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

October 4, 2007

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:	
Andrew Baughman	BRAC PMO West Remedial Project Manager (RPM)
Doug Biggs	Alameda Point Collaborative (APC) Representative
David Cacciatore	The Shaw Group, Inc.
Anna-Marie Cook	U.S. Environmental Protection Agency (EPA)
Tommie Jean Damrel	Tetra Tech EM Inc.
Douglas deHaan	Alameda City Council
James D. Leach	RAB
John Kaiser	San Francisco Bay Regional Water Quality Control Board (Water Board)
James Leach	RAB
Dot Lofstrom	California Environmental Protection Agency (Cal/EPA) Department of Toxic Substances Control (DTSC)
Patrick Lynch	Community member
Jeff Knoth	Alameda Unified School District
John Olson	Waste Solutions Group/Community member
Peter Russell	Russell Resources/City of Alameda
Marcus Simpson	DTSC
Angela Singh	DTSC

Bill Smith	Community Member
Christy Smith	U.S. Fish and Wildlife Service (USFWS)
Hannah Thompson	Sullivan International Group, Inc.
Michael John Torrey	RAB/Housing Authority of the City
Xuan-Mai Tran	EPA
Carol Trotter	Community Member
John West	Water Board
Marilyn York	Alameda Naval Air Museum

The meeting agenda is provided in Attachment A.

MEETING SUMMARY

I. Approval of Minutes

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

Ms. Lofstrom provided the following comments:

- Page 2 of 11, first paragraph, a sentence will be added to the end of the paragraph: "Ms. Singh will be assisting Ms. Lofstrom."
- Page 7 of 11, first paragraph, "Mr. Saddler noted that the Audubon Society has reviewed the PP for the site," will be revised to, "Mr. Saddler noted that the Audubon Society has reviewed the plans for the site."

Mr. Humphreys provided the following comments:

- The font size appears to have been reduced from 12 point to 10 point, which makes it difficult to read. He believes that Times New Roman 12 point font size would be better. Mr. Macchiarella said that he would make sure that the type is 12 point font.
- A table showing the Corrective Action Areas (CAA) distributed by Mr. Macchiarella was not included in the minutes. Mr. Macchiarella stated that it would be attached at the end of Attachment B-2.
- Page 2 of 11, second paragraph under Co-Chair Announcements, "Mr. Macchiarella announced that Ms. Anna Marie Cook," will be revised to, "Mr. Macchiarella announced that Ms. Anna-Marie Cook."
- Page 10 of 11, third paragraph, "given the slower than unexpected progress," will be revised to, "given the slower than expected progress."

The minutes were approved as amended.

II. Co-Chair Announcements

Mr. Humphreys distributed his list of documents and correspondence the RAB received in September 2007 (Attachment B-1). He noted that comments on Site 12 were submitted by the agencies. Mr. Macchiarella corrected Mr. Humphreys and said that correspondence item number 3 should not refer to Site 12 but instead to Site 32. Mr. Humphreys also noted that Mr. Macchiarella and Ms. Cook provided the RAB with separate descriptions of in-situ chemical oxidation and bioremediation technologies.

Mr. Humphreys announced that Ms. Joan Konrad will not be attending the RAB for several months because she had undergone surgery and that Mr. Coe was also unable to attend the meeting. Jim and Jean Sweeney are not in attendance, but have submitted a statement that they are in favor of merging the Fleet Industrial Supply Center Oakland, Alameda Facility/Alameda Annex (FISCA) RAB with the Alameda Point RAB. Ms. Dale Smith was also unable to attend the meeting.

Mr. Humphreys said the RAB considered alternatives for Site 32. The RAB sent a letter to the agencies dated September 28, 2007, stating that, based on its review of the draft Site 32 feasibility report (FS), the RAB's preference is Alternative 6, using in situ chemical oxidation for the contamination at Site 32. The letter is included as Attachment B-2.

Mr. Macchiarella said that the RAB went on a 45-minute site visit to the Operable Unit (OU)-5 pilot-test study area before the meeting. A record of attendees and the site visit is included as Attachment B-3.

Mr. Macchiarella said that a new *Alameda Point Focus* newsletter has been issued and the community should receive it soon. Additional copies of the newsletter were also available during the meeting. This newsletter is written approximately once or twice per year.

Mr. Macchiarella announced that notable milestones have been reached on four sites recently. Records of decision (ROD) have been signed for the Site 25 North Housing Area; Site 28, the former Todd's Shipyard; OU-5; and for OU-1. In total, six RODs have been signed in the past year. Mr. Humphreys asked about the other two sites. Mr. Macchiarella replied that RODs for Site 17 and Site 14 were signed earlier in the year.

During the last RAB meeting, a question was raised about the appearance of the monthly public notices for the RAB meetings. Mr. Macchiarella provided an example of the public notice that appeared on page A-2 of the September *Alameda Journal*. Also on Tuesday, October 2, the *Alameda Journal* ran an article about trenching conducted at Site 1 and the public notice for the meeting appeared below the article.

Mr. Macchiarella announced that Mr. Baughman has accepted a different position at Naval Facilities Engineering Command (NAVFAC) in San Diego. This RAB meeting is his last, and he is transitioning most of his projects to Mr. Derek Robinson and Ms. Catherine Haran. Mr. Robinson has previously met the RAB and also attended a site visit to Site 5 and Site 9.

