



# FINAL NAVAL AIR STATION ALAMEDA Restoration Advisory Board (RAB) Meeting Minutes

[www.bracpmo.navy.mil](http://www.bracpmo.navy.mil)

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

January 7, 2010

The following participants attended the meeting:

## Co-Chairs:

Derek Robinson                      Base Realignment and Closure (BRAC) Program Management Office (PMO) West, BRAC Environmental Coordinator (BEC), Navy Co-chair

Dale Smith                              Restoration Advisory Board (RAB) Community Co-chair

## Attendees:

### RAB Members

Fred Hoffman                      RAB  
George Humphreys                RAB  
Joan Konrad                        RAB  
James Leach                        RAB  
Jean Sweeney                      RAB  
Jim Sweeney                        RAB  
Michael John Torrey               RAB

### Community Members

Richard Bangert                    Community member  
Carrie Hvie                         Community member  
Gretchen Lipow                    Community member

### Navy Members

Bill McGinnis                      Navy Lead Remedial Project Manager (RPM)

Mary Parker Navy Project Manager (PM)

**City of Alameda Representatives**

Frank Matarrese Alameda City Council

Peter Russell Alameda Reuse and Redevelopment Authority (ARRA)

**Regulatory Agencies**

Anna Marie Cook U.S. Environmental Protection Agency (EPA)

Dave Cooper EPA

Melinda Garvey EPA

John Kaiser San Francisco Bay Regional Water Quality Control Board  
(Water Board)

Dot Lofstrom California Environmental Protection Agency Department of  
Toxic Substances Control (DTSC)

Marcus Simpson DTSC

John West Water Board

**Contractors**

Stuart Freeman URS Corporation

Linda Henry Brown and Caldwell

John McMillan Shaw Environmental, Inc. (Shaw)

Marsha Pendergrass RAB Facilitator

Radhika Sreenivasan ChaduxTt

Tommie Jean Valmassy ChaduxTt

The meeting agenda is provided as Attachment A.

**MEETING SUMMARY**

Dale Smith (RAB community co-chair) called the January 2010 former Naval Air Station Alameda (Alameda Point) RAB meeting to order at 6:30 p.m.

**I. Approval of December 2009 RAB Meeting Minutes**

Ms. Smith asked for comments on the December 2009 RAB meeting minutes. RAB members provided comments, which will be incorporated into the final set of minutes for December 2009.

The following comments were provided by Michael John Torrey (RAB):

- Page 8 of 9, list of action item, the dates on action item numbers 2, 3, 4, 6, 8 and 14 will be corrected to January 7, 2010.

The following comments were provided by Fred Hoffman (RAB):

- Page 3 of 9, add the following sentences to the beginning of discussion paragraph, “Mr. Hoffman reminded the Navy that time sensitive data that are not taken will be lost forever. Mr. Robinson responded that the Navy did not feel that the data were necessary and that, according to Mr. Murray Einarson (AMEC Earth & Environmental); elevated concentrations of the plume contaminants were not reaching San Francisco Bay.”

Derek Robinson (Navy Co-Chair) clarified that Mr. Einarson will draft a written response that provides his recommendations on the path forward regarding the Site 1 groundwater plume.

The following comments were provided by George Humphreys (RAB):

- Page 2 of 9, meeting summary, first paragraph, “Dale Smith called the December 2009...” will be revised to, “Derek Robinson called the December 2009....”
- Page 2 of 9, approval of minutes, first paragraph, first sentence, “Ms. Smith asked for comments on the November 2009...” will be corrected to, “Ms. Pendergrass asked for comments on the November 2009....”
- Page 5 of 9, section IV, third paragraph, eighth sentence, “Mr. Humphreys said that Mr. Delong mentioned...” will be corrected to “Mr. Humphreys said that Mr. deHaan (Alameda City Council) mentioned....”
- Page 6 of 9, section IV, third paragraph, insert after last sentence, “Ms. Lofstrom said that Henry Wong (DTSC) will take over the FISCA site.”
- Page 7 of 9, section VI, first paragraph, insert after last sentence, “Mr. Leach said that, as a structural engineer, he could look at the structure drawings and determine within 5 minutes if the floor slab could be cut without damaging the structure.”
- Page 9 of 9, list of action items, action item 10, initiated by column, “Mr. Hoffman” will be changed to, “Mr. Humphreys.”

The following comments were provided by Ms. Smith:

- Pages 5 of 9, section II, first paragraph, third sentence, “Ms. Smith asked if Mr. Robinson could give an update on the document. Mr. Robinson apologized and said that he is not prepared to make a presentation at this meeting,” will be corrected to, “During the agenda setting for the December meeting, Ms. Smith asked if Mr. Robinson could give an update on the document. At the December meeting, Mr. Robinson apologized and said that he is not able to make a presentation at this meeting.”

- Pages 5 of 9, section IV, third paragraph, first sentence, "...site investigation (SI) has not changed from last year," will be corrected to, "...site investigation (SI) had not changed from last year."
- Pages 5 of 9, section IV, third paragraph, eighth sentence, "...engine oils to drain off on the runway. He asked if the runway will be..." will be revised to, "...engine oils to drain on the runway. He asked if the runways will be...."
- Pages 7 of 9, section V, third paragraph, first sentence, "...regional aquitard and that multiple screen..." will be revised to "...regional aquitard and that many multiple screen...."
- Page 7 of 9, section VII, "The meeting was adjourned at 7:45 p.m." will be revised to "The meeting was adjourned at 7:45 p.m. for the annual potluck party."

The following comments were provided by Anna Marie Cook [U.S. Environmental Protection Agency (EPA)]:

- Page 1 of 9, list of attendees, the name "Malinda Garvi" will be corrected to "Melinda Garvey."
- Page 5 of 9, section IV, third paragraph, seventh sentence, "...is not included in the federal to federal transfer parcel land" will be corrected to "...is not included in the SI acreage."

The December 2009 RAB meeting minutes were approved with the above modifications.

## II. Co-Chair Announcements

Mr. Robinson (Navy co-chair) distributed the *Alameda Point Restoration Advisory Board Meeting Feedback Form* (Attachment B-1). He said that as part of the community involvement program, the Navy plans to provide feedback forms at RAB meetings at least once a year. Mr. Robinson requested the RAB members and any community members to fill out and submit the form if interested.

Mr. Robinson distributed the Navy action item responses (Attachment B-2). He requested that the RAB review the responses and he said the Navy will discuss any questions on the action items during the community comment period during the February meeting. Mr. Robinson noted the Navy will be providing written responses to the action items to keep the meetings on schedule.

Ms. Smith said that the end of 2009 was a busy period for RAB members. All the RAB members commented on Site 1 and Mr. Humphreys and Ms. Smith commented on Site 2. Ms.

Smith asked for an updated contact list so that she could forward the RAB comments to the regulators.

Ms. Smith noted that the RAB has provided useful and relevant comments on a number of documents for various sites. Ms. Smith said she feels that the RAB has been treated poorly by the Navy, its consultants, and the regulators with regard to the technical comments. She noted that the RAB members are highly qualified technically and include three licensed practicing engineers, two remedial engineers, and one structural engineer. She added that RAB comments should be considered seriously. Ms. Smith said that she looks forward to a better relationship with the Navy and the regulators.

Ms. Smith said that while commenting on Operable Unit (OU)-1, she came across Jean Sweeney's (RAB) concern that Site 7 would be remediated before the remedial goals had been finalized. Ms. Smith said that when she discussed this issue with Mr. Robinson, he informed her that the Navy and the regulators had agreed to move forward with the Site 7 soil cleanup even though the OU-1 remedial design has not been finalized. Ms. Smith said that the Navy and regulators should have mentioned to the RAB that they had decided to move forward with the work at OU-1.

Ms. Smith distributed her comments on the draft expanded work plan for transfer parcel Economic Development Conveyance (EDC)-12, EDC-17 and the Federal (FED) parcel (Attachment B-3). Ms. Smith briefly explained her comment regarding the four underground storage tanks (UST) present in the tern nesting area. She added that one UST with 2,000 gallons of liquid was removed and appeared to be leaking. Ms. Smith noted that there are three other USTs at the site and that this UST issue is not addressed in the expanded work plan.

Ms. Smith distributed the list of documents received in November and December 2009 (Attachment B-4). Ms. Smith noted that the Site 27 technical subcommittee meeting is scheduled for January 21 at 6:30 p.m. She said that the Navy project manager and the Navy contractors for the site have been requested to attend the meeting.

Ms. Smith asked Mr. Robinson to provide an explanation from the structural engineer on how digging through the foundation of Building 400 to remove the drain pipe will affect the building's foundation footer and structural walls. This issue was added to the action item list.

Ms. Smith noted that she did not receive a response from the Veterans Administration (VA) on moving the bay trail and asked if she could obtain contact information at the U.S. Fish and Wildlife Service. Ms. Cook said she would provide Ms. Smith with the name of the person EPA has contacted at the U.S. Fish and Wildlife Service and will also resend Richard Crow's (VA personnel) contact information.

### III. Operable Unit 2C Feasibility Study Update

Mr. Robinson introduced Mary Parker (Navy project manager) to begin the presentation on the revised draft OU-2C feasibility study (FS). Ms. Parker distributed the presentation handout (Attachment B-5).

Peter Russell (Alameda Reuse and Redevelopment Authority [ARRA]) said that the city commented on the OU-2C FS and distributed a copy to the RAB (Attachment B-6).

During the review of Slide 9, Dot Lofstrom (DTSC) said that the radiological-contaminated lines beneath Building 400 would be addressed originally in the time-critical removal action (TCRA), and now the Navy has decided the FS will address this radiological contamination. Ms. Parker agreed and said that there will be a detailed structural evaluation of Building 400 and a cost estimate will be included in the FS process. Ms. Smith asked if the Navy will wait for any possible rebound from the six-phase heating before the revised draft FS is issued. Ms. Parker said that the Navy will be using data from approximately a year after the six-phase heating was operating. Ms. Cook said that no rebound is expected.

