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

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

April 2, 2009

The following participants attended the meeting:

Co-Chairs:

Patrick Brooks	Base Realignment and Closure (BRAC) Program Management Office (PMO) West, BRAC Environmental Coordinator (BEC), Department of the Navy Co-chair
Dale Smith	Restoration Advisory Board (RAB) Community Co-chair

Attendees:

Doug Biggs	Alameda Point Collaborative
Anna-Marie Cook	U.S. Environmental Protection Agency (EPA)
Tommie Jean Damrel	Tetra Tech EM Inc.
Janet Davis	Community Member
Reyla Graber	Community Member
Catherine Haran	BRAC Remedial Project Manager (RPM)
Fred Hoffman	RAB
George Humphreys	RAB
Joan Konrad	RAB
James Leach	RAB
Gretchen Lipow	Community member
Dot Lofstrom	Department of Toxic Substances Control (DTSC)
John McGuire	Shaw Environmental, Inc. (Shaw)
John McMillan	Shaw

Curtis Moss	BRAC Project Manager (PM)
Kurt Peterson	RAB
Peter Russell	Russell Resources/Alameda Reuse and Redevelopment Authority (ARRA)
Radhika Sreenivasan	St. George Chadux Corp.
Jean Sweeney	RAB
Jim Sweeney	RAB
Michael John Torrey	RAB
John West	San Francisco Regional Water Quality Control Board (Water Board)

The meeting agenda is provided in Attachment A.

MEETING SUMMARY

I. Approval of March RAB Meeting Minutes

Ms. Dale Smith called the meeting to order at 6:35 p.m. Ms. Smith asked for comments on the March 2009 RAB meeting minutes.

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

- Page 4 of 12, Action Item 7, after the fourth sentence, insert "Mr. Humphreys said the hot spot is an area where the Navy said it had punctured drums and allowed them to drain into the soil."

- Page 10 of 12, first paragraph, first sentence, "…that the soil was RAD contaminated" will be changed to "…that the soil was all RAD contaminated. He explained that this terminology was used in the trenching report logs."

- Page 10 of 12, first paragraph, last sentence, "…removal and samples should be collected at the beach" will be changed to "…scanning would not measure to a level needing removal and samples should be collected at the beach and under the rip-rap."

The following comment was provided by Mrs. Jean Sweeney (RAB):

- Page 10 of 12, fifth paragraph, Mrs. Sweeney requested clarification of the statements made in the paragraph. To assist clarification Ms. Dale Smith requested that the Navy review the tape recording to confirm the paragraph.

After a review of the meeting recording, the paragraph has been rewritten to read, "Mrs. Sweeney noted that SunCal has plans to build housing along the area and asked if it

would be cleaned up to residential levels. Ms. Lowman explained that there is either restricted or unrestricted release of property. 'Restricted release' implies that there is a remedy only on the top (example is 4 feet of soil cap) and needs to be approved by the State of California. Restricted release has institutional controls associated with it. She added that the area would be cleaned to residential standards in the top 1 foot. She said that the dose will be estimated to residential standards during dose and risk modeling."

The following comments were provided by Mr. John West (Water Board):

- Page 4 of 12, action item 7, last sentence, "Mr. West said they would not" was asked to be reviewed and re-written as per the recording. The sentence will be revised to "Mr. West said 'no' and added that the concentrations are low."

- Page 11 of 12, Section VI — BRAC Cleanup Team (BCT) update, third sentence, "Considering the time, Mr. West said he would not discuss the list and requested the BCT to review it," will be revised to "Considering the time, Mr. West provided the list and requested the RAB members to review it."

The following comment was provided by Dale Smith:

- Page 7 of 12, first paragraph, third sentence, revise the word "injecting" to "injection."