Mr. Macchiarella said that the FISCA RAB voted to merge with the Alameda Point RAB, if the Alameda Point RAB accepts. Three of the members of the FISCA RAB also are members of this RAB: Mr. and Ms. Sweeney and Ms. Konrad. The idea was to vote in this RAB to accept the FISCA RAB. FISCA is Alameda Point's neighbor and is close to complete in terms of Navy work. Mr. Macchiarella noted that it would not be a major time commitment to merge the RABs. Mr. Macchiarella said that he hoped this RAB would vote to accept responsibilities of the FISCA RAB. Mr. Humphreys asked the RAB about who was in favor of accepting the FISCA RAB. A motion was made, seconded, and all RAB members were in favor.

III. Site 1 Trenching and Time-Critical Removal Action Updates

Mr. Baughman said his presentation would provide an overview of the trenching at Site 1, which includes the objectives, locations of the trenches, results of the trenching, pictures and video of the field work, and the path forward. A handout of the presentation is included as Attachment B-4. The purpose of the trenching at Site 1 was to verify the waste volume estimates and confirm the absence of intact drums.

Mr. Baughman said that the field work was conducted between September 5 and September 11, 2007. A total of eleven trenches were excavated in the waste cells. The trenches were approximately 25 feet long and 3 to 3½ feet wide. As part of the process, the cover soil was removed and then the waste was removed. Any waste found was laid out and photographed. The waste content was noted in trench logs. Any radiological sources or areas where contaminant concentrations were elevated were removed and transferred to disposal bins to be disposed of off-site. The trenches and the ground surface were returned to pre-existing conditions. Clean backfill was used for areas where soil was removed and one area was repaved with asphalt. Mr. Baughman said that an unexploded ordnance (UXO) technician and radiological technician were on site at all times. Mr. Leach asked about the depth of the trenches. Mr. Baughman replied that every trench was 6 to 8 feet deep before water was encountered, and he noted that every trench extended to the bottom of each excavation cell and to the bottom of the waste. Mr. Baughman provided a handwritten map showing trench locations and how the trenches were labeled (Trenches 1 through 11). He said a trench was excavated in each of the waste cells. No trenching occurred through the thick concrete.

Mr. Baughman said the results of the trenching include:

1. Found one drum carcass, only the middle third of the drum, and it was corroded
2. Found trace debris similar in every trench: rocks, concrete, scrap metal, glass, wood, and mostly stained soil.
3. Found dark and grey soils and sand without odor
4. Found one 20 millimeter (mm) shell casing (Trench 5)
5. Found 57 cubic yards of radiologically elevated soil.

Mr. Baughman provided photographs of the trenching on Slides 7 through 13 and described the trenching process. Plastic sheeting is first laid out along the entire length of the trench. The excavator removes a bucket of soil and the subcontractor passes a sodium iodide detector over the bucket to check for radiological content. If radiological material is detected in the bucket, the

soil is transferred immediately into a disposal bin. If the amount of soil to be excavated is small, then the workers lay plastic sheeting over the front bucket of a truck loader and shovel the soil into the bucket by hand. If radiological materials are detected, the soil is wrapped in plastic (called a "burrito"), and disposed in the bin.

Soil that does not contain radiological material is spread over a layer of plastic, pressed flat, and scanned again for radiological content. If radiological material is detected, a shovel is used for removal and the soil is wrapped in plastic and disposed. This process continues until the radiation levels are below the action levels. Mr. Baughman said that the trench [depicted on a slide] was excavated to a depth of 6 to 6.5 feet. Mr. Baughman said that the regulators visited the site and observed the trenching process at Trench 10. Mr. Baughman noted that the radiological materials areas were restricted and cannot be entered without radiological safety training. All site workers and equipment are also screened in the area for radiological materials to ensure the health and safety of the workers and that no contamination leaves the area.

Mr. Baughman reiterated that no drums were found — only the drum carcass mentioned earlier (a portion of a drum).

Mr. Baughman said that the post-trenching closeout report is in progress and will include the objectives of the field work, the actual trench logs showing items that were found, the depths of the trenches, the depths where groundwater was encountered, the types of soil encountered, photographs, and the entire trenching video. He said that the Navy is now working on the response to comments (RTCs) from the regulatory agencies and from the city on the ROD. He expects that the draft final ROD will be submitted in fall 2007.

Mr. Humphreys asked when the post trenching closeout report will be available. Mr. Baughman replied that the draft version of the report should be issued in mid- to late October 2007. Mr. Humphreys asked about the criterion in counts per minute (cpm) used to classify soil as radiological. Mr. Baughman replied that 6,117 cpm was used as the criterion. Mr. Humphreys asked how the criterion was selected. Mr. Baughman replied that a reference area based on the characterization report completed in 2004 on Alameda Point that can be used as background. Mr. Humphreys asked if the number of counts is affected by the distance the detector is held from the source. Mr. Baughman replied that it is affected. Mr. Humphreys said that it appeared that the detector was held at different distances from the soil. Mr. Baughman said that the contractors repeat the screening a number of times and hold the detector against the soil as well.

Mr. Leach asked if the trenches were parallel. Mr. Baughman replied that they were not all in the same direction. Mr. Leach said that the usual method of a cut-and-fill trench is that there is some undisturbed distance of soil between each trench. He asked if the Navy was able to detect discrete disposal cells. Mr. Baughman said that the Navy used historical information to indicate where each disposal cell was located to decide where the trenches would be located. He said that the Navy attempted to position a trench in the center and on the edge of each disposal cell. Mr. Leach asked if there was evidence of the contents of the disposal cells, and Mr. Baughman replied that scrap metal, concrete, wood, stained soils, and construction debris, items that would remain after 50 years, in the cells. Mr. Leach said that he did not recall that the original trenches had been surveyed or coordinates located for the historical landfills. Mr. Baughman replied that

an initial assessment study (IAS) report from 1983 showed the general area of the waste cells. Mr. Macchiarella said that historical aerial photographs showed where the waste cells were located. Mr. Baughman said that other historical information helped them decide where to locate the trenches, such as maps and interviews. Mr. Lynch asked how the excavators were decontaminated after they contacted radioactive soils. Mr. Baughman said that once the soils were transferred to the disposal bins, the excavator buckets were scanned before they left the site. Radiological contamination was never detected on the excavator buckets so they were not decontaminated. Mr. Lynch asked what means would be used to decontaminate the excavators if radioactive materials were detected, and Mr. Baughman replied that a standard operating procedure for decontamination has been established. He said that he could make it available to Mr. Lynch.