During the review of Slide 10, Ms. Parker explained the different colored lines in the figure. Ms. Smith asked if the storm drains, depicted by the orange lines, have been removed. Ms. Parker said some storm drain lines have been removed historically but the entire length was not removed. She noted that the radiological criteria have changed and the soil near the removed line needs to be re-evaluated using the new levels. Ms. Parker noted that there is a partition between Building 400 and 400A and the roof drain extends through the two buildings.

Ms. Smith said that ceiling vents need to be tested for radiological contamination but that testing did not occur at Building 5. Ms. Parker said that ceiling vents will be tested and noted there was a separate TCRA for the structural radiological investigation. Ms. Smith asked why EPA raised the permissible level for naphthalene exposure from 53 to 100 milligrams per liter (mg/L) in groundwater. Ms. Cook said that the EPA has set a health advisory rather than a maximum contaminant level (MCL) for naphthalene because the agency is lagging behind the state in classifying it as a probable human carcinogen. Ms. Cook added that EPA differed from the state's modeling. She noted that the agencies do not have a legally defensible level because the state has yet to promulgate a level.

Ms. Smith asked why volatile organic compounds (VOCs) in groundwater at local area 2 are not being addressed in the document, even though VOC-contaminated soil is being removed. Ms. Parker said that risk from VOCs in groundwater is low and that VOCs were mainly an issue in soil at local area 2. Ms. Smith said that this distinction was not described clearly in the document. Ms. Cook said that the concern with groundwater at local area 2 is the inhalation pathway and MCLs will not be used as the cleanup level. Ms. Cook said that it would be difficult to determine whether groundwater would require cleanup without knowing the details of the remedy and the institutional controls (ICs). It was decided that the language in the document will be revised to clarify this issue. Ms. Smith commented that the excavation depth was also

not clear in the document. Ms. Smith asked if the draft FS was dated May 2009. Ms. Parker said that it was.

#### **IV. Basewide Update**

Mr. Robinson started his basewide update presentation (Attachment B-7).

During discussion of the IR Site 26 update, Mr. Hoffman asked if the Navy has assembled a performance monitoring system at Site 26 to show the effect of the injection on the piezometric surface around the injection area. Mr. Robinson said he did not have the details of the groundwater monitoring and asked if the RAB wanted a presentation on the Site 26 injections. Mr. Hoffman said that the RAB wanted a presentation. Mr. Hoffman noted that the last update the Navy provided the RAB was when the in situ chemical oxidation (ISCO) failed at Site 26. He added that the RAB has not received a detailed update since that time. Mr. Robinson said that post-peroxide ISCO sampling was performed in 2008 and two post-persulfate ISCO sampling events occurred in 2009. The concentrations have decreased in general but rebound has also been observed. He added that, according to the contractor, injected ISCO reagents are preferentially channeling into the higher permeability areas. Contaminant rebound is assumed to be from lower permeability areas, not treated by the injected reagents. He said that ISCO reagents have a relatively short subsurface life, which limits treatment to areas where the injected solution comes quickly into contact with the contaminant. Therefore anaerobic in situ bioremediation (ISB) has been recommended.

Mr. Humphreys said that both persulfate and peroxide are oxidizing agents and asked how the Navy will create an anaerobic environment for the ISB. Mr. Robinson said he did not know the answer. Mr. Hoffman said that it is important to understand the locations of the wells and dynamics of the plume to evaluate the changes at the site. He added that a performance monitoring plan will indicate the success of the cleanup. Mr. Robinson said that the table shows only the maximum detections and noted that data are available from many wells that are monitored over time. The locations of the wells are all listed in the remedial action (RA) work plan. Mr. Hoffman said that the RAB members had commented on the RA work plan and Mr. Pat Brooks (Navy) had told them that the RAB comments were incorporated. Mr. Hoffman noted that the RAB was not provided with the updated RA work plan. Ms. Smith asked if Mr. Robinson could provide the responses to comments (RTCs) presented in the final RA work plan document. Mr. Robinson said that he could provide the RTCs for RAB comments electronically.

During the review of the OU-1 remedial action status, Mr. Humphreys asked how the Navy knew whether the building that was partially torn down was not of historical significance. He asked if the Navy had received approval before tearing down a part of the building. Mr. Robinson said if the building was identified as potentially historical, the Navy can not tear it down without additional approvals. Ms. Smith said that the RAB drafted a comment letter for Site 7 but was not aware that the Navy and the agencies proceeded with cleanup at the site before the RAB submitted its comments on OU-1. Ms. Cook apologized that the RAB was not informed that the site was moving forward to cleanup.

Mrs. Sweeney asked the dates of use for the incinerator and which materials were being incinerated. Ms. Cook said that the Navy did not have the information on what was incinerated. She added that the soil samples collected from the area showed the presence of copper, lead, and other metals. Mr. Robinson noted that the area was excavated during the remedial investigation of OU-1.

Ms. Smith said that there is a waste line on the south side of the building at Site 7. She added that the waste line is poorly supported and is being held up by soil. Stuart Freeman (URS Corporation) said that it is a sewer line. Ms. Smith said that since currently no work is being done at the site, the line is exposed and there is a potential for the soil to slough away from the line, leaving it unsupported. Ms. Smith said that line should be supported and can only be supported by backfilling the area. Ms. Smith asked if there was water in the line. Mr. Freeman said that the water has been removed. Ms. Smith and Mrs. Sweeney asked about the soil piles in the Commissary parking lot. Mr. Robinson said that the soil removed from Site 7 is stockpiled in the Commissary parking lot. He added that the Navy is sampling the soil to characterize it. Ms. Smith asked if there was a barrier underneath the soil. Mr. Robinson said that there is a barrier.

During the review of corrective action area (CAA) C status update, Ms. Lofstrom asked how the pipelines that contain aviation gas were discovered. Mr. Robinson said that the pipelines were discovered during petroleum program investigations. Ms. Smith said that the Navy was trying to find the lines for either waste removal or utilities with the help of historical drawings when these underground pipelines were found. Mrs. Sweeney asked if the aviation gas leaked. Mr. Robinson said that there was no evidence of leakage.

## **V. Community and RAB Comment Period**

Regarding the Site 1 plume, Mr. Hoffman said that he has been requesting at every RAB meeting that the Navy monitor the plume. Mr. Hoffman said that the Navy policy provided by Mr. Robinson as a response to the action item states that a sampling plan is required before monitoring can occur at the site investigation phase. He added that a sampling plan was drafted at the SI phase and suggested the Navy use the existing sampling plan to monitor the wells while awaiting the remedial design (RD)/RA work plan. Mr. Robinson said that the Navy would not use the old sampling plan to monitor the existing wells and will have to wait until the pre-design SAP is finalized. He added that the Navy will follow the normal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process.

Ms. Lofstrom said that the Navy and the regulatory agencies agree on a complete site characterization, and agree that new wells will be installed and samples will be collected when the RD/RA WP is final. She added that the Navy will launch the site characterization work. Mr. Hoffman reiterated that data lost in time cannot be recovered and urged the Navy to not lose more time in finalizing the document. Mr. Robinson said that field efforts will begin in 4 to 6 weeks. Mr. Humphreys asked about actions the Navy might consider if contamination is not found during the field effort; he noted that the contamination might have flowed into the bay in the last 20 years. Mr. Robinson said that the Navy has been monitoring four wells in the plume

area semi-annually and have found relatively stable trends in contamination. Ms. Cook said that the Navy implements removal actions, TCRA or non-TCRA (NTCRA), for both soil and groundwater contamination found at the base, in response to initial data indicating a threat to human health and/or the environment. She added that when this plume was discovered, a decision was made that the plume is not an immediate or substantial danger to human health and the environment, including the bay. Hence, a decision was made to perform remediation in the remedial action. Ms. Cook noted that EPA, DTSC, and the Water Board were all part of making this decision. The groundwater at Site 1 is a lower priority than the landfill at Site 1. She added that the site is at the RD stage and the plume will be cleaned up soon.

Richard Banger (community member) asked how long will it take for the site to be cleaned up completely. Mr. Robinson said that 18 to 24 months will be required to complete the cleanup after the RD document is finalized. Ms. Cook added that the record of decision for Site 1 was signed in December and the RA work must start within 15 months. Approximately another 3 years will be required to complete the Site 1 cleanup.

Frank Matarrese (Alameda City Council) said that Upper Northwest Territory is not going to be a golf course and will probably be developed as a wetland.

Mrs. Sweeney asked what the divers found at the Seaplane Lagoon. Mr. Robinson said that one side of the object is 4 feet deep and there was overburden to move on the other side. He added that the pictures and videos were not clear since the visibility was low. Mr. Robinson said that the Navy is guessing that the object originated from some kind of marine application. Ms. Smith had historical photographs from the expanded site investigation document that showed three ports on the east side of the Seaplane Lagoon where planes were kept. She showed those photographs to the RAB. Mr. Matarrese said that ARRA wrote a letter to the Navy thanking it for the information and requesting that the object to be removed from the Seaplane Lagoon. Bill McGinnis (Navy) said that this update was preliminary and the Navy does not have the final report with the recommendations. Mr. Robinson said that he will update the RAB with more information later.

