FINAL
NAVAL AIR STATION ALAMEDA RESTORATION ADVISORY BOARD
MEETING SUMMARY

www.bracpmo.navy.mil
Building 1, Suite 140, Community Conference Center
Alameda Point
Alameda, California

January 10, 2008

The following participants attended the meeting:

Co-Chairs:

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

Attendees:

Doug Biggs	Alameda Point Collaborative
Dan Carroll	Kleinfelder
Anna-Marie Cook	U.S. Environmental Protection Agency (EPA)
Tommie Jean Damrel	Tetra Tech EM Inc.
Doug Delong	BRAC PMO West, Environmental Compliance Manager
Fred Hoffman	RAB Candidate
Catherine Haran	BRAC PMO West, Remedial Project Manager (RPM)
Craig Hunter	Tetra Tech EM Inc.
Jeff Knoth	RAB
Joan Konrad	RAB
James Leach	RAB
Gretchen Lipow	Community Member
Dot Lofstrom	California Environmental Protection Agency (Cal/EPA) Department of Toxic Substances Control (DTSC)
Patrick Lynch	Community Member
Frank Matarrese	Alameda City Council
Bert Morgan	RAB

John McMillan	Shaw Environmental
Mary Parker	BRAC PMO West RPM
Peter Russell	Russell Resources/Alameda Reuse and Redevelopment Authority (ARRA)
Dale Smith	RAB/Sierra Club/Audubon Society
Jean Sweeney	RAB
Jim Sweeney	RAB
John West	Water Board
Jessica Woloshun	Sullivan International Group, Inc. (Sullivan)
Xuan-Mai Tran	EPA

The meeting agenda is provided in Attachment A.

MEETING SUMMARY

I. Approval of Minutes

Mr. Humphreys called the meeting to order at 6:36 p.m.

Mr. Humphreys provided the following comments:

- Page 4 of 9, first paragraph, last sentence, "Mr. Macchiarella said it is not apart of Alameda Point and is not on the National Priorities List (NPL)," will be revised to "Mr. Macchiarella said it is not a part of Alameda Point and is not on the National Priorities List (NPL)."
- Page 4 of 9, fourth paragraph, fifth sentence, "The OU-5 pilot test is a part of the design and data are available for the site that will contribute to a final design for a full-scale system," will be revised to "The OU-5 pilot test will contribute design data for the site to a final design for a full-scale system."
- Page 4 of 9, fourth paragraph, last sentence, "Mr. Macchiarella is aware that the City of Alameda and Navy are not advancing into an interim lease for the property," will be revised to "Mr. Macchiarella is aware that the City of Alameda and Navy are no longer advancing into an interim lease for the North Housing property."
- Page 5 of 9, first paragraph, third sentence, "Mr. Macchiarella responded that the Site Management Plan (SMP) is scheduled for a standard review periods at this point," will be revised to "Mr. Macchiarella responded that the Site Management Plan (SMP) is based on standard review periods at this point."
- Page 5 of 9, fifth paragraph, last sentence, "He said he would consider all suggestions and respond in the future," will be revised to "Mr. Macchiarella said he would consider all suggestions and respond in the future."

- Page 8 of 9, first paragraph Section VI., second to last sentence, "Ms. Konrad said all FED transfers differ in planning process," will be deleted.
- Page 8 of 9, last paragraph, will be changed to, "Mr. Matarrese expressed three areas of concern with the ARRA meeting. First, he was concerned with how the environmental cleanup of Site 2 would be completed. Second, he was concerned with competition between a privately operated VA hospital and the City of Alameda Hospital. Lastly, he was concerned with who would cover the infrastructure cost. In addition, Mr. Matarrese announced a public workshop on December 13, 2007, hosted by SunCal, the master developer, to discuss transportation and the future use of land that is currently undergoing the cleanup process."

Mr. Macchiarella provided the following comments:

- On the attendees list, Jeff Knoth should be labeled as RAB, not a community, member.
- Steve Peck and Derek Robinson did not attend the meeting and should be deleted from the attendees list.
- Page 5 of 9, fifth paragraph, "Mr. Macchiarella responded that the Navy provides meetings for proposed plans," will be revised to "Mr. Macchiarella responded that the Navy provides meetings for Proposed Plans."

Ms. Smith provided the following comment:

- Page 7 of 9, second paragraph, "Mr. McMillan responded that CO_2 is released with hydrocarbons are oxidized and that catalytic oxidation (catox) units are used from moderate concentrations of vapor," will be revised to "Mr. McMillan responded that CO_2 is released when hydrocarbons are oxidized and that catalytic oxidation (catox) units are used from moderate concentrations of vapor."

The minutes were approved as modified.

II. Co-Chair Announcements

Mr. Humphreys distributed his list of documents and correspondence received during December 2007, which is presented as Attachment B-1.

Mr. Humphreys announced that Michael John Torrey and Neil Coe were excused from the meeting.

Mr. Macchiarella said he mailed the RAB the application and resume for the new RAB candidate, Mr. Fred Hoffman.

Mr. Macchiarella responded to a request from Ms. Konrad during the December RAB meeting about a possible presentation of the federal to federal transfer (FED) parcels. He said the Navy is working on the site inspection (SI) for the FED parcels. . This report is schedule to be drafted around the end of April or May 2008 and that a presentation to the RAB at that time would be appropriate.

Mr. Macchiarella distributed to the RAB a fact sheet that had been given to tenants on the upcoming removal action for Installation Restoration (IR) Sites 5 and 10. The fact sheet is included as Attachment B-2.

III. Site 24 Feasibility Study Presentation

Ms. Mary Parker (Navy) and Mr. Dan Carroll (Kleinfelder) presented the IR Site 24 feasibility study (FS). Ms. Parker began the presentation and noted that a large, fold-out reference map was attached to the end of the presentation handout (Attachment B-3). Ms. Parker explained the site description and history (Slide 3) and showed a map identifying the site location with respect to the rest of Alameda Point (Slide 4).

Ms. Parker summarized the remedial investigation (RI), presented on Slide 6. She said there are no continuing sources of contamination and that the RI evaluated the sediment samples collected at 62 locations from 1996 to 2006. She said that concentrations of some metals and organic chemicals were higher in the northeastern corner of IR Site 24, near the shoreline and under the roadway, than in the open water.

Ms. Parker said the RI included an ecological risk assessment (ERA) and presented the results on Slide 7, which confirmed there were no adverse impacts and that no further action was recommended for the majority of the site. However, the ERA concluded that there is potential ecological risk in the northeastern portion of IR Site 24 between Outfalls J and K, known as the Area of Ecological Concern (AOEC), and that a focused FS was necessary for this AOEC only. Ms. Parker described the AOEC (Slide 8) and said that the depth of contaminant concentrations was up to 2 feet. The location of AOEC for the focused FS was shown on Slide 9.

Ms. Parker explained the rationale for sediment goals at IR Site 24, which concluded that the remediation goals accepted in the final Record of Decision (ROD) for IR Site 17, Seaplane Lagoon, are proposed as preliminary remediation goals in the FS (Slide 10). The preliminary remediation goals were presented on Slide 11.