Mr. Torrey said that he appreciated the photographs that Mr. Baughman provided in his presentation.

Mr. Baughman said that the iodide detector used will detect any anomalies in the area and that no reference area was needed. The trenches were scanned throughout and the excavation proceeded to the clay layer. Mr. deHaan asked if the Navy assumed an impermeable layer. Mr. Baughman said the waste was filled in and would not have migrated below the clay layer. Mr. deHaan said that he assumes that the instrument was calibrated to make sure that contamination has not penetrated the clay layer. Mr. Macchiarella said that the Navy has collected groundwater data beneath the clay layer around the site.

Mr. Baughman showed video footage of the trenching at Site 1. Mr. Baughman pointed out that most of the items in the trenches are rocks, soils, and metal. Mr. Humphreys asked if any samples were collected from the trench. Mr. Baughman said that no samples were collected. He restated the goals of the work. Mr. Baughman pointed out the stained soils encountered in the video and how soil is scanned thoroughly for radioactive material. Mr. Lynch asked if all radioactive material encountered was radium 226. Mr. Baughman replied that the isotope results had not been received but that radium 226 is expected. Mr. Baughman pointed out that the UXO technician was present in the area next to the former small arms firing range berm. He said that a glass shield was installed in this area and the UXO technician watched the excavation of soil from behind the shield. Mr. Baughman noted that workers remained upwind of the trenches and safety personnel evaluated hazards to workers when stained soils were encountered.
Mr. Baughman pointed out the hard clay layer within a trench and Mr. Macchiarella pointed out that the clay can be seen smeared along the bottom of the trench. Mr. Baughman pointed out how the burrito is loaded and surveyed with the iodide detector. The soil is immediately disposed of if there are detections. If there are no detections, then the soil is laid out, flattened, and surveyed again.

Mr. deHaan asked about the amount of soil excavated, and Mr. Baughman replied that 57 cubic yards of radiologically elevated soil was removed, but he was not sure the of the total soil volume. Mr. Russell responded that he estimated the total volume of the excavated trenches to be about 250 cubic yards. Mr. Torrey asked if the soil that has been removed was returned to the trenches. Mr. Baughman said that the radioactive soil that was transferred to the disposal bins was disposed, but that the remaining nonradioactive soil was returned to the trenches.

Mr. Baughman said that some backfill material was used to restore the surface area to its original state. Mr. Torrey asked how the process removed the contamination, and Mr. Baughman replied that intent was to verify the volume of waste, remove soils with elevated radiological readings, and replace the remaining soil in the trenches. Mr. Torrey asked if contaminated soils would affect uncontaminated materials. Mr. Macchiarella stated that all soil excavated was scanned for radiological materials. The process separated the soil that contained radiological materials from soil that did not. The soil that did not contain radiological materials was returned into the trenches.

Mr. Humphreys asked if the Navy revised its estimate of waste volumes materials after excavation. Mr. Baughman replied that the Navy did not revise the estimate because the purpose of the activities was to verify the previous estimates. Mr. Humphreys asked if the Navy verified the information, and Mr. Baughman replied that he believed the Navy verified the information. Mr. Humphreys noted that of 140,000 cubic yards of soil, the Navy has excavated only 200 yards. Mr. Humphreys said that if one-quarter of soil excavated was radioactive, then it is possible that one-quarter of the remaining 140,000 yards would contain radioactive material.

Mr. deHaan asked if Mr. Baughman knew the source of the radioactive material. Mr. Baughman replied that most of the sources of elevated soils were radium dials that were used in planes. Mr. deHaan asked if there was any evidence of radium dials. Mr. Baughman said there was evidence and it will be included in the report. Mr. deHaan asked what besides radium dials were found. Mr. Baughman replied toggle switches and other plane parts and dial chips were found. He said that some items were so corroded that they could not be identified. Mr. Lynch asked if the locations of radiological materials were surveyed so that the Navy can return to the area if needed. Mr. Baughman replied that geographic information system (GIS) technology has been used to survey the area, including the trenches.

Mr. Torrey asked if the RAB is to assume that all of the soil was scanned. Mr. Baughman replied that Mr. Torrey does not need to assume since all soils excavated were scanned. Mr. Macchiarella said that Mr. Torrey could watch the video to see the soils scanned. Mr. Torrey said that he has to assume that since he saw only one pile of the soil scanned, that all of the other soil was not scanned. Mr. Baughman replied all soils were scanned throughout the process.

Mr. Humphreys asked about the fencing in the background of one of the video clips. Mr. Baughman replied that it is the Site 1 fencing. Mr. Humphreys asked if the site was well fenced off and Mr. Baughman replied that it is. Mr. Humphreys said that he had read an article in the newspaper that discussed dial sludge. Mr. Humphreys asked Mr. Baughman if there was any dial sludge encountered during the trenching. Mr. Baughman said that he did not believe that any was encountered. Mr. Humphreys asked how Mr. Baughman had arrived at his conclusion, and Mr. Baughman replied that the sludge would have registered on the sodium iodide detector and did not.