## **VI. Meeting Adjournment**

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

## Action Items

Action Items:	Previous Item #/ Action Item Status/ Action Item Due Date:	Initiated By:	Responsible Person:
1. Request for Presentations: a. Bayport sewer systems and change in the plumes over time. b. Site 26 cleanup.	1./ Pending/ February 4, 2010.	RAB	Mr. Robinson
2. Provide information on the large, submerged, unidentified object.	2./ Completed (See Attachment B-2)/ NA	RAB	Mr. Robinson
3. Provide update on basewide radiological investigation by Radiological Affairs Support Office (RASO) and provide information on the bore, citing activity at the base. Also provide recommendations from the Radiological Assessment Report.	3./ Completed (See Attachment B-2)/ NA	RAB	Mr. Robinson
4. Informal discussion on “Methods of RAB communication of remedial work at Alameda to the community.”	4./ Pending/ February 4, 2010	Ms. Konrad	Ms. Lofstrom
5. Provide the RAB with the latest map on the extent of Marsh Crust.	5./ Pending/ February 4, 2010	Ms. Smith	Ms. Lofstrom
6. Schedule technical meeting on Site 27 remedial action and invite the Navy	6./ Completed (meeting schedule on January 21 at 6:30 pm)/ NA	Mr. Hoffman	Ms. Smith
7. Provide information and map on the Navy ships that were buried at the base.	8./ Pending/ February 4, 2010	Mrs. Sweeney	Mr. Robinson
8. Provide information on any investigations of the firing range near the officer’s club.	9./ Pending/ February 4, 2010	Mrs. Sweeney	Mr. Robinson
9. The Base Realignment and Closure Cleanup Team (BCT) will discuss the possibility of an emergency removal for the	10./ Completed (See Attachment B-2)/NA	Mr. Humphreys	Mr. Robinson and Ms. Cook

<b>Action Items:</b>	<b>Previous Item #/ Action Item Status/ Action Item Due Date:</b>	<b>Initiated By:</b>	<b>Responsible Person:</b>
lead contamination in the storm drain at the BCT meeting and update the RAB on the discussion.			
10. Discuss placement of the extraction and injection wells within the site 27 treatment modules with a remedial design engineer.	11./ Pending/February 4, 2010	Mr. Leach	RAB
11. Provide an update on the Navy's use of concrete in the tern nesting area.	13./ Completed (See Attachment B-2)/NA	Ms. Smith	Mr. Robinson
12. Provide a copy of CERCLA guidelines and Navy policy and procedure.	14./ Completed (See Attachment B-2)/NA	Mr. Hoffman	Mr. Robinson
13. Provide an explanation from the structural engineer on how digging the Building 400 foundation to remove the drain pipe will affect the building's foundation filter and structural walls.	0./ New / February 4, 2010	Mr. Leach and Ms. Smith	Mr. Robinson
14. Provide updated RAB contact list for Alameda Point.	0./ New / February 4, 2010	Ms. Smith	Mr. Robinson
15. Provide RAB comment letter on OU-1 as attachment to the January meeting minutes.	0./ New / February 4, 2010	Ms. Smith	Mr. Robinson
16. Provide the RAB with an electronic copy of the RTCs to RAB comments on the Site 26 as presented in the final RA work plan.	0./New/ February 4, 2010	Ms. Smith	Mr. Robinson

**ATTACHMENT A**

**NAVAL AIR STATION ALAMEDA  
RESTORATION ADVISORY BOARD MEETING AGENDA**

**January 7, 2010**

**(1 page)**

# ***RESTORATION ADVISORY BOARD***

***NAVAL AIR STATION, ALAMEDA***

## ***AGENDA***

**JANUARY 7, 2010, 6:30 PM**

**ALAMEDA POINT – BUILDING 1 – SUITE 140**

**COMMUNITY CONFERENCE ROOM**

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

<b><u>TIME</u></b>	<b><u>SUBJECT</u></b>	<b><u>PRESENTER</u></b>
<b>6:30 – 6:45</b>	<b>Approval of Minutes</b>	<b>Dale Smith</b>
<b>6:45 – 7:00</b>	<b>Co-Chair Announcements</b>	<b>Co-Chairs</b>
<b>7:00 – 7:30</b>	<b>OU-2C</b>	<b>Mary Parker</b>
<b>7:30– 8:00</b>	<b>Basewide Updates</b>	<b>Derek Robinson</b>
<b>8:00 – 8:30</b>	<b>Community &amp; RAB Comment Period</b>	<b>Community &amp; RAB</b>
<b>8:30</b>	<b>RAB Meeting Adjournment</b>	

## **ATTACHMENT B**

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

- B-1 Alameda Point Restoration Advisory Board Meeting Feedback Form. Distributed by Derek Robinson, Navy Co-Chair (1 page)
- B-2 Action Items. Distributed by Derek Robinson, Navy Co-Chair (6 pages)
- B-3 Comment letter on Draft Expanded Inspection Work Plan. Distributed by Dale Smith, RAB Co-Chair (1 page)
- B-4 Documents received during November-December 2009. Distributed by Dale Smith, RAB Co-Chair (1 page)
- B-5 Operable Unit-2C Feasibility Study update presentation handout. Distributed by Mary Parker, Navy PM (9 pages)
- B-6 Alameda Reuse and Redevelopment Authority comments on the OU-2C Feasibility Study. Distributed by Peter Russell, ARRA (7 pages)
- B-7 Basewide update presentation handout. Distributed by Derek Robinson, Navy Co-chair (4 pages)

**ATTACHMENT B-1**

**ALAMEDA POINT RESTORATION ADVISORY BOARD MEETING FEEDBACK  
FORM**

**(1 page)**

# Alameda Point Restoration Advisory Board Meeting Feedback Form

Date: \_\_\_\_\_

Name (optional): \_\_\_\_\_

**Please complete and submit this form before leaving tonight.**

Do the project(s) and issues discussed at RAB meetings interest you?      Very      Somewhat      Could have been better      No

Are the materials provided helpful in understanding the project(s) or issues?      Very      Adequate      Could have been better      No

How likely are you to attend another RAB meeting?      Very      Probably      Probably Won't      Will Not

How can our next meeting be more productive?

What topics would you like to see presented or discussed at future RAB meetings?

Please write additional comments below. If you would like someone to contact you about your comments please note that and give us your contact information.

**ATTACHMENT B-2**

**ACTION ITEMS**

**(6 pages)**

ACTION ITEMS  
Alameda NAS RAB, January 7, 2010

Action Item #2: Provide information on the large, submerged, unidentified object and radium-226.

Diving took place from December 9 to December 11, 2009. The submerged and buried object was initially located using reference coordinates and hand-probing into the sediment. The object was located in a depression in the lagoon floor and completely covered with sediment overburden on the top and all four sides. Divers used multiple sediment removal techniques to clear off parts of the object for inspection. This was difficult as sediment quickly returned to the area cleared.

The object appears to be roughly rectangular in shape; approximately 20 feet in length on the east/west axis. The width is roughly six to seven feet. The object is approximately four feet thick along the eastern. Other edges were not accessible due to safety concerns.

The object seemed to consist of concrete-like material. Timber debris (one bolted to the exterior and others cast or embedded into the concrete-like material) and severely corroded fasteners and metallic items were present, either embedded into the object or located around it. Some needle-thin exposed metal protruding from the object indicate the potential for the presence of reinforcing bar or mat.

The technical memorandum on this object will be included as an appendix to the TCRA Report for Site 17 Debris Pile Removal.

Action Item #3: Provide update on basewide radiological investigation.

The below schedule provides and update on the Alameda Basewide Radiological Surveys

- Draft Work Plan for regulatory and RAB review will be sent on January 28, 2010. The Navy's RASO has been closely involved with and has approved the Work Plan.
- Field Work to begin tentatively in May 2010.
- Radiological Surveys are based on findings of the June 2007 "Historical Radiological Assessment, Volume II, Alameda Naval Air Station." This document can be found in the Information Repositories. Survey recommendations are found in Section 8.0.
- IR Site 1, IR Site 2, Seaplane Lagoon, Storm-Drain and Sanitary Drain System, Rad-Shack Area, and Seaplane Ramp and Parking Apron are being handled under separate concurrent contract actions.
- Draft Radiological Survey Reports will be generated for each building/site and will be submitted beginning in Fall 2010.

Action Item#10: BCT will discuss the possibility of an emergency removal for the lead contamination in the storm drain at the BCT meeting and update the RAB on the discussion.

Jim Barse (Clean Water Program Specialist) from the City of Alameda Public Works was contacted. According to his records, the catch basin in question (catch basin #3G) was cleaned by the city during two events: 1) December 2007 - January 2008 and 2) August- September 2009. It has been agreed between the Navy and Regulatory Agencies that no additional actions are warranted, prior to the Remedial Action.

Action Item #13: Provide an update on the Navy's use of concrete in the tern nesting area.

From discussions with our Environmental Compliance Manager, a small hole was identified in the lease tern area in late summer/early spring on 2009. After the terns had left the area (Fall of 2009), a small excavator was used to investigate the hole to determine if a sub-surface cavity had caused this hole. The hole was over-excavated to a depth of approximately 2-feet and it was determined that a subsurface cavity did not exist. The excavated material was then used to backfill the hole and existing groundcover was spread over the area for final resurfacing. No concrete was used.

Action Item #14: Provide a copy of CERCLA guidelines and Navy policy and procedure with respect to SAP requirements.

Please see the attached pages photocopied from the Department of the Navy Environmental Restoration Program Manual, August 2006. For more information, this document can be viewed at the following link:

[https://portal.navfac.navy.mil/portal/page/portal/docs/doc\\_store\\_pub/p-1200%20navy%20env%20restoration%20manual.pdf](https://portal.navfac.navy.mil/portal/page/portal/docs/doc_store_pub/p-1200%20navy%20env%20restoration%20manual.pdf)

recommended action to be followed after the SI. The information contained with the report also should be used to update/refine the CSM initiated during the PA phase.

### 6.2.1 Sampling and Analysis Plan (SAP)

The SI phase provides the first opportunity to generate current site characterization data by collecting and analyzing samples. The SI consists of a visual inspection of the site and usually includes sample collection and analysis. This sampling may be performed both on-site and off-site as necessary to determine the presence and nature of potential contamination in the soil, groundwater, surface water, and air. The objective of the SI sampling effort is to verify the presence of contamination, not to determine the extent of contamination. A sampling strategy should be developed based on this objective, and documented in the Statement of Work (SOW) and SAP. This strategy will ensure that the appropriate data will be collected to make decisions supporting project objectives.

- **On-Site Sampling:** On-site sampling should determine the nature of any releases of disposed or stored wastes (source identification). Appropriate soil, air, groundwater, surface water, and sediment samples should be collected in the vicinity of any suspected source and along expected migration pathways to determine the existence of contamination.
- **Off-Site Sampling:** Off-site sampling may need to be carried out to assess the potential for migration of contamination to off-site receptors. Off-site sampling may consist of air, soil, groundwater, surface water, and sediment samples.
- **Off-Site Surveys:** Off-site surveys, which may include off-base areas, may be conducted to assess the population, land use, and operation that may be affected by releases from the site. These surveys should identify adjacent land ownership, land use, water supplies, waste disposal practices, and potential receptors of any wastes that may migrate off the site.

Prior to conducting sampling during the SI, a SAP containing a Field Sampling Plan (FSP) and a QAPP are prepared.