Mr. Hoffman asked about the outline of AOEC (approximately one-third of the outlined AOEC is on the water) and whether the contaminants were under water (Slide 9). Ms. Parker responded that the FS included the entire outlined area: surface sediment from 0 feet to a maximum of 2 feet. Mr. Carroll clarified where the riprap wall extends and where the land begins.

Mr. Carroll continued the presentation and reiterated the location of AOEC on Slide 9. He said Pier 1 is the division between IR Site 17 Seaplane Lagoon and IR Site 24. However, water and ecological receptors flow freely under and beyond the pier, or the line that divides the two sites. He said this division should be thought of as a free-flowing or porous line, which tied into the rationale to use the remediation goals accepted in the final IR Site 17 ROD as the preliminary remediation goals in the IR Site 24 FS. Mr. Carroll said Outfall J was the main source of sediment contamination. The only medium of concern was sediment in this AOEC.

Ms. Konrad asked about decontamination of the outfalls. Ms. Parker explained that the lines leading to Outfall J and the outfall had been cleaned and inspected. The lines leading to Outfalls K and L were removed and replaced. Ms. Parker said all were part of a previous removal action.

Mr. Carroll presented the following five alternatives evaluated in the FS (Slide 12):

- Alternative 1 – No Action (Slide 13)
- Alternative 2 – Institutional Controls (ICs) (Slide 14)
- Alternative 3 – Monitored Natural Recovery and ICs (Slide 15)
- Alternative 4 – Thin-layer Cap and ICs (Slide 16)
- Alternative 5 – Dredging (Slide 18)

Mr. Leach asked about the common recommendation to deepen waterways for navigation. Mr. Carroll responded that shipping traffic and navigation of freighters require deeper drafts to pass through waterways and to piers. In this case, however, ships are not navigating in the FS area. Mr. Carroll said navigation is not a major concern; instead, the concern is maintaining the stability and availability of the roadway. He said that barges dock at Pier 1, so whatever alternative is selected, the waterway still needs to be deep enough for barges.

Mr. Carroll showed a chart synthesizing the comparative analysis of the five alternatives, which included the relative cost of each alternative (Slide 19). He showed the remaining schedule for the FS (Slide 20) and opened up the presentation for questions.

Mr. Humphreys asked about the monitored natural attenuation of contaminants (referring to Alternative 3) and how cadmium, as heavy metal, can be naturally attenuated. Mr. Carroll explained that Alternative 3 is not highly recommended because of issues such as the one posed by cadmium. Cadmium remains in the environment and, if disturbed, can cause potential harm to ecological receptors. Ms. Parker said this is why Alternative 3 was not highly rated.

Mr. Leach asked how the Navy's logic for remediation can anticipate the regional future use (referring to Alternatives 4 and 5). Ms. Parker said that future use does not matter with respect to this remediation. The Navy planned to remove only 0 to 2 feet of sediment based on data and results for confirmation samples in Alternative 5. A thin-layer of clean sand, up to 1 foot, is proposed in Alternative 4. Ms. Parker said that the reasoning to replace the area with clean sediment is to maintain the stability of the roadway. She said that this remediation alternative would have no effect on future use of the area.

Mrs. Sweeney asked about the extent of the action area extending under the road, and Ms. Parker responded that it extends to the red line on the figure, which is about 60 feet.

Mr. Lynch expressed concern about contaminants, such as polychlorinated biphenyls (PCBs), and chemicals that have not been manufactured in the last 25 years, and legacy contamination from storm drains. He said even with estimated sedimentation rates, 15 to 25 years of sedimentation has not been enough to address the concern of contaminants, and he was

concerned about the monitored natural recovery and ICs alternatives. Mr. Lynch expressed his second concern about attributing this contamination to a storm drain outfall when ships that were docked at the piers discharged untreated ship waste directly into the bay until 1991. He said that this source should be considered as an equal source of contamination. Ms. Parker responded that the Navy collected off-shore data to evaluate potential contamination from docked ships. Ms. Parker also said that some of the reasons that Mr. Leach expressed factored into Alternative 5, Dredging, being more highly rated than the other alternatives.

Ms. Konrad said that it appeared that Alternative 5 was the preferred alternative, and Ms. Parker responded that the ranking for Alternative 5 was higher. Ms. Parker said the FS does not officially propose an alternative; the Proposed Plan identifies a preferred alternative, and the Navy typically works with the regulatory agencies to select an alternative for the Proposed Plan. Ms. Parker agreed that the rating for Alternative 5 was higher. Mr. Carroll said that, as a part of the FS process, an unbiased scientific evaluation is conducted to assess the advantages and disadvantages of each alternative. He said, in this case, even though dredging (Alternative 5) is the most expensive alternative, it rated the highest among the other alternatives.

IV. Site 34 RI Presentation

Ms. Catherine Haran (Navy) and Dr. Craig Hunter (Tetra Tech) presented the IR Site 34 RI (Attachment B-4). Ms. Haran began with an introduction to and overview of the presentation. Ms. Haran presented the site location, history, and features, as well as soil and groundwater sampling. Dr. Hunter presented the risk assessment (RA) exposures, human health and ecological risk, and recommendations.

Ms. Haran said that IR Site 34 is located in the north-central portion of Alameda Point and is 4.2 acres (Slide 3). She said that the site is relatively flat with open space and partially paved areas, and explained the site history on Slide 4. Ms. Haran said IR Site 34 was part of a Naval Air Rework Facility (NARF) used for maintenance of base equipment. Twelve buildings that previously occupied the site were used for metal work, wood work, painting, sandblasting, and equipment storage. She said all activity ceased when the base closed in 1996. The buildings were demolished and the site is now open space. Mr. Hoffman asked if engines were reworked in any of the buildings and Mr. Macchiarella responded that the facility was used for maintaining base equipment. Ms. Haran explained the site features on Slides 6 and 7.

Ms. Haran discussed the previous investigations, including soil sampling events between 1994 and 2006 (Slide 8). She said the soil samples were analyzed for metals, volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, PCBs, total petroleum hydrocarbons (TPH), and polycyclic aromatic hydrocarbons (PAHs). Soil samples were collected across the entire site, but were focused in areas of suspected contamination based on the site history (Slide 9).

Ms. Haran discussed the groundwater sampling events between 1995 and 2007 (Slide 10). She said groundwater is shallow and within 4 feet of the surface across much of the site. She said that groundwater was analyzed for the same contaminants as soil.

Mr. Biggs asked why the buildings were torn down, and Mr. Delong responded that it was a decision made by Navy management to maintain the base.

Mr. Humphreys said he recalled a causeway or fill that took trains out to the ferry and asked about the distance to the shoreline. Ms. Haran showed a line that represented the old rail line, which was removed (Slide 9). Mr. Hunter said the old rail line is about 30 feet from the shoreline.