Mr. deHaan introduced himself as a city council member. He said that the city council met October 3 and reviewed the preliminary information that has been provided. He noted that the council is concerned about the proposed remediation and it will not be accepted as it was

presented. He expects further information from the Navy and informed the Navy because the Navy will hear its position in the newspapers. He said that he was part of the RAB in 1995, so he is familiar with the activities and he is encouraged by the progress with the new developer. He shared the information with the Navy because he said that it would be unfair for the Navy to believe that some other decision had been made. The council is concerned about the radiation and believes that the landfill cap would not be satisfactory. As a result, the council expects further information, explanations, and alternatives.

IV. BRAC Cleanup Team (BCT) Activities

Ms. Lofstrom said that Mr. Lynch raised questions at the last meeting and she wanted to respond, in particular the question about DTSC's database, EnviroStor, and why the address of the east housing had not been updated. She said that EnviroStor is the database for DTSC that is not required by statute; instead, it is voluntary. She said that it has no legal ramifications and that it is an informational database only. Ms. Lofstrom noted that she would like to provide a presentation to the RAB on EnviroStor. She said that she would like to assemble some screen shots to present to the RAB. She said that it is a tool for the community to use to access reports and review DTSC's comments. She said that among items recorded are covenants.
Ms. Lofstrom stated that DTSC has contracted with a company called Terradex. Terradex sends the DTSC project manager an e-mail notification when excavation is planned in a restricted area. Underground Service Alert (USA) is contacted before excavation can begin. Terradex sends an e-mail to the DTSC project manager based on the contacts to USA. This process has been under way since September. As a result, DTSC is informed of excavations planned in restricted areas. Ms. Lofstrom distributed a map that shows areas with a restriction and areas where Terradex would provide notification. Ms. Lofstrom noted the map was only an example. She said that she hopes that this system would eliminate any concern about excavation on sites without DTSC's knowledge. Mr. Lynch said that he could provide Ms. Lofstrom with a statutory reference that states that her agency is required to maintain an on-line database. Ms. Lofstrom said that she talked with DTSC's legal counsel and he was not aware of any statute. She said that DTSC has tried to seek legislation and asked Mr. Lynch if he was thinking of Geotracker. He said he was not referring to Geotracker and that he would send Ms. Lofstrom the relevant statutory reference in an e-mail. Ms. Lofstrom said that she would appreciate if Mr. Lynch could send the statutory reference to her in an e-mail.

Ms. Lofstrom said that DTSC would like all of the state regulatory agencies to adopt the database, but all have different databases currently. Ms. Lofstrom said that she enters data into the database and should be informed of errors. Her phone number and e-mail address are in EnviroStor. She said that Mr. Macchiarella found a mistake and she corrected it.

Ms. Lofstrom said that the second item involved the Marsh Crust ordinance. The former DTSC project manager for FISCA, Mr. Henry Wong, had requested that some language that was ambiguous be adjusted. He was specifically requesting that the depth to the Marsh Crust be specified. The city agreed to the request, but has since hesitated since the development that is planned will change the grade. Mr. Lynch said to Ms. Lofstrom that the delay will violate a regulation that DTSC finds to be ambiguous and unenforceable. Ms. Lofstrom responded that her agency does not consider the regulation ambiguous and unenforceable. Mr. Lynch said that

he thinks that the city's concern would be addressed by surveying the elevation of the Marsh Crust instead of the depth below surface; grading will not change the elevation, but the result would be a topographical map and would be unambiguous. Mr. Russell said that he was at a RAB meeting when the 5-year review was issued. He said that the DTSC letter from Mr. Wong did not indicate it was ambiguous, but because of the benchmark issues, measuring the depth to the Marsh Crust may be unusable for homeowners. He said that Mr. Wong wanted it described both as the elevation of the Marsh Crust and the depth below ground. The city commented in the response to comments in the final 5-year review that the map would be updated when the land was redeveloped since the ground surface will change. He said that Bayport is where the future elevation has been established. Mr. Russell said that the rationale was that excavation is prohibited without the Navy's authorization. The same applies to redevelopment at FISCA. He said that once the final grade is established, the map will be upgraded to be more accessible to future uses. Mr. Lynch said that the only version that he has seen of that map shows a depth of 10 feet can be excavated without encountering the Marsh Crust and yet all the data from the Estuary Park shows 100 parts per million (ppm) of benzo(a)pyrene at a depth of 7 feet. He said that the map contradicts itself. Mr. Russell said that there is no contradiction. Mr. Russell said that the polycyclic aromatic hydrocarbons (PAH) occur in two general fashions. He said that one is in a concentrated layer, the Marsh Crust, which is at the bottom of the fill and at the top of the Bay Mud. Above the Marsh Crust and not addressed by the Marsh Crust ordinance is the soil itself. Mr. Russell said that the PAHs are found in the soil because of its origin as dredge fill material. Mr. Lynch said no levels of high PAHs have been detected elsewhere on the Navy base besides at the Estuary Park. Mr. Lynch emphasized that the highest concentrations of PAHs are found at 7 feet below ground surface at the estuary park and that there is an error in the map that needs to be corrected. Mr. Russell said that the Marsh Crust ordinance addresses different issues. Mr. Lynch said Mr. Russell is correct that the Marsh Crust contamination is not addressed by the Marsh Crust ordinance. Mr. Russell said that the PAHs above the Marsh Crust are not addressed by the Marsh Crust ordinance. Mr. Lynch said that he disagrees with Mr. Russell. Mr. Russell said that there is a separate ROD and separate task for the soil above the Marsh Crust. Mr. Leach said that elevation benchmarks should be used instead of below the ground surface since elevation does not change. Mr. Russell said that DTSC has requested to set the benchmarks both as elevation and depth below ground surface.

