water exchange through culvert)

- **The Risk Assessment in this document is incomplete.**
 1. Lacks evaluation of risk from asbestos wastes
 2. Needs to justify recreational use scenario – type of use and 52-hr/year duration
 3. Need to increase exposure for Park Ranger/Tour Guide: from 10 to 40 hr/week
 4. Screening values for eco risk in wetlands soils are not conservative – use sediment screening values (dredge sediments)
 5. Needs analysis of impacts of surface runoff on pond surface water quality

- **The Navy should not postpone defining credible risk to the Feasibility Study (FS).**
 1. The RI is the place for resolving uncertainties.

For more information, contact Samantha Murray, Conservation Director:
Phone: 510-843-6551 E-mail: smurray@goldengateaudubon.org