Mr. Humphreys mentioned that he expressed a general concern about any other fuel lines under the runway during the presentation on the Alameda Point Petroleum Program at the RAB meeting on December 6, 2007. He said that the presenter, Mr. John McMillan, answered that there were no other fuel lines. Mr. Humphreys said he noticed what appeared to be a fuel dock on the map and asked if the area had been sampled for contamination. Mr. Macchiarella explained that Mr. Humphreys referred to corrective action area (CAA) A, or fuel line A, which was closed out. Mr. Humphreys asked if the fuel line site had been sampled for contamination and asked if it was the only fuel line. Mr. Macchiarella said CAA-A was closed out (sampling for contamination occurred) and it was the only major fuel line. Mr. Delong said it was the only major fuel line as well.

Dr. Hunter proceeded with the presentation and explained the anticipated reuse scenario (Slide 12). He said that IR Site 34 is intended to be redeveloped as a part of a golf course. There is a restriction on residential use, and shallow groundwater is not a current or future source of drinking water. Dr. Hunter explained the results of the human health risk assessment (Slide 13). He said the reasonable maximum exposure for the cancer risk of each exposure scenario falls within the risk management range, but the residential exposure scenario exceeded the value. In turn, one of the recommendations was to complete an FS to examine potential remedial alternatives for the site. Potential noncancer risk also showed potential hazards to commercial/industrial and construction workers. He pointed out that the noncancer risk does not include exposure to lead, but it was evaluated through the DTSC lead comparison concentration. The results showed that lead exceeded that value. He explained that incremental risk was posed by site activities and not background levels; the metals concentrations exceeded levels typically observed in background concentrations. The incremental risk was the total risk for the site (Slide 14). Most of the risk to residential and commercial/industrial receptors was from hypothetical inhalation of VOCs in indoor air originating from vapor intrusion and was based on a single detection at a single location. He said the risk was driven by one high value detected, but VOCs were detected in only three or fewer soil sample locations (Slide 14). He said the exposure point concentrations were based on this maximum concentration in single samples, which overestimated potential risk for the site (Slide 14).

Dr. Hunter said four areas were identified as areas of concern (AOC) and explained the contamination in each (Slide 15). He showed two maps of the locations where human health risk drivers were identified based on both the residential and recreation use scenarios (Slide 15 and 16). Dr. Hunter summarized the risk drivers for soil (Slide 17) and said these risk drivers would be examined in the FS. He said that there were no risk drivers for groundwater.

Dr. Hunter summarized the ecological risk assessment (Slide 18) and said IR Site 34 is characterized by open space and barren habitat, which was deemed generally unsuitable for supporting wildlife populations. He said small wetlands were found (vernal pool-type wetlands) and are typical for the settling that has occurred on the site. He said soil contamination was not found in the small wetland locations. In addition, the golf course is not expected to create ideal habitat for wildlife.

Based on the risk assessments, Dr. Hunter said an FS is recommended for further evaluation of soil in the AOCs. In addition, he said the FS should consider the future land use in its evaluation of the alternatives to address contamination (Slide 19). He said additional data gaps sampling was proposed to confirm the presence of the VOCs.

Mr. Leach asked how it was concluded that a potential golf course would not be suitable habitat for wildlife. Dr. Hunter responded that it would not be managed for wildlife; management may control wildlife populations.

Ms. Konrad asked about the process of discovering a potential revision of land use. Mr. Macchiarella responded that a cleanup strategy is valid for a certain point in time because there is a possibility of future land use to change over time. The Navy and other military agencies rely on a reuse plan. Alameda Point relies on the Naval Air Station (NAS) Alameda Point Community Reuse Plan of 1996, which was adopted as a general reuse plan amendment in 1999 or 2001. He said that the general plan amendment incorporated the reuse plan of 1996 and updated the site map for future use, which identified the northwest areas as the site for a golf course. [P.S. *After the meeting, Mr. Macchiarella clarified that the 1996 reuse plan was adopted by the City of Alameda in 2003;"Alameda Point General Plan Amendment".]*

Mrs. Sweeney asked if the contamination, including PCBs, pesticides, and PAHs, was located uniformly across the site or clustered in certain areas. Dr. Hunter responded pesticides were discovered in an area along the fence-line to the north. He said PCBs detection was limited, localized, and not widespread across the site.

V. Discussion and Vote of RAB Membership of a New Applicant

Mr. Humphreys introduced Mr. Hoffman, the RAB candidate, and asked him to describe his qualifications and reflect on his reason for candidacy. Mr. Hoffman introduced himself and described his qualifications. Mr. Hoffman received a bachelors and masters degree in geology and worked for EPA for 13 years when the agency began operation in 1970. Mr. Hoffman explained that, early in his employment, he experienced many facets of EPA and eventually settled into the regional groundwater field. In 1983, he said, groundwater contamination was discovered at Lawrence Livermore National Laboratory. He contributed to the work and was eventually offered employment to work on the groundwater contamination. Livermore was the first Department of Energy (DOE) National Priorities List (NPL) site, and he was on the team to negotiate the first DOE federal facility agreement. He became the division leader responsible for the Superfund cleanup of the Livermore site which, at its peak, was similar to the Alameda Point project. He said that an interesting aspect of his job was that he was able to conduct all

components and investigations he deemed necessary because it was the first project of its kind. He said that the cleanup at the Livermore site was a rewarding experience. In addition, he worked with a community work group, similar to the RAB. He said he is familiar with working and communicating with the public about cleanup on a site.

Mr. Hoffman said he is a 30-year resident of Alameda and is concerned with the cleanup at Alameda Point. He is retired from the laboratory and is interested in the activities at Alameda Point because the national laboratory has tested experimental technologies on Alameda Point. He said he is impressed with the Navy's willingness to experiment with new technologies. Mr. Hoffman said he wanted to assist with groundwater cleanup at Alameda Point.

The RAB elected Mr. Fred Hoffman as a member of the RAB.

VI. Community and RAB Comment Period

Ms. Lofstrom discussed the Fleet Industrial Supply Center Oakland, Alameda Facility/Alameda Annex (FISCA) public comment period, which is scheduled to open by the end of January. A fact sheet will be mailed. She said that the remedial action plan was reviewed and comments were provided to the developer. The developer is responsible for the work, and not the Navy. The public comment meeting is tentatively scheduled for February 13, 2008, in Room 140, Building 1, the Community Conference Center at Alameda Point.

VII. RAB Meeting Adjournment

The meeting was adjourned at 8:21 p.m.