Ms. Lofstrom said that the BCT has also been working on the Site 35 proposed plan, the Site 26 remedial design, and the Site 1 trenching.

V. Community and RAB Comment Period

Mr. Lynch reiterated his concern that PAH contamination will be encountered above 10 feet below ground-surface.

Mr. Humphreys asked who will monitor the database in the absence of Ms. Lofstrom. Ms. Lofstrom replied that she believes that DTSC will maintain a contract with Terradex, but the alerts will be sent to her supervisor or her replacement.

Mr. Smith briefly recounted a story of a resident that believed that contamination could be remediated by a combination of photovoltaic and wind power.

Mr. Torrey asked Mr. deHaan how long the city expects the Navy to remain at the installation. Mr. deHaan said that the Navy has indicated that the base would be turned over in the year 2000. Transfer did not occur because the Navy has found more contamination than was expected. Mr. deHaan said that he would be eager to learn how much of the land has been remediated. He has heard that 50 percent has been remediated but he feels it is more likely 20 percent. Mr. Macchiarella said that a proposed early transfer is in progress with the new developer, SunCal. It is an aggressive schedule for early transfer of a large portion of the property in 2 years that SunCal designed. Mr. Torrey asked if the Navy expects to leave the installation in about 2 years. Mr. Macchiarella replied that the Navy expects to, in accordance with SunCal's schedule, be able to allow SunCal to accept a large portion of the property. Mr. deHaan said that it is only a segment of the property. Mr. deHaan said that the area has been considered the "cleaner" portion of the property and the industrial areas are elsewhere. Mr. Humphreys asked if cleanup will continue under the developer after the early transfer takes place. Mr. deHaan replied that cleanup will still need to be continued. Mr. Humphreys asked when the cleanup will be done and Mr. deHaan said that Phase 4 is being held because it is a more heavily contaminated area. Mr. Torrey said that his understanding was that the Navy was ready to leave. Mr. deHaan said that the Navy is not leaving. Mr. Russell said that Mr. Lynch raised an important point. Mr. Russell said that the PAHs in Estuary Park are an important issue and are addressed in the ROD for Site 25. Mr. Lynch disagreed that the PAHs are addressed in the ROD for IR Site 25. Mr. Russell continued that there is a specific prohibition on excavation below 4 feet. Mr. Lynch said that is inadequate since the Navy removed only the top 2 feet of contaminated soil. Mr. Russell replied that the PAHs that Mr. Lynch is referring to are not in dispute. Mr. Lynch said that he is describing the Marsh Crust, which is at 7 feet, but the soil above the Marsh Crust is contaminated with PAHs as well. Mr. Russell said that he wanted to point out that there are specific prohibitions in place that supplement the Marsh Crust ordinance in that area.

Mr. deHaan asked if 4 feet of soil was removed when Estuary Park was developed. Ms. Cook and Mr. Russell replied that only 2 feet were removed. Ms. Cook said 2 feet of soil has been removed except for in the children's playground, Clover Park, where 4 feet was removed.

Mr. Smith asked about the root depth for corn. Mr. Humphreys replied about 1 foot. Mr. Smith asked about the root depth for trees. Mr. Humphreys replied about 6 feet. Mr. Smith said that trees should be planted to reduce the amount of wind and strengthen the ground.

The meeting adjourned at 8:05 p.m.

ATTACHMENT A

NAVAL AIR STATION ALAMEDA
RESTORATION ADVISORY BOARD MEETING AGENDA
October 4, 2007

(One Page)

RESTORATION ADVISORY BOARD

NAVAL AIR STATION, ALAMEDA

AGENDA

OCTOBER 4, 2007, 5:30 PM TO 7:30 PM

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

****** Note the earlier than usual start-time to account for a Site Visit. If you will not be attending the Site Visit, then please arrive at 6:30pm in the Regular RAB meeting location (shown above). ******

TIME	SUBJECT	PRESENTER
5:30 - 6:15pm	**Site Visit to OU-5/IR02 Pilot Test Area**	
	****** Please arrive on your own at the Pilot Test area, see attached map for details. When the site visit is complete, proceed on your own to Bldg 1, Suite 140 (the regular RAB meeting location) ******	
6:30 – 6:40	**Approval of Minutes**	**Mr. George Humphreys**
6:40 - 6:50	**Co-Chair Announcements**	**Co-Chairs**
6:50 – 7:15	**Site 1 Trenching & Time Critical Removal Action Updates**	**Mr. Andrew Baughman**
7:15 – 7:20	**BCT Activities**	**Ms. Dot Lofstrom**
7:20 – 7:30	**Community & RAB Comment Period**	**Community & RAB**
7:30	**RAB Meeting Adjournment**	

ATTACHMENT B

NAVAL AIR STATION ALAMEDA
RESTORATION ADVISORY BOARD MEETING HANDOUT MATERIALS

B-1 List of Reports and Correspondence Received during September 2007, distributed by George Humphreys, RAB Community Co-Chair (2 pages)

B-2 Letter from the RAB to Mr. Thomas Macchiarella regarding the RAB's preferred alternative for IR Site 32. Provided by George Humphreys, RAB Community Co-Chair (2 pages)

B-3 OU-5 Groundwater Pilot Test Site Visit Meeting Summary. Provided by Tommie Jean Damrel, Tetra Tech EM Inc. (3 pages)

B-4 Site 1 Trenching Update. Presented by Andrew Baughman, BRAC PMO West (8 pages)

ATTACHMENT B-1

LIST OF REPORTS AND CORRESPONDENCE RECEIVED, SEPTEMBER 2007

(Two Pages)