Ms. Konrad asked how items, such as the large submerged, unidentified object and radium^{226}, are added to the action item list. Mr. Brooks commented that the items could be added as an action item. Mr. Brooks also said that the Navy addresses environmental problems (such as contamination or imminent safety hazards) with environmental funding but the submerged block in the Seaplane Lagoon does not appear to be a safety hazard. The Navy has asked contractors to provide divers and try to identify the block. Ms. Smith commented that, depending on how deep it is, the unidentified block could be a hazard to navigation. Mr. Humphreys commented that a submerged or sunken barge was mentioned and could contain hazardous material; hence, the barge should be investigated. Mr. Brooks said that the Navy is investigating a barge in the northwestern corner of the Seaplane Lagoon in the area proposed for dredging. Ms. Smith asked whether there was contamination in the barge. Mr. Brooks replied that the sediments underneath the barge were contaminated, so the barge would be removed to provide access for removal by dredging.

II. Co-Chair Announcements

Ms. Smith distributed the documents "Documents and Correspondence" and "Technical Committee Meeting Minutes" (Attachment B-1).

Mr. Brooks said that the Navy is preparing a new and updated community relations plan. As part of that plan, the Navy is asking RAB members to volunteer to participate in interviews. Mrs. Sweeney, Mr. Humphreys, and Ms. Joan Konrad volunteered to be interviewed. Mr. Brooks said that the Navy has included one of Ms. Konrad's suggestions to include an overall map of the

contaminated areas. Ms. Smith asked Ms. Tommie-Jean Damrel if the volunteers from the USS Hornet had been contacted for interviews. Ms. Damrel said the interview was scheduled for April 3.

Mr. Brooks said the Navy is preparing the plan to remove the radiological material from the rip-rap wall and will determine whether additional areas need to be scanned on the base as a result of this discovery. The Navy is preparing a plan to scan the concrete that was removed from the debris pile.

Groundwater samples have been collected from Site 26 and will be available in May.

Mr. Brooks reviewed the action items.

Action Item 1: Mr. Brooks said that the requests for presentations are almost complete. Mr. Brooks also said that in May, the Navy would issue a Proposed Plan (PP) for Site 24.

Action Item 2: Completed; Mr. Brooks distributed figures on the Operable Unit (OU)-2B groundwater plume to the members who did not receive a copy in the mail.

Action Item 3: Completed.

Action Item 4: Pending; Mr. Brooks distributed the document tracking sheet for the RAB (Attachment B-2). Mr. Brooks will update the document after every RAB meeting.

Action Item 5: Completed.

Action Item 6: Completed.

Action Item 7: Mr. Brooks said that a RAB technical subcommittee meeting was held to discuss the RAB rules of operation and will be discussed later in the meeting. Mr. Brooks said he attended the meeting with Dale Smith, George Humphreys, Michael John Torrey, Dot Lofstrom, and Dave Cooper (EPA). Mr. Brooks distributed the edited version of the rules of operation and explained that the red underlines are the insertions and the boxes on the right column show the deletions in the document.

III. Review and Finalize Rules of Operation

Mr. Brooks distributed the rules of operation document (Attachment B-3) that needed to be reviewed. Mr. Humphreys suggested the formatting of the document be reviewed. Mr. Brooks agreed and said that he will make sure the formatting is correct. Mr. Brooks said that there were no edits on page 1. On page 2, Item 8, Mr. Humphreys requested to add “that” to the sentence “The RAB may request the Navy…” and to also insert the sentence, “the Navy may also suggest training opportunities.” Mrs. Sweeney asked what or who an independent facilitator was, as

indicated in the first paragraph on page 2. Ms. Dale Smith explained that an independent facilitator is a consultant appointed by the Navy when there is a lack of community cohesiveness related to cleanup issues. Ms. Konrad asked if there was a vice community co-chair. Ms. Smith responded that a vice community co-chair has not been elected in the last two elections. Mr. Brooks noted that "Navy's" should be capitalized in Item 7.

Ms. Smith said that the last two sentences of Item 5 should read, "The agenda will provide for a public, community member, and RAB comment period." Mr. Humphreys suggested rephrasing the sentence to read, "The agenda will provide for a comment period during which the public and the RAB will make their comments." Mr. Humphreys said that the RAB did not want the audience interjecting comments during the presentation period. Mr. Brooks confirmed that the audience would have an opportunity to provide their input.

Mr. Leach said that "only" should be inserted into the last full line of page 2 to read, "Usually, comments by the public and other community members will be made only during the public comment period." Ms. Smith said that the limitation on speaking only during the public comment period is not always followed and that certain members of the public are allowed to speak during the discussion. Mr. Peterson said that "public comment period" should be changed to "during this period."