ATTACHMENT A

NAVAL AIR STATION ALAMEDA
RESTORATION ADVISORY BOARD MEETING AGENDA

January 10, 2008

(One Page)

RESTORATION ADVISORY BOARD

NAVAL AIR STATION, ALAMEDA

AGENDA

JANUARY 10, 2008, 6:30 PM

<u>* Notice changed date for this meeting ***</u>**

ALAMEDA POINT – BUILDING 1 – SUITE 140
COMMUNITY CONFERENCE ROOM
(FROM PARKING LOT ON W MIDWAY AVE, ENTER THROUGH MIDDLE WING)

TIME	SUBJECT	PRESENTER
6:30 - 6:45	Approval of Minutes	Mr. George Humphreys
6:45 - 7:00	Co-Chair Announcements	Co-Chairs
7:00 – 7:30	Site 24 Feasibility Study Presentation	Ms. Mary Parker & Mr. Dan Carroll
7:30 – 8:00	Site 34 Remedial Investigation Presentation	Ms. Catherine Haran & Dr. Craig Hunter
8:00 – 8:15	Discuss and vote on RAB Membership of a New Applicant (RAB members received the application with this Agenda)	Mr. George Humphreys
8:15 – 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 and Correspondence Received during December 2007, distributed by Mr. George Humphreys, RAB Community Co-Chair (1 page)

B-2 Fact Sheet for Removal Action at IR Site 5 and 10 (1 page)

B-3 Draft Feasibility Study for IR Site 24, Pier Area, Alameda Point, presented by Ms. Mary Parker and Mr. Dan Carroll (11 pages)

B-4 Draft Remedial Investigation Report for IR Site 34 Alameda Point presented by Ms. Catherine Haran and Dr. Craig Hunter (11 pages)

ATTACHMENT B-1

List of Reports and Correspondence Received during December 2007

(1 page)

Restoration Advisory Board
List of Document and Correspondence
Received during December 2007

Reports

1. Dec. 12, 2007, "Draft Final Feasibility Study Report, IR Site 32, Northwestern Ordnance Storage Area, Alameda Point, Alameda, California", prepared by Bechtel Environmental, Inc. for BRAC Program Management Office West.
2. Dec. 18, 2007, "Final Remedial Investigation Report, IR Site 20 (Oakland Inner Harbor) and IR Site 24 (Pier Area), Alameda Point, Alameda, California", replacement page for Table 6-5.
3. Dec. 21, 2007, "Draft, Addenda to Final Project Plans, Free Product Removal at Petroleum Corrective Action Area C, Alameda Point, Alameda, California", prepared by Shaw Environmental, Inc. for BRAC Program Management Office West.
4. Dec. 24, 2007, "Preliminary Remedial Design, Draft Remedial Action Work Plan for IR Site 4, Alameda Point, Alameda, California", prepared by Innovative Technical Solutions, Inc., for BRAC Program Management Office West.

Correspondence

1. Nov. 28, 2007, (received Dec. 4, 2007), "Request for Extension for Review of Draft Remedial Investigation Report for Installation Restoration Site 34, Alameda Point, Alameda County, September 2007", letter from Ms. Dot Lofstrom, P. G., DTSC to Mr. Thomas L. Macchiarella, BRAC Program Management Office West.
2. Nov. 20, 2007, (received Dec.4, 2007), "Review of the Draft Remedial Investigation Report for Installation Restoration Site 34, Alameda Point, Alameda, California, September 2007", letter from Xuan-Mai Tran, U. S. EPA Region IX, to Mr. Thomas Macchiarella, BRAC Program Management Office West.
3. Dec. 6, 2007, "Review of Draft Remedial Investigation Report for Installation Restoration Site 34, Alameda Point, Alameda, California, dated Sept. 2007", from Ms. Dot Lofstrom, P. G., DTSC, to Mr. Thomas L. Macchiarella, BRAC Program Management Office West.
4. Dec. 10, 2007, "Review of the Preliminary Remedial Design/Draft Remedial Action Work Plan for IR Site 17, Seaplane Lagoon, Alameda Point, Alameda, California, Oct. 2007", letter from Xuan-Mai Tran, U. S. EPA, Region IX to Mr. Thomas Macchiarella, BRAC Program Management Office West.
5. Dec. 13, 2007, "Review of the Draft Spring 2007 Alameda Basewide Annual Groundwater Monitoring Report Alameda Point, Alameda, California, Sept. 2007", letter from Xuan-Mai Tran, U. S. EPA, Region IX to Mr. Thomas Macchiarella, BRAC Program Management Office West.

ATTACHMENT B-2

Fact Sheet for the Removal Action at IR Site 5 and 10

(1 page)

REMOVAL ACTION
AT INSTALLATION RESTORATION SITES 5 AND 10
ALAMEDA POINT, ALAMEDA, CALIFORNIA

OCTOBER 2007

SITE BACKGROUND

Installation Restoration (IR) Sites 5 and 10 consist of Buildings 5 and 400, respectively, located in the central portion of the former Naval Air Station at Alameda Point. These buildings were used for missile rework operations, aircraft maintenance, and other specialty operations. Each building also operated an instrument shop that maintained aircraft instruments that utilized radioluminescent paint.

The radioluminescent paint contained radium-226 that was mixed with fluorescent zinc sulfide to make paint that would glow in the dark. This paint was then applied to aircraft instruments and switches to make them visible in darkened conditions. Wastes from this operation were identified as having been discharged into the sewer and storm drain system. Radiological characterization activities have verified the presence of low-level radium-226 in the storm drain lines that discharged from the instrument shops within Buildings 5 and 400.

Building 5 is currently vacant. Building 400 is leased to several tenants, including a used car export company, art studies, and a woodworking shop.

REMOVAL ACTION OBJECTIVE

The Navy has planned a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Time-Critical Removal Action to dispose of radioactive contamination that may be present in or around the storm drain lines near Buildings 5 and 400. The primary objective of this removal action is to protect human health and the environment by physically removing low-level radium-226 impacted drain lines and soils, thus preventing potential migration of contaminated material within or outside of the storm drain and sewer systems.

The removal action is being carried out by an approved Action Memorandum and Time-Critical Removal Action Work Plan with oversight from the U.S. Environmental Protection Agency, the California Environmental Protection Agency, and the San Francisco Regional Water Quality Control Board.

REMOVAL ACTION

To achieve the removal action objectives, the Navy will remove potentially contaminated storm drain lines and associated soil as indicated on Figure 1.

The removal action will consist of excavating trenches to access and remove the potentially contaminated drain lines and surrounding soils. Once the drain lines are removed from the trench excavations, the in-place trench soils will be tested for remaining contamination, which will also be removed if above the action level. A new storm drain system will be installed “in kind”, trenches will be backfilled with clean import material, and the surface will be restored. All excavated material will be surveyed and tested for contamination, then disposed of in accordance with all applicable regulations in an off-site licensed facility.

Excavation locations will be delineated with signs, lights, temporary railings, and barricades. Excavation activities will be phased in segments along the length of the drain lines to minimize disruption during the course of the project. Open excavations will be closed at the end of each work day with trench plates.

Although minimal delays may occur, convenient access to roadways will be maintained during construction activities. Dust abatement measures will be applied as needed to the on-site roads used by construction vehicles for prevention of dust nuisance.

Potential risk from this work to nearby tenants is minimal and will be constantly monitored by designated Health & Safety professionals during operations.

IR SITES 5 AND 10 REMOVAL ACTION SCHEDULE

Mobilization and pre-excavation setup began in August 2007 and are ongoing, while excavation activities are anticipated to begin in Early November.