List of Documents and Correspondence Received during September 2007

Documents

1. August 30, 2007(Received in September), "Final Data Gap Sampling Work Plan for Operable Unit 1 (IR Sites 6, 7, 8, 16), Alameda Point, Alameda, California", prepared by Tetra Tech Inc. for BRAC Program Management Office West.
2. August 31, 2007 (Received in September), "Final Remedial Investigation Report, IR Site 20 (Oakland Inner Harbor) and IR Site 24 (Pier Area) , Alameda Point, California", cover, title pages, spine insert and CD, prepared by ARCADIS BBL and Neptune & Company for BRAC Program Management Office West.
3. September 6, 2007, "Draft, Remedial Investigation Report for Installation Restoration Site 34, Alameda Point, Alameda, California", prepared by SulTech, a Joint-Venture of Sullivan Consulting Group and Tetra Tech E M Inc. for BRAC Program Management Office West.
4. September 7, 2007, "Draft Final, Data Gap Sampling Work Plan for Operable Unit-2A and 2B", prepared by Tetra Tech, Inc. for BRAC Program Management Office West.
5. September 7, 2007, "In Situ Chemical Oxidation Pilot Test Workplan, Appendix J, Preliminary Remedial Design Draft Remedial Action Workplan, Installation Restoration Site 26, Alameda Point, Alameda, California", prepared by Innovative Technical Solutions, Inc. for BRAC Program Management Office West.
6. September 10, 2007, "Final, Record of Decision Operable Unit 5/IR-02 Groundwater", prepared by Tetra Tech Inc. for BRAC Program Management Office West.

Correspondence

1. September 13, 2007, "Review of the Draft Workplan, SCAPS Laser Induced Fluorescence, Tarry Refinery, Alameda Point, Alameda, California", letter from Ms. Dot Lofstrom, P. G., Department of Toxic Substances Control, to Mr. Thomas Macchiarella, BRAC Program Management Office West.
2. September 13, 2007, "Review of the Draft Final Site Inspection Report, Transfer Parcel EDC-17, Alameda Point, Alameda, California, August 2007", letter from Xuan-Mai Tran, U. S. EPA Region IX to Mr. Thomas Macchiarella, BRAC Program Management Office West.
3. September 17, 2007, "Review of the Draft Feasibility Study Report IR Site 12, Northwestern Ordnance Storage Area, Alameda Point, Alameda, California, June 2007", letter from Xuan-Mai Tran, U. S. EPA region IX to Mr. Thomas Macchiarella, BRAC Program Management Office West.

4. September 19, 2007, "Review of the Draft Final Site Inspection Report, Transfer Parcel EDC-12, Alameda Point, Alameda, California, August 2007", letter from Xuan-Mai Tran, U.S. EPA Region IX to Mr. Thomas Macchiarella, BRAC Program Management Office West.
5. September 24, 2007, letter from Ms. Anna-Marie Cook, U. S. EPA Region IX to Mr. George B. Humphreys, RAB Community C0-chair, regarding information packet on In-Situ Chemical Oxidation and Bio-Remediation Technologies.
6. September 27, 2007, "Review of Draft Feasibility Study (FS) Report, Installation Restoration (IR) Site 32, Northwest Ordnance Storage Area, Alameda Point, Alameda County", letter from Ms. Angela Singh, Department of Toxic Substances Control to Mr. Thomas L. Macchiarella, BRAC Program Management Office West.

ATTACHMENT B-2

LETTER FROM THE RAB TO MR. THOMAS MACCHIARELLA REGARDING THE RAB'S PREFERRED ALTERNATIVE FOR IR SITE 32

(Two Pages)

George B. Humphreys
Co-chair, Restoration Advisory Board (RAB)
25 Captains Drive
Alameda, CA 94502-6417
September 28, 2007

Mr. Thomas L. Macchiarella
BRAC Environmental Coordinator
Department of the Navy
BRAC Program Management Office West
1455 Frazee Road, Suite 900
San Diego, CA 92108-4310

Subject: IR Site 32, Northwest Ordnance Storage Area, Statement of RAB preferred Alternative

Dear Mr. Macchiarella:

Community members of the Restoration Advisory Board met on September 28, 2007 to discuss the six alternatives described in the Draft Feasibility Study for IR Site 32 dated June 2007. At the last RAB meeting Councilman Matarrese asked the RAB to make a recommendation as to its preferred alternative. At the outset, we would like to thank the Navy for the excellent 4-page summary of the technologies involved with both in-situ chemical oxidation and in-situ biodegradation processes. It was most helpful to us in our consideration of the various alternatives. The RAB also wishes to acknowledge the descriptive material on the two processes provided by the U. S. EPA Region IX, which also facilitated our deliberations.

Based on our discussions, we have decided to endorse Alternative 6, In-Situ Chemical Oxidation and Institutional Controls. This recommendation is, of course, predicated on the assumption that the technology will prove effective in treating the chemical contamination and achieving cleanup goals. We eliminated Alternative 1, No Action, because it is not protective of human health and the environment. Alternative 2, Institutional Controls, and Alternative 3, Monitored Natural Attenuation, were both eliminated because the assumed duration of each alternative is 30 years. It is RAB's position that remedial alternatives be effective within a reasonable time. Alternative 4, Enhanced In-situ Biodegradation, was eliminated because its effectiveness in treating chlorobenzene has not been demonstrated and bench-scale and pilot scale testing would be required. Further, Alternative 4 has an estimated duration of 4 years versus 3 years for Alternative 6. Alternative 6 was chosen over Alternative 5 because its estimated duration is 3 years versus 6 years for Alternative 5. Also, the in-situ chemical oxidation technology using modified Fenton's reagent seems to be more demonstrated compared to the enhanced biodegradation process using emulsified vegetable oil as the organic substrate. Finally, the reason for using rows of injection wells for the ISB is unclear.