Mr. Humphreys asked if Ms. Smith wanted to discuss the technical subcommittee meeting that is mentioned on page 3, first paragraph, Item 9. Ms. Smith said that initially the technical committee meeting would be included; however, a few members felt the technical committee meetings were not necessary. Ms. Smith indicated that the meetings are beneficial, but the Navy should not feel obligated to hold the meetings on a regular monthly basis if they are not needed. Ms. Smith commented that several members of the public wanted the issue on the technical subcommittee meeting brought before the RAB. Mr. Hoffman said that the technical committee meetings began so that anyone interested in the technical design could meet with the technical staff from the Navy and not concern the RAB members. Ms. Smith agreed and indicated that it was the RAB members who suggested not having the technical meetings, and not the Navy or the regulators. Mr. Humphreys said that he wanted to have the technical committee meetings, and he wanted the issues discussed at the technical meetings to be reported at the RAB meetings. Mr. Humphreys indicated that a particular paragraph in the rules of operation provides opportunity for the RAB to conduct focus group meetings and for the Navy to participate. Mr. Brooks said that it is not the Navy's position to write the synopsis of the technical committee meeting. Ms. Smith indicated that Mr. Humphreys was interested in inserting minutes from the technical committee meeting into the administrative record and distributing them to the RAB members. Ms. Smith said that she would type her notes from the meeting so there would be a record of the discussion.

Ms. Konrad asked how often the technical committee meetings were held and how many had occurred. Mr. Humphreys said that there have been four technical subcommittee meetings to date. Mr. Humphreys indicated that he had written the minutes of the first meeting, but no minutes were prepared for the other meetings. Ms. Smith said that her notes from the technical committee meetings would be distributed, but they should not be considered an official record.

However, Ms. Smith said that the RAB members wanted the minutes to be included in the administrative record.

Mr. Peterson asked if the meeting minutes could be added to the rules of operation. Ms. Konrad responded that a secretary could be elected, and the secretary would be responsible for obtaining approval of the minutes. Ms. Smith did not think electing a secretary and spending the RAB meeting time on approving the minutes was necessary or appropriate. Ms. Konrad suggested that the purpose of the meetings is to inform the board members and recommended writing the minutes but not approving them through a formal procedure. Mr. Peterson agreed that the approvals would not need to be formal. Mr. Sweeney suggested sending an e-mail of the minutes to the meeting attendees, who could contribute their inputs, and then the e-mail with the collated inputs could be distributed at the meeting. Mr. Hoffman thought the minutes should indicate a meeting was held, who attended, and what subjects were discussed. Ms. Konrad said that she agreed with Mr. Sweeney's idea of an e-mail. Mr. Humphreys thought that the notes should be inserted as an attachment to the minutes for the RAB meeting. Mrs. Sweeney said that the time constraints would be resolved if the RAB members reviewed the notes in an e-mail. Ms. Smith said that if the minutes were prepared in an e-mail and it was acceptable, then she would print and distribute a final version. Mr. Humphreys indicated that the members could provide comments during the comment period at the RAB meeting.

Ms. Lofstrom asked why the RAB members wanted the descriptive notes of the technical focus group to be part of the administrative record. Ms. Smith said that there is opposition to nano zero-valent iron (nZVI) by the RAB members and the minutes are an effective way of expressing opposition.

Ms. Cook suggested that the RAB members submit a letter to the Navy on issues of concern from the technical committee meeting that can become part of the administrative record. Mr. Hoffman indicated that the technical committee meeting is a forum for the RAB members to discuss the array of monitoring wells at the site, review the hydraulic conductivity tests, and verify that the design appears to be appropriate with technical staff. Mr. Humphreys indicated there was no need for documentation because this type of technical information is not wanted in a RAB meeting, it would lead to disagreements, and the RAB would have to decide on the outcome. Mr. Humphreys said that if there is serious disagreement with Navy plans, it would come up in the RAB meeting and not the technical committee meeting.