Backfilling and site restoration are estimated to be complete by April 2008.

QUESTIONS

For more information about this action, please see:

Information Repository

950 West Mall Square,

Bldg 1, Room 240,

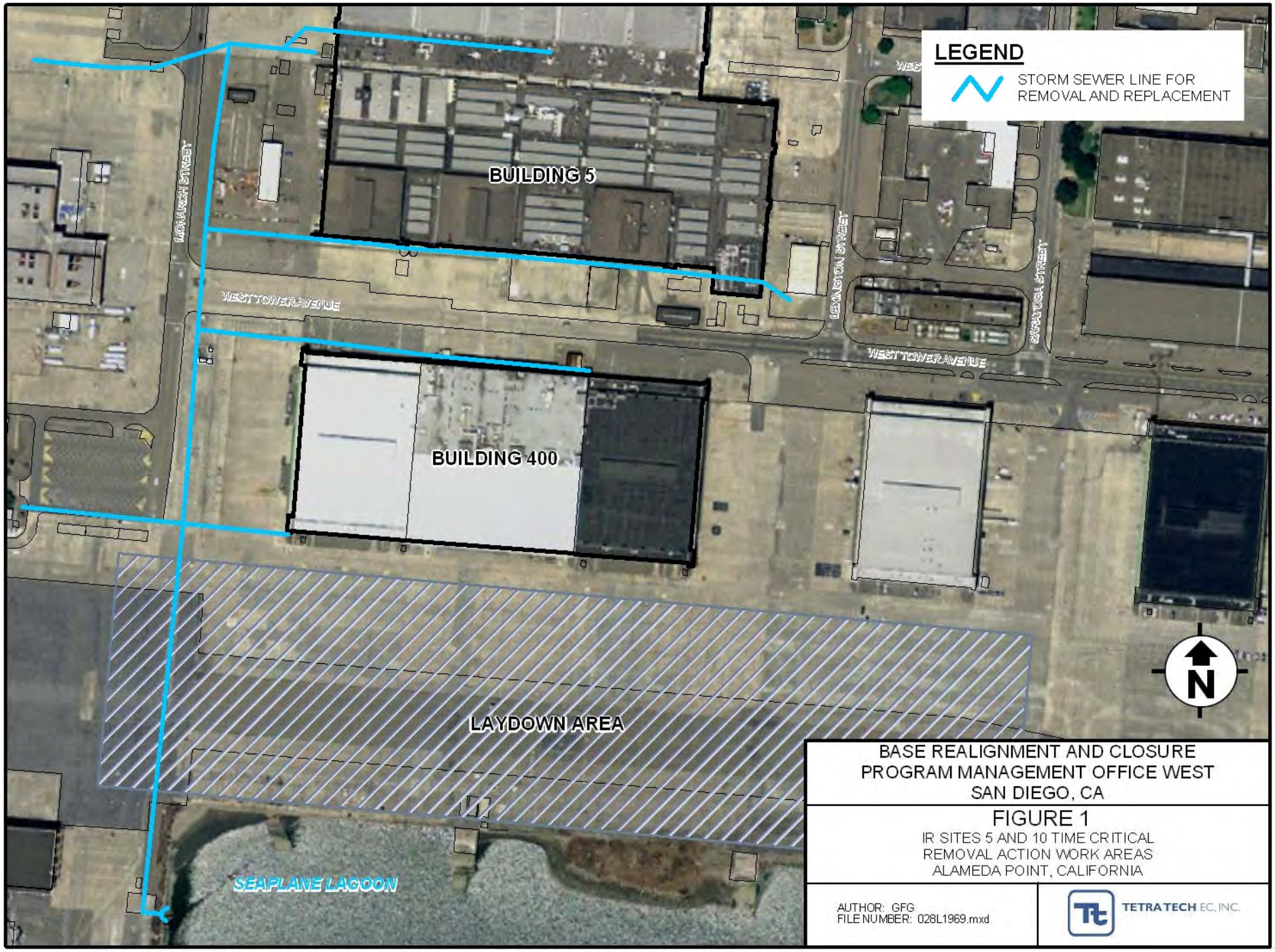
Alameda Point, CA

or contact:

THOMAS MACCHIARELLA

NAVY BRAC ENVIRONMENTAL COORDINATOR

(619) 532-0907



BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CA

FIGURE 1

IR SITES 5 AND 10 TIME CRITICAL
REMOVAL ACTION WORK AREAS
ALAMEDA POINT, CALIFORNIA

AUTHOR: GFG
FILE NUMBER: 028L1969.mxd

TETRA TECH EC, INC.

ATTACHMENT B-3

Draft Feasibility Study IR Site 24, Pier Area, Alameda Point

(11 pages)

Welcome

BRAC PMO

Draft Feasibility Study for IR Site 24, Pier Area, Alameda Point

RAB Meeting
January 10, 2008

Mary Parker
Navy Project Manager

Dan Carroll
Kleinfelder

Agenda

BRAC PMO

- Site Description and History
- Remedial Investigation (RI) Summary
- Remediation Goals
- Feasibility Study (FS) Alternatives
- Comparative Analysis
- Schedule
- Questions and Discussion

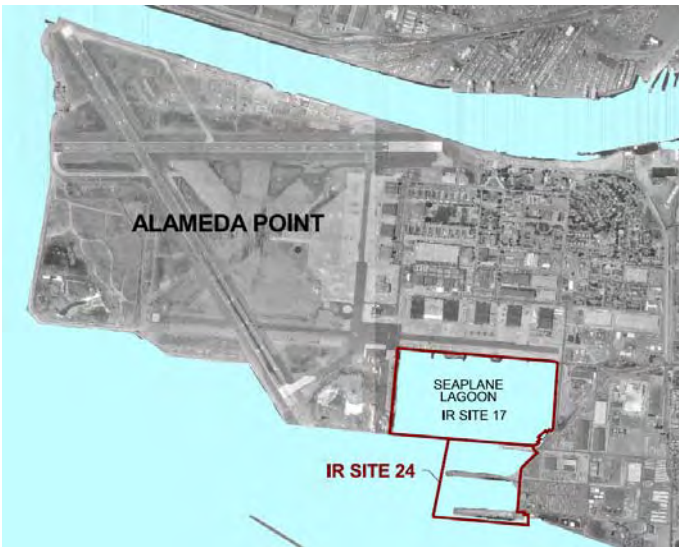
Site Description and History

BRAC PMO

- IR Site 24 consists of the offshore Pier Area, which is approximately 50 acres
- Three piers currently dock naval ships (including U.S.S. Hornet)
- Navy began actively using the piers in 1943
- Pier Area was periodically dredged until 1978
- Proposed future use includes docking large ships
- Two storm-sewer lines leading to the Pier Area were replaced in 1991 and the third line was cleaned in 1991