- **Field Sampling Plan (FSP):** The FSP describes the number, type, and location of samples; the sampling methods, the types of analyses; and decontamination procedures. It also identifies the personnel to perform each task. The plan should be based on the type of release being investigated, the types of hazardous materials expected, and their potential off-site migration routes.
- **Quality Assurance Project Plan (QAPP):** The QAPP presents the policies, organization, objectives, functional activities, and specific QA/QC activities to ensure the validity of analytical data generated during project execution.

U.S. EPA guidance on SIs is found in *Guidance for Performing Site Inspections Under CERCLA* (OSWER 9345.1-05, Sep. 1992). Additional information on the preparation of a FSP and UFP-consistent QAPP is provided in Chapter 8 of this manual.

### 6.2.2 Screening Risk Assessment

As part of the response action, the NCP requires that the nature and extent of site risks to human health and the environment be characterized through human health and ecological risk assessments. The Navy has defined a three-tiered approach that follows U.S. EPA guidance for both the human health risk assessment (HHRA) and ecological risk assessment (ERA) process for assessing risks at a site. Although typically done in the RI phase of the ER process, a Tier 1 screening risk assessment (SRA) should be completed as part of the SI to identify any potential contaminants of concern (COCs) that may pose unacceptable human health or ecological risks. The SRA is a conservative evaluation consisting of a

- *Navy Installation Restoration Chemical Data Quality Manual* (Sep. 1999): Appendix H of the IR CDQM presents guidance on conducting data reviews and data validation. The information is applicable to Contract Laboratory Program [CLP] and non-CLP methods.
- *National Functional Guidelines for Organic Data Review* (EPA/540/R-99-008, Oct. 1999); and *Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses* (EPA/540/R-04/004, Oct. 2004). These Functional Guidelines are designed for use with data packages generated under CLP SOWs for analytical methods. (CLP is a national network of U.S. EPA personnel, commercial laboratories, and support contractors whose mission is to provide analytical data of known and documented quality.) However, they can be applied to analytical methods other than those identified as CLP. It is noted that non-CLP methods may not specify the same QC and documentation requirements that CLP docs; therefore, the Functional Guidelines cannot be followed explicitly. Software packages are available through U.S. EPA to conduct portions of the data validation process electronically.

#### 8.1.2.5 *Sampling and Analysis Plan (SAP) and Field Sampling Plan (FSP)*

The SAP documents the details of all field activities and laboratory analyses before the site work is initiated. In addition to ensuring consistency in the sampling and analytical methods, it provides a mechanism for review and approval by regulatory agencies and stakeholders. The SAP describes the objectives and locations of sampling activities; field methods and procedures for sample collection; procedures for analyzing collected samples; and data management and reporting procedures. The SAP includes a FSP (described in this subsection) and a QAPP (described in Section 8.1.2.3).

The purpose of the FSP is to detail a “plan of action” for the field sampling effort to ensure that proper sampling techniques are employed to obtain samples that retain their scientific integrity and are legally defensible. The person writing the plan must be very familiar with the site-specific conditions and those implementing the plan must be very familiar with the plan’s contents. A properly prepared FSP that is correctly implemented will allow the sampling objectives to be met, help avoid confusion in the field, preserve health and safety, and ultimately save time and money. Chapter 3 of the *UFP-QAPP Manual* (EPA/505/F-03/001, Mar. 2005) provides guidance for developing a FSP. Topics that should be addressed in a FSP include:

- Sampling Process Design (Experimental Design);
- Sampling Methods;
- Equipment Required;
- Sampling Locations;
- Sample Handling and Custody;
- Sample Containers and Preservation;
- Decontamination Procedures;
- Disposal of Residual Materials;
- Analytes of Concern and Analytical Methods;
- Quality Control;
- Instrument/Equipment Testing, Inspection, and Maintenance;
- Instrument/Equipment Calibration and Frequency;

- Inspection/Acceptance of Supplies and Consumables;
- Non-direct Measurements; and
- Data Management.

## 8.2 Remedial Investigation (RI)

This section describes the RI process including site characterization, considerations of background chemical concentrations, risk assessments, and data management and visualization. Figure 8-3 presents a flow diagram of the RI process.

The goals of the RI are to:

- Determine the nature and extent of COCs and potential threat to human health and the environment; and
- Provide a basis for determining whether or what types of response actions are required.

Before RI site work begins, the RPM ensures that the required plans are in place as discussed in Section 8.1, including the RI Work Plan, SAP, FSP, QAPP, and HASP. The RPM also ensures that project personnel at the FEC and installation, as well as contractors working on the RI, are familiar with these documents. Once the scoping process is complete and work plans established, the site characterization process (including site work) can begin.

### 8.2.1 Site Characterization

During the site characterization stage of the RI, the SAP is implemented. Field data are obtained and analyzed to assess the nature of any threats the site poses to human health or the environment and to refine the CSM and design of potential response actions. Field data analyses and interpretation should be based on the DQOs and QA/QC requirements outlined in the QAPP. QA/QC is an important element in site characterization because critical decisions are made based on data generated from field and laboratory activities. A QAPP is developed prior to initiating field activities to ensure effective QA/QC during field activities as well as laboratory analysis and data review. See Section 8.1.2 Systematic Planning for information and resources on the Triad Approach, DQOs, QAPP, and Laboratory QA/QC. This will ensure that data are of appropriate quality and are legally defensible.

The development and implementation of a successful remedial strategy is directly related to acquiring valid site characterization information pertaining to the nature of the contaminants, mass distribution and volume estimation of each contaminant phase, and an accurate understanding of the geologic and hydrogeologic processes affecting the disposition of contaminants.

The major steps in site characterization typically include:

- Collecting of field samples including soil, sediment, groundwater, surface water, biological, and air samples as specified in the SAP;
- Making field observations and measurements of the physical nature of the site, including topography, surface and groundwater hydrology, meteorology, lithology, ecology, and other observed physical parameters of the matrices which may include:

- Hydrogeologic parameters obtained from field tests such as a pump test or slug test.
- Field measurements of matrix parameters including depth to groundwater, groundwater temperature, pH, conductivity, redox potential, color, and presence of nonaqueous-phase liquid (NAPL)
- Soil classification, and lithology;
- Analyzing samples in the laboratory or using field screening techniques;
- Using data management and visualization tools to aid in the evaluation of laboratory results and field observations to characterize the site;
- Determining the adequacy of data for deciding whether the site poses an unacceptable risk and for the development and evaluation of remedial alternatives; and
- Refining the CSM.

The results of field observations or laboratory analyses may show that site conditions are significantly different from what was anticipated during initial scoping efforts. Rescoping and additional sampling may be necessary (e.g., in the case of a high concentration of contaminant on the boundary area of the study, step-out sampling may be required to delineate the boundary of the contaminant mass).

Results also may indicate that the threat is more immediate than previously understood, in which case an interim removal action may be initiated. If one portion of the site needs more immediate attention than others, separating the site into operable units will facilitate addressing the highest priority area or media first.

#### 8.2.1.1 Sampling

A critical element of site characterization is the collection of samples from various media. Samples may be analyzed either in the field, using instruments, test kits, or visual observation; or in a laboratory by any of numerous analytical techniques. When collecting samples it is crucial that the samples are:

- Representative of typical conditions of the location and media of interest; and
- Collected using the appropriate protocols for the media sampled and the parameters to be analyzed.

The SAP, which includes the FSP and QAPP (as discussed in Section 8.1.2.5), is a tool to accomplish these sampling objectives.

#### Collecting Representative Samples

In any natural geologic formation, there is a degree of heterogeneity; thus one sample is not expected to be representative of a larger area of the site. Concentrations of contaminants as well as natural properties of the media can vary spatially and with depth, sometimes in an unpredictable manner. To address this issue, it is necessary to obtain a sufficient number of samples to gain enough confidence that the sample set as a whole provides a reasonably accurate characterization of the site. In general, the number of samples required to meet the project objectives depends on the extent of contamination as well as the degree of variability. Thus, the factors that determine the number of samples required can only be determined through sampling and analysis. The SAP is developed before these data are available; therefore, uncertainty will exist regarding the number and locations at which samples should be collected.

**ATTACHMENT B-3**

**COMMENT LETTER ON DRAFT EXPANDED INSPECTION WORK PLAN**

**(1 page)**

Mr. Derek Robinson  
Department of the Navy  
Base Realignment and Closure, Program Management Office West  
1455 Frazee Road  
San Diego 92108

January 6, 2010

Re: Draft Expanded Site Inspection Work Plan for Transfer Parcels EDC-12, EDC-17, FED-1A, FED-2B and FED-2C

Dear Mr. Robinson,

Thank you for the opportunity to comment on the above document.

The main comment I wish to make is that the Tern Nesting Area will not be investigated in spite of the fact in 2005 a UST was pulled after a report of staining and petroleum odors was made to the Navy. After the tank was pulled naphthalene and lead were found in groundwater. The only monitoring well in the area, M108-A, had not been sampled since 1995. If it had been sampled the contamination would have been found sooner.

When the contamination was originally reported it was commented that there were four tanks in the vicinity. Yet the work plan does not intend to investigate the other tanks as to their contents. Given that this is in the Open Area III used for fire fighting training, it makes sense that the tanks may be associated with that activity. The one tank pulled appeared to be capable of holding 2,000 gallons of liquid, an unusually large tank for runway lights. The other three tanks may be of a similar size and may have contained flammables and fire suppressants. Ignoring the presence of these tanks is not protective of ecological receptors. Additionally, the document states that ecological receptors are not to be considered when determining clean-up investigations. There is evidence of ground subsidence in the area that could be caused by failure of the tanks. This policy should be revisited and the tanks should be investigated and possibly pulled.

FED-2C had extensive plane parking but will not be investigated. This is sensitive habitat and should not be ignored. Additionally, the document states radiological waste was disposed of at the site and there is no mention of investigation and remediation. Other issues not covered under this program are so identified. Is this to be addressed under the radiological program?

Minor comments are that there is mention of Open Area II but I cannot find it anywhere, please indicate where that site is.

The document references SMWUs and USTs on Figure 12, but these layers are turned off.

Again, thank you for the opportunity to comment on this document.