Mr. Brooks said that providing written comments on draft work plans and reports is the best way to influence the direction of a project. Mr. Brooks explained that EPA, DTSC, the Water Board, and the Department of Public Health (DPH) submit written comments to the Navy to suggest improvements, ask for clarification, or to explain oppositions to specific parts of the planning documents or reports. The Navy then evaluates each comment in the responses to comments section at the end of the draft final planning document or report. The responses to comments are formal written responses and are included in the administrative record. Mr. Brooks said that this response to comments is the formal process used with the BCT. Ms. Smith asked if the Navy includes the RAB comments in the response to comments. Mr. Brooks said that the Navy if the

Navy receives written comments from the RAB, they are addressed in the same manner as BCT comments.

Ms. Smith asked if there were any changes to the language in Section 9. Mr. Hoffman responded that the language was sufficiently broad.

Mr. Curtis Moss referred to the discussion on ZVI. Mr. Moss said that the Navy had requested a volunteer to be a representative and disseminate information from the meeting to the RAB. Mr. Brooks said that formal written comments should be submitted on the planning documents if formal written responses are desired. He noted that the RAB comments are evaluated seriously, recorded in writing, and addressed in the reports or planning documents. Mr. Humphreys said that only the RAB community co-chair sees all the documents, and the other RAB members receive a presentation at a RAB meeting where comments can be made and where they should be taken into account. Mr. Brooks reminded the RAB that all current reports are in the Information Repository and available for checkout.

Ms. Smith asked if the RAB wanted to continue the technical committee meetings as needed, but not necessarily on a monthly basis, so that members can meet in-depth with technical staff that has knowledge of the issues. Mr. Leach said that the way the sentence is written leaves the issue open and that a meeting can be called. Mrs. Sweeney said that she finds the technical meetings informative. Ms. Konrad asked how the RAB members will be informed of the focus group meetings. Ms. Smith said the members will be informed through e-mail. Mr. Humphreys indicated that if an issue comes up as a result of the meeting, then a letter should be written if a specific response is needed from the Navy. Ms. Smith said that a separate meeting can be called to draft the letter to the Navy. Mr. Brooks said that the RAB can write general or specific comments to the Navy. Mr. Hoffman moved to continue holding the technical focus group meetings, reserve the third Thursday of the month for the meetings, and hold them as needed. The motion was seconded and approved. Mr. Hoffman suggested that the Navy provide a technical subcommittee meeting minute taker. Mr. Brooks responded that the RAB subcommittee chair is responsible for providing the meeting minutes.

Ms. Smith asked for any other comments on page 3. Mr. Humphreys commented that there was a typographical error on Item 9, second sentence, “A focus group can be suggested b…” and it should read “A focus group can be suggested by….”

Ms. Cook commented on Item 9, last sentence, “If deemed appropriate by the focus group, the Navy, regulatory agencies, city, or other participants may be invited to attend.” Ms. Cook asked whether the regulatory members cannot attend a meeting unless invited. Mr. Humphreys explained that the regulator would need to be invited to a focus group meeting, which is different from a technical sub-committee meeting, where the regulators are welcome. He added that the RAB could invite experts to the meeting, as appropriate. Ms. Smith commented that the technical meetings are intended to encompass as many staff with technical knowledge as possible. Mr. Peter Russell asked to have ARRA/city added to the last sentence on Item 9. Ms. Konrad asked about the quorum for the RAB meetings. Mr. Brooks said that the rules state that

a quorum is the majority of those in attendance; therefore, if three RAB members are present, then two is a quorum.

Ms. Lofstrom said that she remembered EPA had indicated that there was no need to include the definition of a quorum because the RAB does not normally vote on issues and that a quorum is only required for the RAB to vote on an issue. Mr. West agreed.

Ms. Konrad said that the RAB meetings must be open to the public and asked how this requirement was addressed. Mr. Brooks replied that the public participation requirement is referenced in Items 2 and 3. Mr. Humphreys noted that it is mentioned under item D6, which discusses nominations for the co-chair. Ms Konrad said these rules were last updated when the number of members in this group was diminishing, and there was no fixed number of members in the RAB needed for a quorum. Hence, it was decided that the majority of those in attendance were a quorum. She added that the members who did not attend the meeting for a certain amount of time would not be regarded as members.