There appears to be the possibility that contaminated groundwater could flow around a barrier row and bypass the treatment zone. The RAB considers the costs associated with Alternatives 4, 5, and 6 to be essentially the same. Hence, there is no reasonable basis for distinguishing among these three alternatives on the basis of cost.

Thank you for the opportunity to express the RAB's preference in this matter.

Sincerely,

George B. Humphreys,
RAB Community Co-chair

Copies to:

Ms. Anna-Marie Cook
U.S. EPA Region IX

Ms. Dot Lofstrom
DTSC

Mr. John West
Regional Water Quality Control Board

Mr. Frank Matarrese
Alameda City Council

Mr. Peter Russell
Russell Resources, Inc.

ATTACHMENT B-3

OU-5 GROUNDWATER PILOT TEST SITE VISIT MEETING SUMMARY

(Three Pages)

NAVAL AIR STATION ALAMEDA
RESTORATION ADVISORY BOARD (RAB)

OPERABLE UNIT 5 GROUNDWATER PILOT TEST TREATMENT SYSTEM
SITE VIST MEETING SUMMARY

October 4, 2007

The following participants attended the site tour:

Doug Biggs	Alameda Point Collaborative (APC) Representative
David Cacciatore	Shaw Environmental and Infrastructure
Anna-Marie Cook	US Environmental Protection Agency (EPA)
Tommie Jean Damrel	Tetra Tech EM Inc.
Larry Dudus	Tetra Tech ECI
George Humphreys	Restoration Advisory Board (RAB) Community Co-chair
Jeff Knoth	RAB/Alameda Unified School District
Dot Lofstrom	California EPA (Cal/EPA) Department of Toxic Substances Control (DTSC)
Bill Ogle	Tetra Tech ECI
Thomas Macchiarella	Base Realignment and Closure (BRAC) Program Management Office (PMO) West, BRAC Environmental Coordinator (BEC), Navy Co-chair
Mary Parker	BRAC PMO West Remedial Project Manager
Peter Russell	Russell Resources/City of Alameda
Marcus Simpson	DTSC
Angela Singh	DTSC
Michael John Torrey	RAB/Housing Authority of the City
Xuan-Mai Tran	DTSC
John West	Regional Water Quality Control Board (Water Board)

SITE VISIT SUMMARY

Attendees followed the map provided in their RAB packet (Attachment 1) to find the Operable Unit (OU) 5 pilot study area, located at Kollman Circle, off of Singleton Avenue. Ms. Parker welcomed attendees and informed the group that the final record of decision (ROD) for groundwater at OU-5 had been signed and would be available at the information repositories beginning October 5, 2007. Ms. Parker also stated a notice would run in the *Alameda Journal* informing the public of the availability of the ROD. Ms. Parker then introduced Mr. Dudus, the lead geologist for the project, and Mr. Ogle, the site superintendent, to give a presentation about the groundwater pilot test treatment system. Attendees were given a handout of the presentation (Attachment 2).

Mr. Dudus explained groundwater at OU-5 was affected with benzene and naphthalene. These chemicals of concern (COC) are typically cleaned up by naturally-occurring organisms

consuming and breaking them down (a process called bioremediation). The purpose of the treatment is to enhance the natural bioremediation process by providing the organisms with needed oxygen. Mr. Dudus explained the treatment achieves this through (1) biosparging (pushing air into the ground) and (2) soil vapor extraction (SVE) to capture any vapors that may occur. Mr. Dudus stated nutrients may also be added to feed the organisms.

Mr. Dudus then explained the workings of the treatment system, pointing out the surface equipment at the site and noting the below-ground well fields. Mr. Ogle displayed a pilot test map (part of Attachment 2) indicating the location of the biosparge and SVE wells relative to the surface equipment the group was viewing.

Mr. Knoth asked how deep the contamination is. Mr. Dudus replied anywhere from 15 or 16 feet at the south end of the OU, to 18 feet at the north end. Mr. Humphreys asked how thick the plume is. Mr. Dudus replied the water table is 6 or 7 feet deep in some spots, and 18 feet deep in others. He noted the deeper into the plume, the higher the concentration of COCs.

Mr. West asked whether there were any nutrients lacking that needed to be added. Mr. Dudus said that was currently unknown, and something being analyzed during the pilot test.

Mr. Biggs asked how the team was monitoring vapor output into the atmosphere. Mr. Dudus stated the team collected air using stainless steel, 6-liter canisters (SUMA canisters) at the beginning of the project, and since was collecting them monthly to test air quality. To date, the COCs in the air had not been elevated.

Mr. Dudus then reviewed the noise control requirements and monitoring taking place to ensure compliance. Ms. Cook asked if the blower could be turned off at night to reduce noise. Mr. Dudus stated they wanted to keep the whole system running full-time, including the blower, to ensure benzene does not mobilize. However, when the study is complete, they will analyze the need for certain equipment and certain times, and may make adjustments to the set-up. Mr. Dudus added that there have been no noise complaints from any residents.

Mr. Humphreys asked how many cubic feet per minute (CFM) output were by each well. Mr. Ogle replied the team uses standard cubic feet per minute (SCFM), and the output is 2 to 7 SCFM per each well.

Mr. West asked what the full-scale operation might look like. Mr. Dudus stated that would depend on the results of the test, and the area where treatment is required. The system could stay in the same location and be piped to other areas, or may be moved. The pilot test is expected to run until the end of calendar year 2007, and then results will be analyzed and incorporated into a remedial design and work plan.