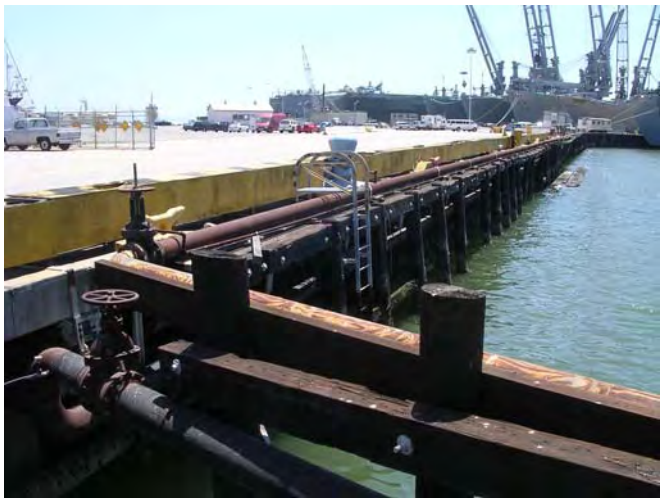
Site Location Map

BRAC PMO



Wharf Road and Pier 1 Area

BRAC PMO



RI Summary

BRAC PMO

- Primary sources of contamination include storm drain outfalls, surface runoff
- No continuing sources
- Sediment sampling conducted in:
  - 1996, 1997 and 1998: 31 locations
  - 2005: 19 locations
  - 2006: 12 locations in wharf road area near the shoreline and under the roadway
- RI evaluated the historical (1996-1998) and 2005/2006 RI sediment data
- In the northeastern corner of IR Site 24 near the shoreline and under the roadway, concentrations of some metals and organic chemicals are higher than in the open water

Sediment Sampling Locations

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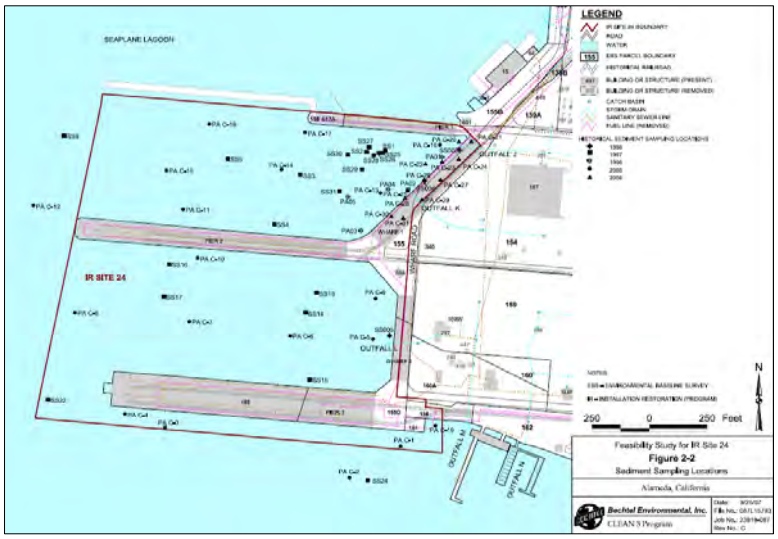

Risk Assessment Results

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- Ecological risk assessment
  - Evaluated risk to the benthic invertebrates, fish, and birds including the Least Tern
  - No adverse impacts and no further action recommended for majority of the site (open water area)
  - Potential ecological risk in the northeastern portion of IR Site 24 between Outfalls J and K
- Focused FS for this Area of Ecological Concern (AOEC) only

Area of Ecological Concern

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- AOEC approx. 18,000 square feet (0.4 acre)
- Depth of contaminant concentrations above preliminary remediation goals (RGs): 0-2 feet
- Primary contributors to risk:
  - Cadmium
  - Lead
  - Total DDx (sum of pesticides DDT, DDD, and DDE)
  - Total Polychlorinated Biphenyls (PCBs)
- Contaminants are co-located

Pier 1 and Outfalls J and K Area

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Rationale for Sediment Goals

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- IR Site 24 is adjacent to and south of Seaplane Lagoon (IR Site 17)
- The Site 24 ecological risk drivers identified in the RI (i.e., cadmium, lead, total DDx and total PCBs) also were risk drivers at Seaplane Lagoon
- The ecological receptors are the same at both Site 24 and Seaplane Lagoon
- Therefore the remediation goals accepted in the Final Record of Decision (ROD) for Seaplane Lagoon are proposed as preliminary remediation goals in the FS

Preliminary Remediation Goals

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Constituent	Value (mg/kg)	Basis for Preliminary RG
Cadmium*	24.4	Seaplane Lagoon RG
Total DDx (DDT, DDD, DDE)	0.13	Seaplane Lagoon RG
Total PCBs	1.13	Seaplane Lagoon RG

* Spacial distribution of lead similar to cadmium; preliminary RG for cadmium considered protective for lead as well

FS Alternatives Evaluated

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- Alternative 1 – No action
- Alternative 2 – Institutional Controls (ICs)
- Alternative 3 – Monitored natural recovery and ICs
- Alternative 4 – Thin-layer cap and ICs
- Alternative 5 – Dredging

Discussion of Alternatives

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- Alternative 1 – No action
- Alternative 2 – ICs
- Alternative 3 – Monitored natural recovery and ICs
- Alternative 4 – Thin-layer cap and ICs
- Alternative 5 – Dredging

Alternative 1: No action alternative

- Threshold criteria must be met
- No ecological data available for sediment beneath wharf road
- No action alternative not protective based on available data

Discussion of Alternatives

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- Alternative 1 – No action
- **Alternative 2 – ICs**
- Alternative 3 – Monitored natural recovery and ICs
- Alternative 4 – Thin-layer cap and ICs
- Alternative 5 – Dredging

Alternative 2: ICs

- **Prohibit disturbance of sediments beneath wharf road**
- **Prohibit removal of wharf road**

Discussion of Alternatives

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- Alternative 1 – No action
- Alternative 2 – ICs
- **Alternative 3 – Monitored natural recovery and ICs**
- Alternative 4 – Thin-layer cap and ICs
- Alternative 5 – Dredging

Alternative 3: Monitored natural recovery and ICs

- **Natural sediment processes would cover contaminants**
- **Same ICs as Alternative 2**
- **Sedimentation rates ~ 1 cm/yr**
- **Monitor sediment quality every 5 years (sediment stability, risk reduction over time)**
- **When monitoring results indicate acceptable risk, no further action**

Discussion of Alternatives

BRAC PMO

- Alternative 1 – No action
- Alternative 2 – ICs
- Alternative 3 – Monitored natural recovery and ICs
- Alternative 4 – Thin-layer cap and ICs
- Alternative 5 – Dredging

Alternative 4: Thin-layer cap and ICs

- More active than Alternatives 2 and 3
- Similar ICs to Alternative 2
- Monitoring to assess cap effectiveness
- Place clean sand layer (~ 1 foot thick) in action area
- Assumed shallow exposure interval for benthic receptors

Under the Wharf Road

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- Difficult access
- Not prime habitat

Discussion of Alternatives

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- Alternative 1 – No action
- Alternative 2 – ICs
- Alternative 3 – Monitored natural recovery and ICs
- Alternative 4 – Thin-layer cap and ICs
- **Alternative 5 – Dredging**