Ms. Smith pointed out that a quorum is a majority of the people in attendance at the given meeting. Ms. Konrad asked how the public is invited. Ms. Smith said that the Navy invites the public. Mr. Brooks said that the meetings are announced in the Alameda Journal and that meeting minutes are on the BRAC website. Mr. Humphreys suggested adding a sentence in the RAB structure that a quorum shall constitute a majority of the RAB members present. Ms. Smith noted that the RAB had decided not to include this language. Mr. Hoffman said that a meeting without the Navy's presence is a focus group and not a RAB meeting.

Ms Smith asked if there were any other comments on pages 4 or 5. Ms. Konrad found two typographical errors on page 4, Item 3, first sentence, correct the sentence to read "attend regular meetings" and on Item 6, last sentence, correct the sentence to read "Nominations are…"

Ms. Lofstrom commented that many community members were interested in becoming RAB members; as a result, the number of members should not be restricted to 10, as indicated on page 3. Mr. Peterson agreed the number should be removed and the word "voluntary" should be added. Mr. Hoffman said that the Department of Defense (DOD) suggests that the RAB membership be no larger than 30. Ms. Smith moved that the RAB decided to change the language in the first and second sentences on page 3, D. Membership, Item 1. Motion carried to have the sentence read "The RAB community membership is voluntary and shall serve without compensation."

Ms. Smith asked for comments on page 5. Ms. Konrad commented on page 5, Section G. Effective dated and Amendments, Item 1, the date should be changed from January 2005 to the date the document is signed, which is May 7, 2009. Mr. Brooks said that the date in Item H, last sentence, is quoting the guidance, which was put into effect on May 12, 2006, and so that statement will remain as is. Ms. Smith said that the sentence should read "The effective date of these Rules of Operation shall be May 7, 2009 –subject to prior approval. These Rules of Operation shall replace the RAB Charter dated January 6, 2005." Mr. Humphreys commented

that the signature line for the vice community co-chair on page 5 should remain, although the name has been removed.

IV. RAB Involvement in Restoration Process

Mr. Hoffman indicated that the following comments are his personal opinion and not necessarily the opinion of the other RAB members. Mr. Hoffman said that he has been feeling increasingly frustrated over the Navy and EPA's marginalization of comments that have been provided by the RAB. Mr. Hoffman indicated that the ZVI injection at the oil-water separator (OWS) was discussed at the January technical subcommittee meeting. Mr. Hoffman was disappointed that no technical staff involved with the design attended the meeting. Mr. Brooks commented that he was planning to attend as the technical representative but was unable to attend the meeting due to a funeral in Washington. Mr. Hoffman said that he wanted the consulting design engineers to attend the meeting. Mr. Brooks replied that his experience with 3 previous ZVI projects qualified him to speak in detail on the technology and its application. Mr. Hoffman commented that the OWS was clearly the source of trichloroethylene (TCE) contamination, and the contour maps provided by the Navy indicated a bullseye around the OWS. As the technical meeting proceeded, Mr. Hoffman said he asked if the purpose of the study was to use ZVI or to clean up the plume. Mr. Hoffman said that Mr. Moss said that it was to clean up the plume. Note from Navy Co-chair: the purpose of the study is to evaluate how well ZVI can clean up the plume. Mr. Hoffman suggested that the best way to clean up the plume would be to extract from the center of the plume, inject the ZVI around the outside of the plume, and pump. Mr. Hoffman commented that the advantages to pumping include moving the ZVI into the highest concentration in the plume because the opportunity to pump out the mass exists. Mr. Hoffman said that Mr. Moss characterized that method as "pump and treat," and that the Navy policy opposes "pump and treat." Mr. Humphreys confirmed that he heard Mr. Moss say that the Navy has had a policy against pump-and-treat for 15 years. Mr. Hoffman said that he had heard rumors on this issue, but it was the first time he heard the Navy confirm the policy. Note from Navy Co-chair: the Navy has a general guidance against using groundwater pumping to remove dissolved contaminants unless there are extenuating circumstances. There is no policy that prohibits "pump and treat".