Yours



Ms. Dale Smith



**DALE SMITH**  
2935 Otis Street  
Berkeley California 94703  
**510-841-2115**

**ATTACHMENT B-4**

**DOCUMENTS RECEIVED DURING NOVEMBER-DECEMBER 2009**

**(1 page)**

Documents Received  
November - December 2009

**Documents**

1. *Draft Addendum #5 to Final Project Plans to Drain Sump, Post-shutdown Sampling and Building 397 Sampling*, Shaw Environmental November 12, 2009
2. *Final Addendum #4 to Final Project Plans, Fuel Line Abandonment and TC Drain Assessment, Corrective Action Area C*, Shaw Environmental, November 12, 2009
3. *Draft Expanded Site Inspection Work Plan for Transfer Parcels EDC-12, EDC-17, FED-1A, FED-2B and FED-2C*, CH2MHill, November 20, 2009
4. *Final Record of Decision for Installation Restoration Site 1, 1943-1956 Disposal Area, St. George Chadux/TetraTech EM*, November 23, 2009
5. *Revised Draft Feasibility Study, Operable Unit-2A*, Oneida Integrated Enterprises, December 7, 2009
6. *Draft Work Plan for Monitoring Well Installation and Sampling, Installation Restoration Site 32*, Trevent, December 7, 2009
7. *Technical Memoranda for Second and Third Quarters 2009, CAA 3 and CAA C*, Shaw, December 9, 2009
8. *Draft Work Instruction for Pre-dredge Remedy Optimization Sediment Sampling, Installation Site Restoration Site 17*, Battelle, December 22, 2009
9. Tech Memorandum, CAA 3, Shaw environmental, December 2009
10. Tech Memorandum, CAA C, Shaw environmental, December 2009

**ATTACHMENT B-5**

**OPERABLE UNIT-2C FEASIBILITY STUDY UPDATE PRESENTATION HANDOUT**

**(9 pages)**



# Operable Unit-2C Feasibility Study Update Alameda Point, CA

RAB Meeting  
January 7, 2010

Mary Parker  
Navy Project Manager

1



## Topics

- Background
  - Location
  - Areas in Draft Feasibility Study (FS) based on the remedial investigation (RI) report conclusions and in-progress removal actions
- New Developments
- Next Steps

2



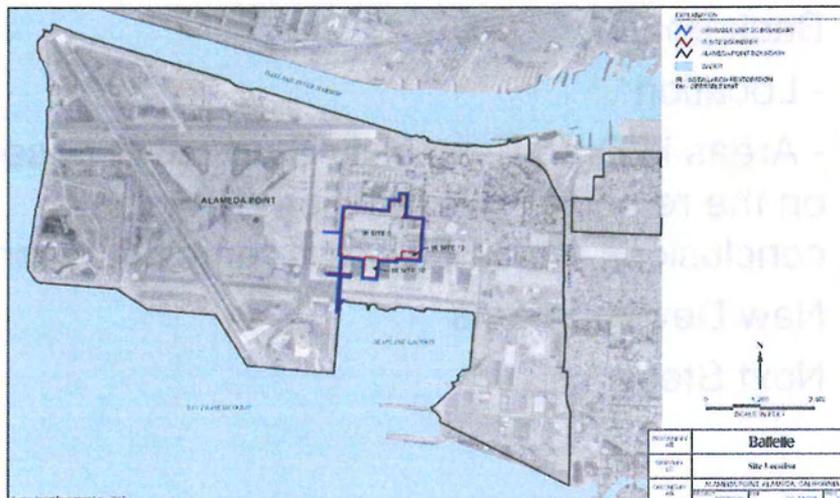
## Site Background

- Operable Unit (OU) 2C is approximately 53 acres in size and consists of Installation Restoration (IR) Sites 5, 10, and 12. IR Site 5 is ~47 acres. Most of OU-2C is covered by buildings, and areas not covered by buildings are largely paved.
  - IR Site 5 (Bldg. 5) is the former Naval Air Rework Facility
  - IR Site 10 (Bldg. 400) is the former Missile Rework Facility
  - IR Site 12 is the former Alameda NAS Power Station
- The RI Report divided OU-2C into three subareas for assessment of risk: Exposure Units 1, 2, and 3.

3



## OU-2C Site Locations



4



## RI Report Conclusions



- Based on the RI risk assessment, no further action was recommended for soil or groundwater at IR Site 10, IR Site 12, and Eastern Exposure Unit 1.
- Local Area 1 (inside Exposure Unit 1) to be addressed through the Alameda Point petroleum cleanup program.

5



## Draft FS Content

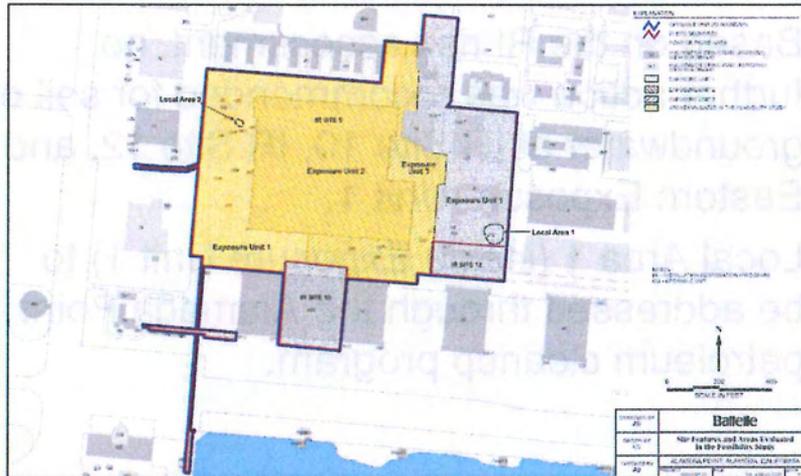


- The Draft FS evaluated
- IR Site 5 Western Exposure Unit 1
  - IR Site 5 Exposure Unit 2 (Bldg. 5) including potentially radiologically-impacted piping that remains beneath Building 5
  - IR Site 5 Exposure Unit 3

6



## OU-2C Site Features and Areas Evaluated in the Draft FS



7



## Draft FS Content

- The Draft FS specified that the in-progress IR Sites 5 and 10 Time-Critical Removal Action (TCRA) would address radiological contamination in storm drain lines associated with IR Site 10 (Building 400).

8



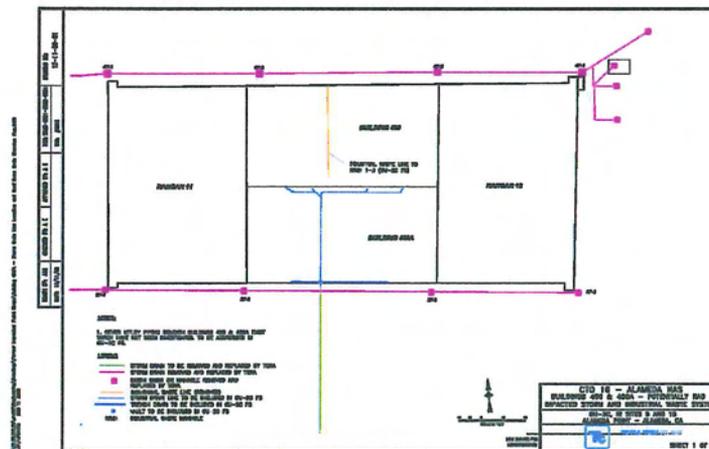
## New Developments

- The IR Sites 5 and 10 TCRA is addressing radiological contamination associated with Building 400 but will not address the radiological contamination in lines beneath the floor of Building 400.
- The six-phase heating TCRA was completed, and the regulatory agencies requested in late November 2009 that the latest groundwater concentrations be incorporated into the OU-2C FS.

9



## Lines Beneath Bldg. 400



10



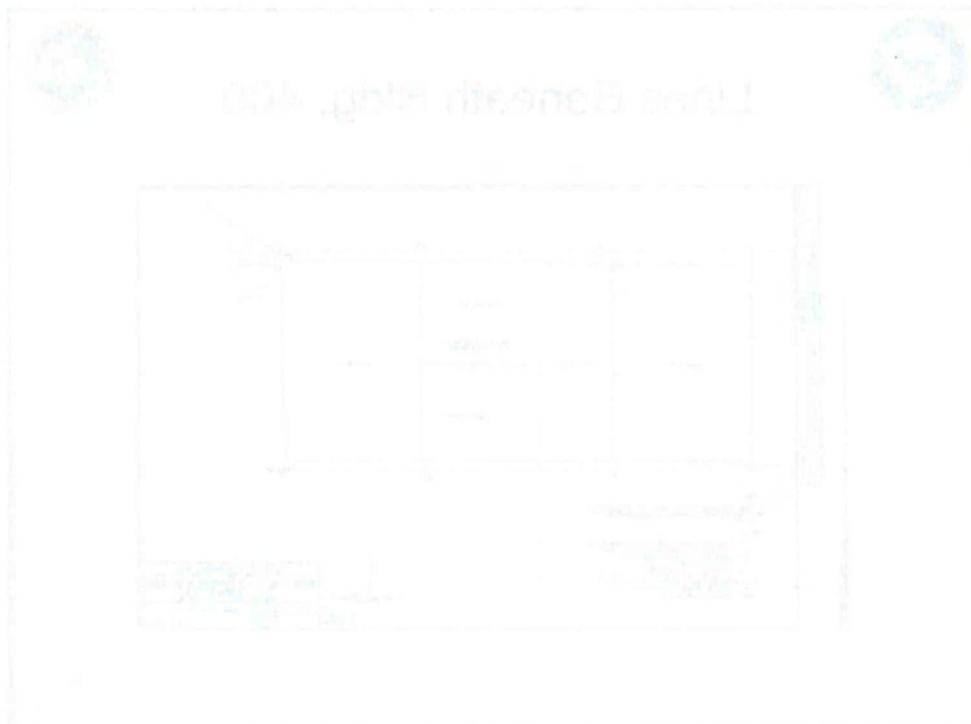
## Next Steps



The following steps for the OU-2C FS are planned:

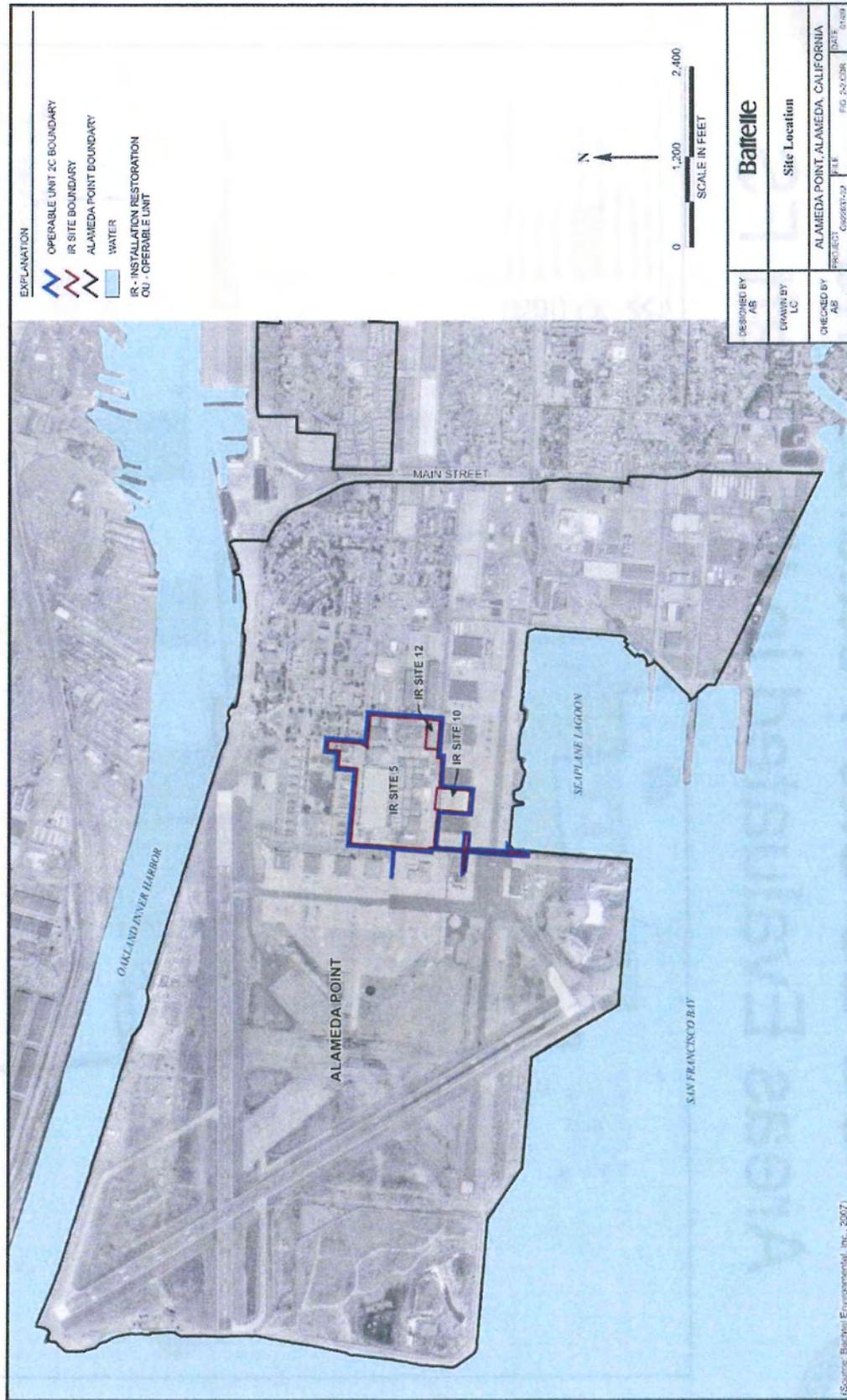
- Add radiological lines beneath Building 400 and the latest six-phase heating data
- Address BCT comments provided at the December 15, 2009 BCT meeting
- Meet with the BCT in late January and/or February 2010
- February to March 2010: Resolve written/remaining comments with the regulatory agencies
- April 2010: Issue a Revised Draft FS for review

11



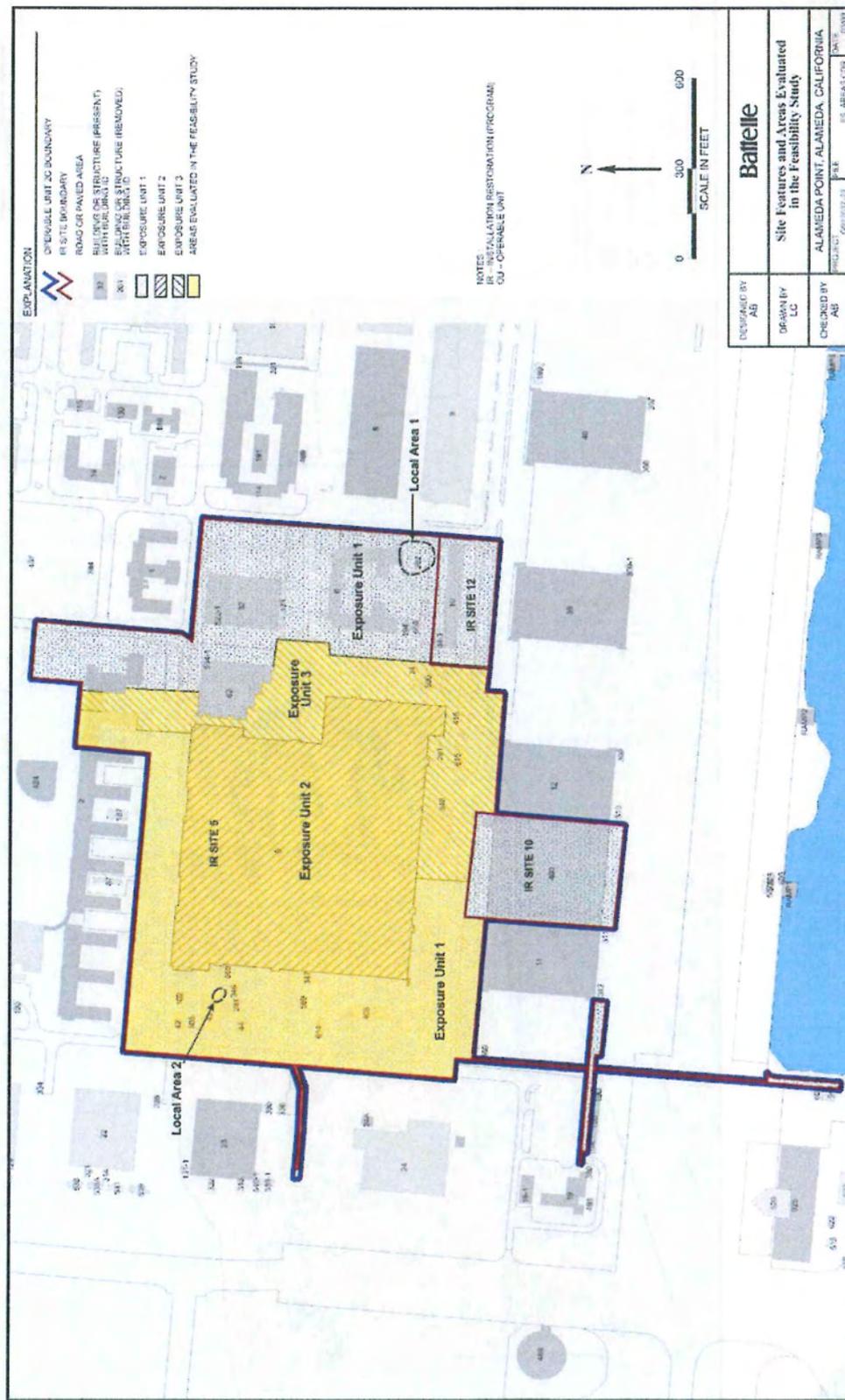


# OU-2C Site Locations





# OU-20C Site Features and Areas Evaluated in the Draft FS





**ATTACHMENT B-6**

**ALAMEDA REUSE AND REDEVELOPMENT AUTHORITY**

**(7 pages)**

# Alameda Reuse and Redevelopment Authority

City Hall  
2263 Santa Clara Ave. Rm. 380  
Alameda, CA 94501

(510) 747-4800  
Fax: (510) 747-4805

**Governing Body**

December 28, 2009

**Beverly Johnson**  
Chair

Derek Robinson  
BRAC Environmental Coordinator

**Doug deHaan**  
Vice-Chair

BRAC PMO West  
1455 Frazee Road, Suite 900

**Marie Gilmore**  
Boardmember

San Diego, CA 92108-4310

**Frank Matarrese**  
Boardmember

Re: Comments on May 8, 2009 *Draft, Feasibility Study Report, Operable Unit 2C, Alameda Point, Alameda, California*

**Lena Tam**  
Boardmember

Dear Mr. Robinson:

**Ann Marie Gallant**  
Interim Executive Director

The Alameda Reuse and Redevelopment Authority (ARRA) appreciates the opportunity to comment on the Navy's May 8, 2009 *Draft, Feasibility Study Report, Operable Unit 2C, Alameda Point, Alameda, California (FS)*. At its June 3, 2009 board meeting, the ARRA directed its staff to submit the following comments to the Navy.

The ARRA has seven major and two minor comments, which are summarized briefly as follows:

1. The *FS* rates the soil remedial alternatives that rely on the floor of Building 5 to cap contaminated soil too favorably in relation to the other soil alternatives. The *FS*'s comparative analysis inappropriately ignores the high probability that the contaminated soil under Building 5 will be excavated and disposed off site during redevelopment.
2. According to the February 1, 2006 *Alameda Point Preliminary Development Concept (PDC)*, the southern portion of Exposure Unit 3 is planned for residential reuse. However, the *FS*'s alternatives analyses for soil and groundwater incorrectly assume commercial/industrial reuse for this area.
3. Soil remedial alternative S4 (excavation, off-site disposal, ICs, and monitoring) has a low relative performance for the criterion of reduction of toxicity, mobility, or volume through treatment as a principal element. However, the *FS*'s alternatives analysis for soil incorrectly ascribes medium relative performance to this criterion.
4. Residential risk-based concentrations (RBCs) should be estimated using 30 years of exposure, not by using six years as a child or 24 years as an adult, whichever is more conservative.