Mr. Simpson asked about the large black barrels at the site, inquiring what is the in the barrels and how long they would be at the site. Mr. Dudus stated the barrels contain soil and water derived from the drilling to install wells for the study. Mr. Dudus noted the barrels were in the process of being removed off site and disposed of properly. Mr. Dudus noted that, when full-

scale construction begins in 2008, any barrels of construction-derived waste would be at the site less than three months.

Mr. Simpson asked how the site was secured and how access to the site was restricted to the general public. Mr. Dudus explained the fencing at the site would remain up, and the gate was continuously locked.

Mr. Dudus stated the team expects to begin full-scale remediation at OU-5 in September 2008. The site visit adjourned so attendees could attend the regular RAB meeting.

ATTACHMENT B-4

SITE 1 TRENCHING UPDATE

(Eight Pages)

Welcome

BRAC PMO WEST

IR Site 1 Trenching Update

Andrew Baughman, PE
Remedial Project Manager
October 4, 2007

Overview

BRAC PMO WEST

- IR Site 1 Trenching
  - Objectives
  - Locations
  - Results
  - Pictures and Video
  - Path Forward

Trenching Objectives

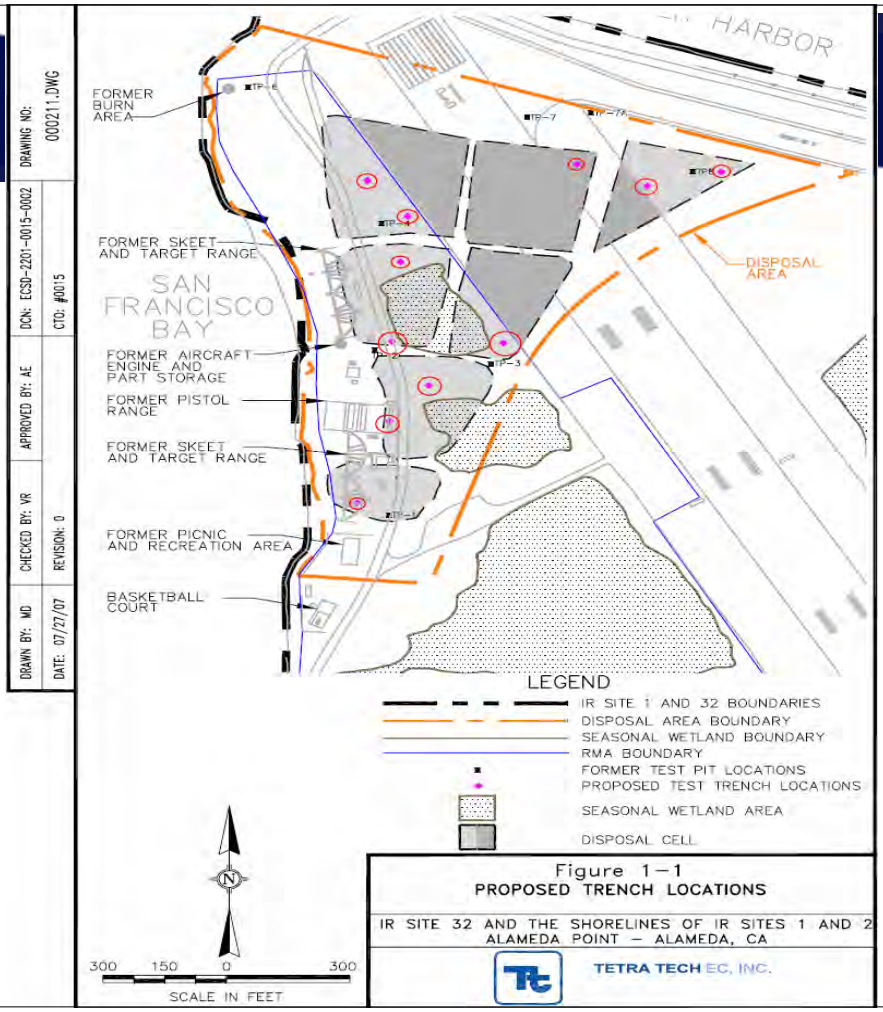
BRAC PMO WEST

- To validate certain assumptions in the ROD
  - Verify waste volume estimates
  - Confirm absence of in-tact drums
- Field Work September 5, 2007 to September 11, 2007

Scope

BRAC PMO WEST

- Trenches were excavated in all waste cells
  - 11 Trenches Total
    - Approximately 25 feet long and 3-3½ feet wide
    - Remove cover soil
    - Remove waste (UXO Tech. and Radiological Tech.)
      - Photograph and note waste contents
      - Remove any Radiological Point Sources or MEC/MPPEH that are found
      - Return trench and surface to pre-existing condition



BRAC PMO WEST

Trenching Results

BRAC PMO WEST

- 1 Drum Carcass (Trench 2)
  - No top or bottom 1/3
  - Highly rusted and corroded
- Trace Debris
  - Rock
  - Concrete
  - Scrap metal
  - Very little glass and wood
- Dark and grey soils and sand
  - No odor
- UXO/MPPEH
  - One 20 mm casing found (Trench 5)
- Radiologically Elevated Soils
  - 57 cubic yards (4 ½ Bins)

Pictures

BRAC PMO WEST

Pictures

BRAC PMO WEST

Pictures

BRAC PMO WEST

Pictures

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Pictures

BRAC PMO WEST

Pictures

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Path Forward

BRAC PMO WEST

- Post-Trenching Closeout Report
  - Objectives, field work, trench logs, pictures, and entire video on DVD
- Site 1 Record of Decision (ROD)
  - Navy working on the RTCs to all comments
  - Draft Final ROD due out Fall 2007

Questions?

BRAC PMO WEST