Mr. Hoffman said that pump-and-treat systems have been involved in removing most of the jet fuel at Alameda Point and therefore the Navy does not have a firm rule against pump and treat. He indicated that he was talking about not just pump and treat but a combination of technologies that would help ZVI remove the contamination. Mr. Hoffman said that the hydraulics in the subsurface should be understood and controlled by evaluating injection, extraction, and hydraulic conductivity. Mr. Hoffman indicated that the hydraulics should be controlled or the project would fail. Mr. Hoffman said that he approached Ms. Cook about the Navy's policy and she said that that EPA agrees with the Navy on the point that "pump and treat" does not work, and it has been proven to not work at the Lawrence Livermore National Laboratory. Mr. Hoffman disagreed with Ms. Cook and said that pump and treat is the recommended alternative at Livermore, has stopped transport of contaminants across the boundary of the site, and has cleaned up large acreages of the site to below maximum contaminant levels (MCL) or in some areas to non-detect. He explained that pump and treat was not currently working at the laboratory because the Department of Energy had experienced a budget shortfall and the pump-

and-treat systems were shut down. Mr. Hoffman said that EPA has stipulated penalties against the laboratory, that the pump-and-treat system, which had been effective, was not working, and the laboratory was fined and ordered to re-start the pump-and-treat systems. Therefore, "non-working" meant "not in operation," so in effect, Mr. Moss's comments that "we can't even discuss pump and treat because of the Navy policy" and Ms. Cook's comments about "pump and treat not working," has cut off any further discussion about using multiple technologies.

Mr. Hoffman indicated that he was concerned that Site 26 was not properly characterized before remediation began. He indicated that before the remediation project began, he suggested the Navy further characterize the site. He added that the Navy had a contracting problem and could not continue with characterization. Therefore, the failure to properly characterize Site 26 resulted in failure of the remedy. The next round of the remediation at Site 26 involved a combination of technologies, which included hydraulic control and pumping.

Mr. Hoffman said that, 10 years ago, it was known that a dense nonaqueous phase liquid (DNAPL) plume existed at Site 1 and that it was 15 meters from the San Francisco Bay. The University of Waterloo left the site after the conclusion of its study and no cleanup occurred at the site for 10 years. Mr. Hoffman said that Mr. Brooks indicated that the project is starting up again. Mr. Hoffman stated that he has concerns about the level of involvement of the regulators during the 10 years the project was down, and concerns about how the Navy planned to control the plume on the shores of the bay. Mr. Hoffman indicated that he received no response to his concerns.

Mr. Hoffman advised the Navy and regulators not to marginalize the comments from the RAB members, as the RAB is made up of highly skilled technical people. Mr. Hoffman said that the RAB members do not have a hidden agenda, only a concern for the environment of Alameda and a vision that the Alameda Naval Air Base is cleaned up as quickly and efficiently as possible. Mr. Hoffman indicated that the RAB does not receive input on the discussion at the BCT meetings. Mr. Hoffman is also concerned that the questions that are asked are answered and that the RAB members receive insight into what is occurring at the BCT meetings. In closing, Mr. Hoffman recommended that a RAB representative be present at the monthly BCT meeting.

Ms. Smith commented that the Treasure Island RAB has tried for 15 years to obtain access to BCT meeting minutes. She also indicated that the Treasure Island RAB members were remediation engineers who wanted to attend the BCT meetings and they were not allowed to attend. In addition, meeting minutes for the BCT meetings were provided 2 years after the meeting was held. Ms. Smith explained that David Risk (DTSC) joined the BCT and started providing the RAB members with detailed updates on the BCT meetings.

Ms. Lofstrom said the regulators have been discussing the best ways to provide information to the RAB. She noted that while the BCT meeting minutes are part of the administrative record, she could post the BCT meeting minutes on EnviroStor to make them more accessible. Ms. Lofstrom explained that there would be a delay of a few months for the final minutes to be posted.

Ms. Smith asked if a RAB member could attend the BCT meeting.