5. The *FS* mischaracterizes DTSC's vapor intrusion model as *overly* conservative.
6. The *FS* inappropriately uses soil contaminant concentrations from below the water table to explain that DTSC's vapor intrusion model leads to an overestimation of human health risk and hazard.
7. The map of elevated chlorinated volatile organic compounds (VOCs) in shallow groundwater appears to omit some areas that have high chlorinated VOC levels.
8. The text underestimates the length of piping to be remediated between manhole 9F and the east end of Building 5 by about 200 feet. (minor)
9. When using large format figures and tables, please show their identifiers so that they can be seen without unfolding the page. (minor)

### Comments

1. **The comparison of soil remedial alternatives inappropriately favors reliance on the floor of Building 5 to cap contaminated soil.**

The *FS*'s evaluations of the two soil remedial alternatives that rely on using Building 5's floor as a cap for contaminated soil—S2 (institutional controls (ICs) and monitoring) and S3 (excavation, engineered cap, off-site disposal, ICs, and monitoring)—do not give enough weight to redevelopment plans for IR Site 5. In all probability, redevelopment will include demolition of Building 5, and the contaminated soil under it will be excavated and disposed in an off-site landfill. When this occurs, the expected benefits (cost and short-term effectiveness) of the building-cap alternatives will disappear.

Cost: The excavation and disposal costs, which the *FS* assumes are saved by using Building 5 as a cap for contaminated soil, are not, in fact, saved. In reality, these costs would be simply shifted from the Navy to the transferee. The ARRA has not budgeted redevelopment funds for remediation of contaminated soil beneath Build 5. The *FS* should recognize these near-term, post-transfer costs by assigning the same Cost criterion relative performance to soil alternatives, regardless of whether the Navy or the transferee is the entity that excavates and disposes of the contaminated soil.

Short-Term Effectiveness: The *FS* judges the building-cap alternatives too favorably in its sustainable environmental remediation (SER) analysis, which is an important component of the Short-Term Effectiveness criterion. This overly favorable rating occurs primarily because the building-cap alternatives are assumed not to involve soil transportation and disposal in an off-site landfill. As a result, the *FS*'s SER analysis contributes to relatively poor Short-Term Effectiveness performances for soil alternatives that include excavating the contaminated soil under Building 5 (S4 and S5). The *FS* should assign the same Short-Term Effectiveness relative performance to soil alternatives, regardless of whether the Navy or the transferee is the entity that excavates and disposes of the contaminated soil.

2. **The planned reuse is residential for IR Site 10 and the southern margins of Exposure Units 1 west and 3.**

The *FS* assumes that the proposed future land use for OU-2C is commercial. However, the southern portion of OU-2C is planned for residential reuse. The 2006 *PDC* designates IR Site 10 and the southern margins of Exposure Units 1 west and 3 to be future residential land use. The Alameda Point illustrative plan, which is shown on Figure 19 of the *PDC* (copy attached), provides a conceptual layout for the *PDC* development program.

The *FS* bases its assumption of proposed future commercial land use on *PDC* Figure 18 (*FS* Figure 2-5). However, this figure contains a drafting error. *PDC* Figure 18 suggests that IR Site 10 and the southern margins of Exposure Units 1 west and 3 are planned for commercial mixed use. This designation is inconsistent with the text, tables, and figures of the rest of the *PDC*. For example, *PDC* Table 1 shows land use by development phase. As shown on *PDC* Figure 20, OU-2C is in Development Phase II, and south of West Tower Avenue is the only part of Phase II planned for residential reuse. The number of Phase II housing units shown on Table 2 (241 units) would not fit in the area *PDC* Figure 18 erroneously suggests are planned for residential reuse. Alameda Measure A, with which the *PDC* complies, requires residential lots to be at least 2,000 square feet per dwelling unit. Thus, the 241 Phase II dwelling units would occupy at least 482,000 square feet. This is a larger area than the residential reuse erroneously shown on *PDC* Figure 18. In contrast, the area occupied by 241 Measure-A-compliant dwelling units readily fits into the Phase II residential area shown on *PDC* Figure 19. The density of 241 dwelling units in the Phase II residential area shown on *PDC* Figure 19 closely approximates the residential density planned for Phase III. If the Phase II dwelling density is calculated using the *PDC*'s Figure 18 residential area, then an unacceptably high density results.

The *FS* recognizes future residential reuse for IR Site 10 and for Exposure Unit 1 west. Thus, the mismatch between the *PDC*'s proposed future land use and the remedial objectives of the *FS* is important only for the southern portion of Exposure Unit 3—the part south of West Tower Avenue (EBS Parcel 53A). Parcel 53A was split off from the rest of Parcel 53 due to the presence of radiologically contaminated storm drain lines associated with IR Sites 5 and 10. This area appears to have little, if any, soil or groundwater contamination otherwise. The *FS* should deal with this portion of Exposure Unit 3 the same as it does IR Site 10 and the storm drain lines to the south and west of Exposure Unit 1 west. That is, the *FS* should not include this area in its decisionmaking process. An alternative approach would be to move the southern boundary of IR Site 5 northward slightly to coincide with West Tower Avenue, which would remove this area from OU-2C.

**3. Soil remedial alternative S4 (excavation, off-site disposal, ICs, and monitoring) has a “low” relative performance for the criterion of Reduction of Toxicity, Mobility, or Volume Through Treatment as a Principal Element, not “medium” as shown in the *FS*.**

Soil alternative S4 does not address the statutory preference for selecting remedial actions that employ treatment technologies that permanently and significantly reduce toxicity, mobility, or volume of hazardous substances as their principal element, a conclusion the *FS* appropriately draws on page 7-5. However, *FS* Table ES-1 shows a medium relative

performance for soil alternative S4 on this CERCLA criterion. "Medium" is the same relative performance Table ES-1 shows for soil alternative S5, which uses treatment (soil vapor extraction) as the principal element to treat 74 percent of the contaminated soil. The *FS* speculates that the receiving landfill for alternative S4 might treat the soil it disposes, but does not state how much, if any, of the landfilled soil might need such treatment. Even if the receiving landfill were to treat the soil it disposes, that treatment would be incidental and not treatment as the alternative's principal element. Please show a low relative performance for soil alternative S4 on this CERCLA criterion.

**4. The map of elevated VOCs in shallow groundwater appears to omit some areas that have high VOC levels.**

*FS* Figure 2-21 appears to omit some areas of groundwater that are contaminated with chlorinated VOCs in the shallow first water-bearing zone (FWBZ). *FS* Figures 2-18 through 2-20 show areas of FWBZ contamination by individual chlorinated VOCs that are not reflected on Figure 2-21. For example, Figure 2-21 shows shallow FWBZ groundwater at sampling location S05-2B-A (map location E-4) to have less than 10 micrograms/liter ( $\mu\text{g/L}$ ) of total chlorinated VOCs. However, Figures 2-18 through 2-20 show this location as having more than 10  $\mu\text{g/L}$  each of 1,1 dichloroethane, trichloroethene, and vinyl chloride. Please resolve this apparent discrepancy.

**5. The *FS* inappropriately bases RBCs on exposures of six years as a child or 24 years as an adult, whichever is more conservative, rather than the sum of these two exposures.**

The *FS*'s Protectiveness Evaluation of Remedial Alternatives appears to use nonstandard exposure durations in its human health risk calculations.

"For carcinogenic chemicals in the residential scenario, RBCs were calculated for both an adult (24 year exposure period) and a child (6 year exposure period) receptor and the more conservative value calculated was chosen as the RBC, resulting in the most health protective RBC." (*FS*, p. 3-7; see also p. C-1)

More appropriately, the risk from 6 years exposure as a child should be summed with the risk from 24 years exposure as an adult to derive a risk estimate from 30 years exposure. The *FS* states "exposure assumptions as the OU-2C RI HHRA were used in calculations of the RBCs", but that appears not to be the case. The *RI*'s Human Health Risk Assessment uses the preferred, more conservative 30-year assumption.

"[F]or residents, RME values assume that residents are exposed daily for 350 days a year for 6 years as a child and 24 years as an adult." (*RI*, p. M-8, see also *RI* Table M2-2, Note b)

Please conform the *FS*'s human health risk calculations to the more conservative exposure assumptions used in the OU-2C *RI*.

**6. The *FS* inappropriately characterizes DTSC's vapor intrusion model as *overly* conservative.**

The *FS*'s Protectiveness Evaluation of Remedial Alternatives mischaracterizes DTSC's vapor intrusion model.

“Modeling indoor air from soil and groundwater is highly conservative, and, as such, the RBCs calculated for the indoor air exposure pathway that are used to assess the protectiveness of the remedial alternatives are overly conservative.” (p. C-2, underlining added)

The *FS* then lists ten model assumptions, with the implication that they contribute to the RBCs being “overly” conservative. However, several of the assumptions could lead to RBCs that are too high—too lax, rather than too conservative. For example:

- The subsurface may not be homogeneous and contaminants may not be homogeneously distributed: “hot spots” could exist that were not detected by the *RI*'s relatively coarse sampling pattern.
- Air mixing in the building may not be uniform: some areas may have much less mixing than others, leading to buildup of intruding vapors.
- Preferential pathways may exist: migration of vapors may be less impeded than the model assumes.
- Ventilation rates and pressure differences may not remain constant: both of these factors likely vary.

DTSC's vapor intrusion model is purposely conservative—partly to compensate for less than perfect characterization of site-specific vapor intrusion. The *FS*'s inappropriate conflation of a *highly* conservative model with *overly* conservative RBCs is inappropriate. An easy way to be more objective would be to characterize the RBCs as *highly* conservative, rather than *overly* conservative.

**7. The *FS* inappropriately uses soil samples from below the water table at location EA5SB18 to explain that risk and health hazard due to vapor intrusion are overestimated and that soil in that area should not be remediated.**

The *FS* omits soil in the vicinity of sampling location EA5SB18 (Exposure Unit 3) from the remedial footprint. (p. C-4) Soil at EA5SB18 contains both ethylbenzene and 1,2,4-trimethylbenzene (1,2,4-TMB) above the RBCs for future office workers at 3 to 4 feet below ground surface (bgs): 3.1 milligrams per kilogram (mg/kg) of ethylbenzene and 100 mg/kg 1,2,4-TMB. The *FS*'s occupational RBCs for these VOCs are 0.86 mg/kg and 12.8 mg/kg, respectively.