Alternative 5: Dredging

- Clean closure option, accomplishes mass removal
- Silt curtain to control sediment migration
- Assume clean sand placed in dredge area for stability
- Access from water side
- Confirmation sampling after removal
- No ICs or additional monitoring

Comparative Analysis of Alternatives

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	ALTERNATIVE				
NCP Criteria	1 No Action	2 ICs	3 MNR With ICs	4 Thin-Layer Capping With ICs	5 Dredging
Overall protectiveness	No	Yes	Yes	Yes	Yes
Compliance with ARARs	Yes	Yes	Yes	Yes	Yes
Long-term effectiveness and permanence	NA	○	○	◑	●
Reduction of toxicity, mobility, or volume through treatment	NA	○	○	○	◑
Short-term effectiveness	NA	◑	◑	●	◑
Implementability	NA	●	●	◑	◑
Cost[b] ($M)	NA	● 0.43	◑ 1.1	○ 2.1	○ 2.3

Notes:
ARAR – Applicable or relevant and appropriate requirement
IC – Institutional control
MNR – Monitored natural recovery
NA – Not applicable. Did not meet threshold criteria, and was not evaluated against balancing criteria.

Relative Performance:

Low = ○ medium = ◑ high = ●

Schedule

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- ☑ Draft issued 11/28/07
- ☑ RAB Meeting 1/10/08
- Comments due 1/28/08
- Draft Final FS 3/28/08
- Final FS 4/28/08

Questions and Discussion

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ATTACHMENT B-4

Draft Remedial Investigation IR Site 34 Alameda Point

(11 pages)

Welcome

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Draft Remedial Investigation Report for Installation Restoration Site 34 Alameda Point

Catherine Haran
Project Manager
BRAC PMO

Craig Hunter
Sultech Team

January 10, 2008

Presentation Overview

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- Site Location, History, and Features
- Soil Sampling
- Groundwater Sampling
- Risk Assessment Exposures
- Human Health Risk
- Ecological Risk
- Recommendations
- Schedule

Site Location

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Location at Alameda Point

Site Construction History

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- **Prior to Late 1800s:** Site underwater
- **Late 1800s:** Railroad constructed on berm
- **1920s-1950:** Additional fill events
- **1946-1967:** Buildings constructed for use by Navy

Previous Site Activity

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- Site 34 was a Naval Air Rework Facility (NARF) for maintenance of base equipment
- Formerly 12 buildings on Site 34 that were used for painting, wood work, metal work, sandblasting, and storage
- All buildings were demolished between 1996 and 2000
- Site is currently vacant with building pads and unpaved open space

Site Features

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- 6 ASTs and 15 transformers removed between 1996 and 2000
- Former fuel line closed-in-place in 1998
- The southwest area was primarily open space; used for storage of parts, equipment, and temporary storage and treatment of PCB- and lead-contaminated soil removed from nearby Site 15 between 1995 and 1997
- Storm sewer runs along the eastern boundary of the site; Second storm sewer encroaches onto the western portion of the site

Site Features

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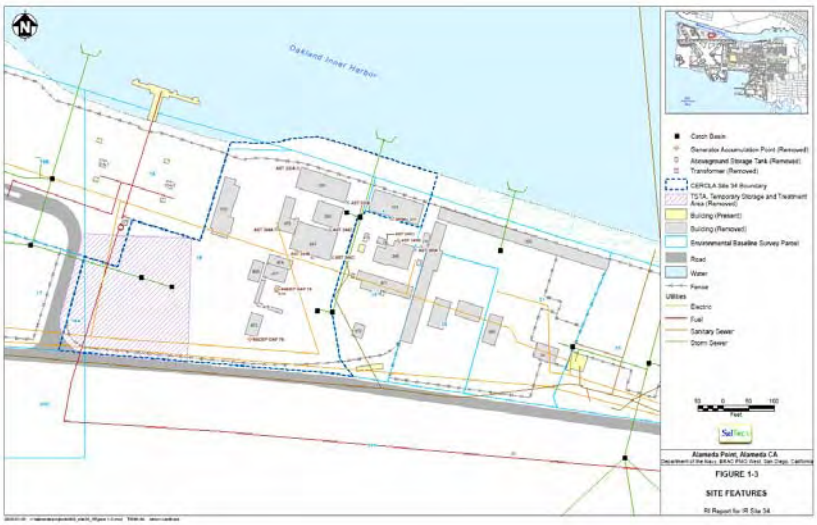

Soil Sampling

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- Previous investigations targeted areas of suspected contamination, such as leaks, stains, and fuel tank sites
- Samples collected during the RI addressed potential data gaps
- 208 soil samples collected between 1994 and 2006

Soil Sampling

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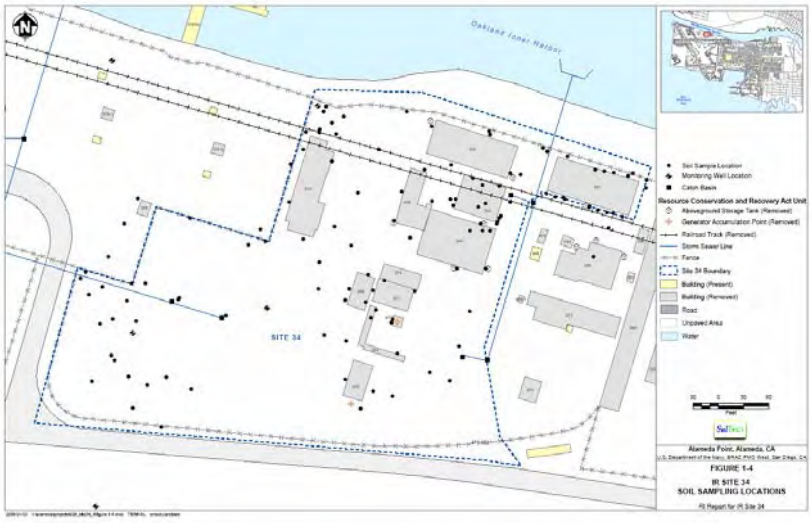

Groundwater Sampling

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- 44 groundwater samples were collected between 1995 and 2007
- 5 monitoring wells (installed in 2006) sampled for 2 rounds
- Groundwater is present within 4 feet of the surface across much of the site