Mr. Brooks said that there is not a mechanism for the public to be involved in the BCT meetings. He mentioned the Final Rule for RABs, which were just reviewed, provide the Department of Defense (DoD) method for involving the public, which does not include BCT meetings. The BCT and RAB meetings are separate; one meeting is for the public to be involved, and the other is for the regulators and the Navy.

Mr. Peterson indicated that he agreed with Ms. Lofstrom's idea of posting the minutes on EnviroStor.

Mr. Leach commented to Mr. Hoffman that, in regard to the plume, there were no injection wells at the perimeter that would drive the contaminants toward the center of the plume. He was also unaware of the Navy's policy against pump and treat. Mr. Leach said that he thought hydraulically pushing the contaminant from the ground and treating it and then introducing clean water and pushing it hydraulically toward the contaminant was the best mode of action. He also noted that one problem with treating in situ is that some of the contaminants cannot be washed away toward the center of the extraction. However, the counter-argument is that if the contaminants do not move hydraulically, then they should be left in place. Mr. Leach said that he had used pump and treat.

Mr. Hoffman said that he understands the Navy is committed to in situ treatment, but he does not believe the in situ treatment works if the hydraulic system is not controlled. Mr. Brooks noted that the Navy ensured hydraulic control after the first injection where movement in the plume was observed. Mr. Hoffman indicated that he was pleased to see the Navy's response for Site 26.

Mr. West commented that he thinks the technical committee meetings are valuable because individuals can gather outside of the RAB meetings and review the approaches for the cleanup and discuss the technical issues. Mr. West encouraged the continuation of technical committee meetings on an as needed basis.

Mrs. Sweeney commented that the RAB members do not fully understand actions at Fleet and Industrial Supply Center Oakland, Alameda /Alameda Annex (FISCA), because the RAB was dissolved for that installation. Mrs. Sweeney asked whether there will be a RAB if the Navy sells the land to a developer at Alameda Point. She commented that the RAB is receiving less and less information about FISCA, and there is a possibility the RAB will not receive any information if the land is sold to a developer. Mrs. Sweeney indicated that she read the initiative, the new Chapter 11, where SunCal wants the public to adopt the general plan and plans to level Alameda Point. She indicated that SunCal is making statements like, "buildings may increase the traffic in Alameda but the traffic problem is a regional problem" and "the historical building can stay if it is feasible, and they plan to build a five-story apartment on the edge of the lagoon". She added that SunCal engineers discussed the potential for soil spreading in an earthquake and that they need to stabilize the land by installing drains underneath the buildings. Mrs. Sweeney said her concern that the public would have no voice on what the developers plan if the RAB is

dissolved. Mr. Brooks confirmed that as long as the Navy is involved in the cleanup process at Alameda Point, there will be a need for a RAB.

Ms. Lofstrom said that no actions have occurred at FISCA until recently. The most recent activity was approval of the remedial action plan. She indicated that the Navy was not involved because the developer was working with the city and DTSC. Ms. Lofstrom noted that there was no work at FISCA, so the RAB was not updated. Ms. Lofstrom said that there is nothing that the RAB and Navy can address, because FISCA is not a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site.

Mr. Peterson suggested moving the BCT updates higher on the agenda. Mr. Hoffman said that the RAB can be informed of the outcome and move to the next topic if issues that have already been addressed and resolved at the BCT meetings arise at the RAB meetings.

Ms. Cook commented that when the regulators attend the RAB meetings they will answer any questions that the RAB asks or present any information requested. She also said that the regulators do not want to insert themselves into the RAB meeting. Mr. Hoffman said that if the regulators have agreed to the presentations, then they should explain to the RAB the reasoning behind them. Ms. Smith asked for the reason for using ZVI.

Ms. Smith said that she understands that EPA is adamantly opposed to the ZVI approach. Ms Cook said that EPA is not adamantly opposed, but she thinks it is not appropriate to firmly oppose it until more is known about the process. Ms. Cook also said that EPA's technical experts do not support opposition at this point. Ms. Lofstrom said that the DTSC engineers support the new technology. Ms. Smith said that this new technology is raising questions on biodegradation as a result of its use.

Mr. West said that the better vehicle is the technical subcommittee with a format to work through the pros and cons of the various approaches. Ms. Lofstrom agreed. Mr. Peterson commented that the RAB members are looking for more information and updates at any level.