The *FS* suggests not remediating soil in the vicinity of EA5SB18, asserting that use of these contaminant concentrations overestimates risk and health hazard. The *FS* notes that at EA5SB18, these VOCs were measured at lower concentrations in deeper soil samples, but

that the vapor intrusion model upon which the preliminary RGs is based assumes these concentrations are present throughout the vadose zone. The deeper measurements of ethylbenzene in soil are 2.5 mg/kg at 4 to 4.5 feet bgs and non-detect (< 0.02 mg/kg) at 10 to 10.5 feet bgs, and of 1,2,4-TMB are 74 mg/kg at 4 to 4.5 feet bgs and 0.013 mg/kg at 10 to 10.5 feet bgs.

The *FS* should discuss why the soil samples from 10 to 10.5 feet bgs are relevant. Groundwater at sampling location EA5SB18 is shallower than 10 feet bgs. Accordingly, the 10 to 10.5 foot bgs soil sample was saturated and not indicative of vadose zone conditions. The sample from 4 to 4.5 feet bgs has marginally lower VOC concentrations than the shallower sample, but they are still much higher than their RBCs. The average vadose-zone ethylbenzene concentration at EA5SB18 is three times its RBC. The average 1,2,4-TMB concentration is seven times its RBC. These concentrations are suggestive of a vadose-zone source area for which vapor intrusion modeling does not lead to a large overestimation risk and health hazard, in contrast to the *FS*'s assertion. The Exposure Unit 3 remedial footprint for soil should include the vicinity of soil sample location EA5SB18.

**8. The *FS* text underestimates the length of the abandoned pipeline beneath Building 5.**

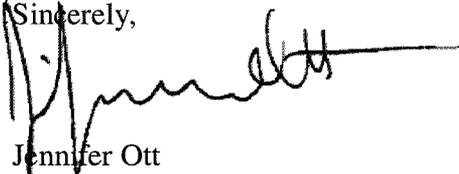
The *FS*'s remedial-footprint discussion estimates the length of piping between manhole 9F and 10F to be approximately 70 feet. (p. 3-13) However, *FS* Figure 2-4 indicates the length to be closer to 200 feet. Please rectify this apparent discrepancy.

**9. Please display the names and numbers of oversize figures and tables so that they can be seen without unfolding the page.**

The *FS* locates the names and numbers of figures and tables that are printed on landscape 11" x 17" pages midway across that page. They cannot be seen unless the page is unfolded. For ease of use, please show the figure and table names and numbers so that they can be viewed without unfolding the page.

Thank you for considering the ARRA's comments on the *FS*.

Sincerely,



Jennifer Ott  
Redevelopment Manager

cc: ARRA Board Members  
Anna-Marie Cook, U.S. EPA  
Dot Lofstrom, DTSC  
John West, Water Board  
Peter Russell, Russell Resources, Inc.



**ATTACHMENT B-7**

**BASEWIDE UPDATE PRESENTATION HANDOUT**

**(4 pages)**



# IR Site 26 Site Update



- Completed Full-Scale ISCO
  - Direct injection of 30,000 lbs of hydrogen peroxide performed from July 14 through August 28, 2008
  - Injection and recirculation of 15,400 lbs of sodium persulfate performed from February 12 through 19, 2009.
  - Two rounds of post-ISCO monitoring performed after completing final round of ISCO injections

- Considerable reduction of CoCs observed, but RGs not achieved
- Anaerobic ISB necessary to treat remaining TCE to RG of 0.5 µg/L (DCE and VC also will be treated anaerobically)

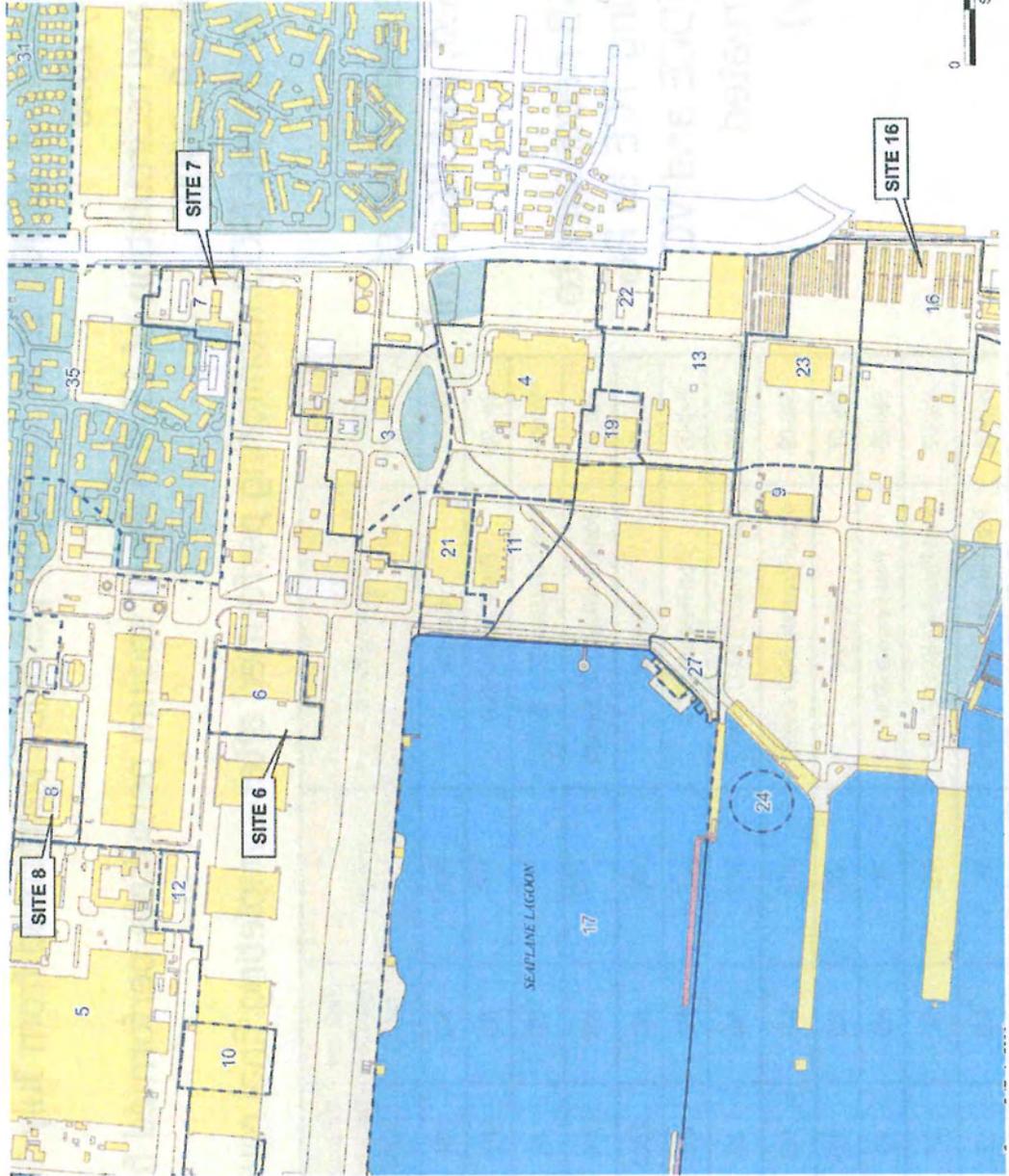
Date	Sampling Event	Analyte	Minimum Detection (µg/L)	Maximum Detection (µg/L)	Average Detection (µg/L)	Location of Max. Detection
Nov-07	Baseline	TCE	ND	700	88.8	26MW08
Sep-08	Post-Peroxide ISCO	TCE	ND	150	26.5	26MW03
Mar-09	Post-Persulfate ISCO, Event 1	TCE	ND	86	15.1	26PZ03
Sep-09	Post-Persulfate ISCO, Event 2	TCE	ND	130	38.1	26PZ03
Nov-07	Baseline	DCE	ND	2,500	323.6	26MW08
Sep-08	Post-Peroxide ISCO	DCE	ND	410	70	26MW03
Mar-09	Post-Persulfate ISCO, Event 1	DCE	ND	39	8.5	26PZ01
Sep-09	Post-Persulfate ISCO, Event 2	DCE	ND	110	42.3	26MW03
Nov-07	Baseline	VC	ND	530	67.6	26MW08
Sep-08	Post-Peroxide ISCO	VC	ND	68	12.5	26MW03
Mar-09	Post-Persulfate ISCO, Event 1	VC	ND	3.1	0.5	26PZ01
Sep-09	Post-Persulfate ISCO, Event 2	VC	ND	23	7.4	26MW08

Min/Max/Avg based on data from wells: 26MW02, 26MW03, 26MW04, 26MW05, 26MW07, 26MW08, 26PZ01, 26PZ02, 26PZ03



**BRAC**  
PMO WEST

# OU-1 REMEDIAL ACTION STATUS





## OU-1 REMEDIAL ACTION STATUS

**BRAC**  
PMO WEST

BCT accepted the soil remedy and agreed to the commencement of the Remedial Action while Navy resolved comments to the groundwater portion of the RD/RAWP.

- Soil remedy concurrence was requested by Navy in an effort to avoid rain delays and reduce project cost. -
- October 2009 – Begin excavations OU-1 excavations completed 04 December.
- December 2009 - Excavations and sampling complete
- Submitted lab data, figures, and recommendations for backfill to BCT on December 22.
- January 2009 – Backfill scheduled to be completed
- January 2009– Additional excavations at Site 16N&S (OWS608B and CANS 338H-4)



## CAA C – Status Update

**BRAC**  
PMO WEST

- Discovery (Jun 2009) – Historic underground pipeline containing aviation gas
- Corrective Action (Jun - Nov 2009)
  - Research (map room/repository)
  - Confirm Piping Layout (electronic tracing, pot-holing)
  - Closure in place (drain, clean, video, grout)
- Conclusions – No evidence of significant contamination present. 85 gal avgas removed
- Success – Avoided future potential release due to deteriorating pipeline. Confirmed no additional laterals