Groundwater Sampling

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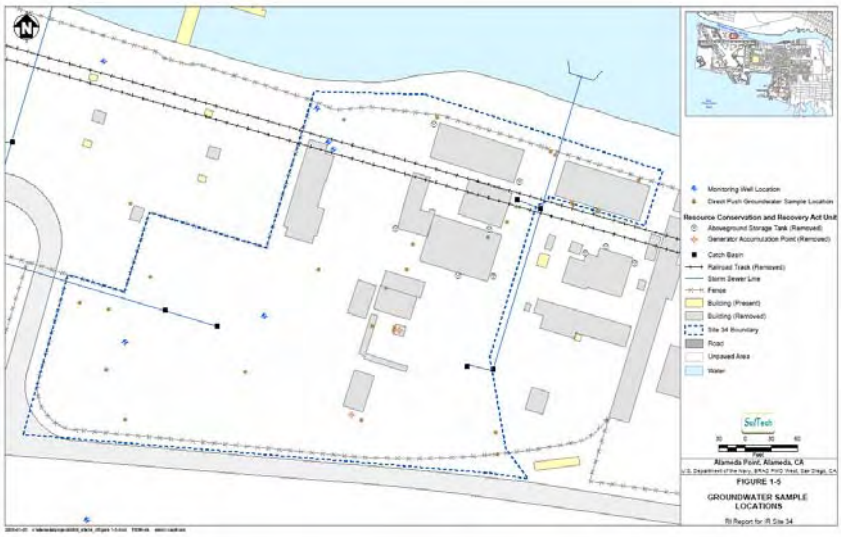

Risk Assessment Exposures

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Anticipated Reuse Scenario:

- Intended to be redeveloped as part of a golf course
- Identified as a tideland trust area that is subject to the limitations expressed in the Coastal Zone Management Act, including a restriction on residential use
- Shallow groundwater at Site 34 is not a current or future source of drinking water

Potential Receptors Evaluated in the RI:

1) Future resident (unlikely)
2) Future recreational user (for example, golfer)
3) Future commercial/industrial worker (groundskeeper or vendor)
4) Future construction worker (golf course construction team)
5) Ecological receptors

Human Health Risk

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Reasonable Maximum Exposure and (Central Tendency Exposure)

Exposure Scenario	Cancer (includes risk from background)	Noncancer (does not include risk from lead)
Recreational	2E-05 (4E-06)	1 (1)
Commercial/ Industrial	5E-05 (4E-06)	7 (5)
Construction	2E-05 (3E-07)	9 (0.2)
Residential: Child + Adult	3E-04 (6E-05)	81 (62)

Human Health Risk

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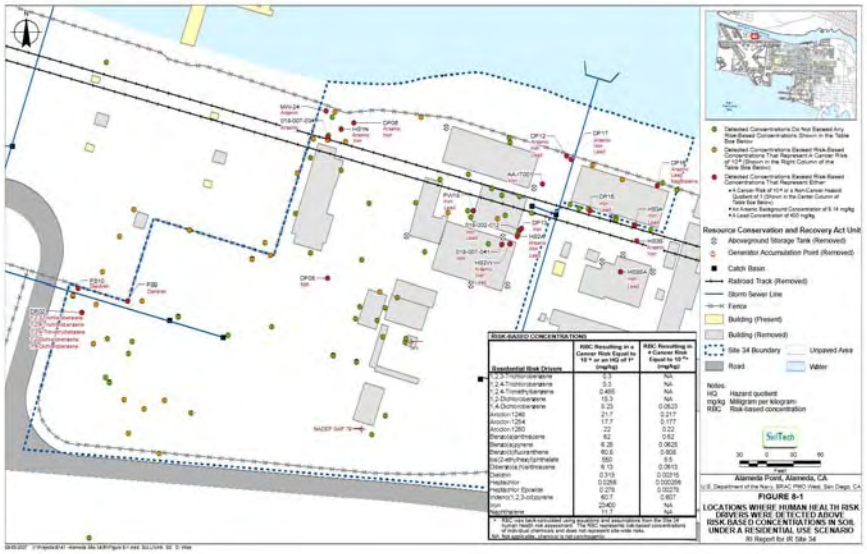
- Incremental risk is approximately equal to total risk (background risk is negligible and driven by arsenic)
- Predicted blood-lead concentrations for hypothetical future residents (adult and child) exceeded the DTSC comparison concentration
- Most of the risk to residential and commercial/ industrial receptors is from hypothetical inhalation of VOCs in indoor air based on vapor intrusion modeling
- VOCs were detected in 3 or fewer soil samples from Site 34. Exposure Point Concentrations were based on maximum concentrations detected in a single sample; overestimates potential exposures (and risk) for the site

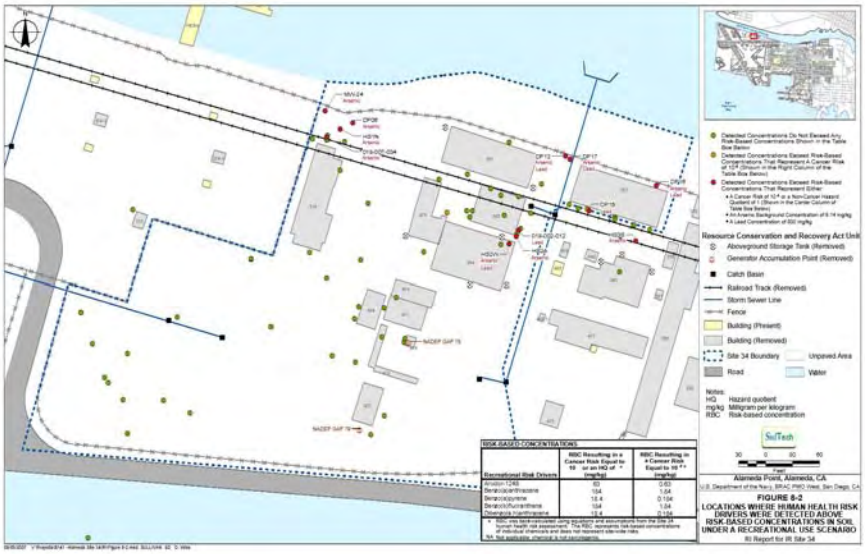
Human Health Risk

BRAC PMO



Human Health Risk

BRAC PMO



Human Health Risk

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Soil Risk Drivers (Future Industrial Worker):

- Metals (arsenic)
- VOCs (2 chemicals; based on laboratory analytical results for one soil sample)
- PAHs (5 chemicals; few isolated locations)
- Pesticides (heptachlor)
- PCBs (Aroclor-1248)

Soil Risk Drivers (Future Construction Worker):

- Metals (aluminum, arsenic, chromium, and manganese)
- PAHs (benzo(a)pyrene)

Groundwater Risk Drivers (Industrial and Construction):

- None

Ecological Risk Analysis

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- Current habitat at IR Site 34 is predominantly open space/barren habitat, which is generally unsuitable for supporting wildlife populations
- Potential small wetlands at IR Site 34 are not affected by site-related chemicals; the exposure pathway is incomplete or environmental risk is negligible
- Anticipated future use of IR Site 34 (golf course) is not expected to generate ideal habitat for wildlife

Recommendations

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- Consider further evaluation of selected chemicals in an FS
- The FS should consider the future land use in evaluating potential response actions
- Consider limited testing near the sample point where VOCs drive risk (inhalation exposure) to evaluate whether the soil represents a source for soil gas

Schedule

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Draft RI Report Submitted ……..	**September 7, 2007**
Comments Received from Agencies...	**December 5, 2007**
Submit Draft Final RI Report …..	**March 1, 2008**
Final RI Report ……..	**April 1, 2008**

Questions?

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