Ms. Smith distributed all her notes and comments on the two technical meetings from January and February (Attachment B-4).

V. BCT Update

Ms. Lofstrom said the March BCT meeting was an all-day meeting; the discussion concerned the remedial design for Site 28, Todd Shipyard. The BCT reviewed previous remedial designs that were evaluated and incorporated lessons learned into this new remedial design. In the basewide groundwater monitoring program, the BCT is considering optimization and an overview of the groundwater monitoring wells. She indicated that two hydrogeologists working as consultants to EPA and DTSC are analyzing the wells. They are considering wells that need to be dropped or added into the program and whether some wells need quarterly or annual sampling. Site 2 and Site 24 PP were also reviewed during the BCT meeting. Ms. Lofstrom noted that DPH had a

concern with the Site 2 PP and requested unrestricted use. DPH commented that it could not accept the PP because the plan does not allow for unrestricted use, which is required for transfer to a non-Federal entity. Even though Site 2 is planned to be transferred to the Department of Veterans Affairs, there is no mechanism presented to address an administrative process if an alternative property transfer were to occur in the future. The document has been sent back to the Navy and the Navy is reviewing the DPH comments.

The last agenda item was Public Benefit Conveyance 1 (PBC 1), the area containing the gym, swimming pool, and skate parks. This area is being conveyed to the city and has been cleaned up. Ms. Lofstrom noted that no other contamination was found in the area except petroleum hydrocarbons. She added that the Navy's contention is that the petroleum hydrocarbons are not a CERCLA substance within the CERCLA program and DTSC has agreed. Ms. Lofstrom said that DTSC has agreed to the transfer and the Water Board will enter into a restriction with the Navy; that is; restrict the land (1) to make sure that there is no interference with the monitoring wells, and (2) to ensure DTSC access to the site. Ms. Lofstrom said that the PBC 1 transfer should be finalized within the next few months and it will be the first land transferred, which represents a move forward.

Ms. Konrad asked how unrestricted use for recreation is different from unrestricted use for residential use. Ms. Cook said that recreational use is itself a restriction. Ms. Lofstrom said that there is a basic disagreement between DPH and DTSC on the site being cleaned up for unrestricted use. She added that it is an administrative rather than a technical argument. Ms. Lofstrom said that tidal trust land is involved and thus unrestricted use is not possible. She said that this comment and the Navy's response will be provided in the Record of Decision (ROD).

VI. Community and RAB Comment Period

Ms. Graber said that she heard at the ARRA meeting that the Navy sent a letter to the City Council with some concerns about the SunCal developer because of its track record and its ability to be held accountable. She thought it was an unusual letter from the Navy to the City Council. Ms. Graber also said that ArcEcology participated in a lawsuit against East Housing, now called BayPort, and was objecting to the condition of the land for housing. She said that she was on the negotiating committee and there is an out of court settlement to guarantee 25 percent of the area for the housing projects. While reviewing the layout, Ms. Graber noted her concern regarding the plume where SunCal is planning to build a school.

Mr. Biggs wanted to provide his comments as a community member to the RAB. He said that the RAB is an "advisory board" and the Navy and the regulators are not obligated to accept the RAB's comments. He indicated that the Alameda RAB has more influence than other RABs. Mr. Biggs said that he has been involved with Alameda Point for 5 years and represented the homeless families at Alameda. He said that he has brought his concerns to the RAB members about some of the plans and he has not felt advocacy from the community members of the RAB. Mr. Biggs noted that he has received advocacy from EPA and DTSC on every case. He said that EPA provided training on the CERCLA process, and also recommended that all community members take the training. Ms. Konrad said that she does not remember any such information

being distributed to the RAB members. Mr. Biggs said that he had requested additional testing at Site 35 but the RAB did not endorse this request and EPA helped fulfill the request. Mr. Humphreys noted that when Ms. Sweeney had advocated for the collaborative when there were reports of dead squirrels and birds and health problems in the Bessie Coleman Center. He noted that there were nearby piles of contaminated soil at the former Navy commissary

In connection with the recent fire at the hospital building at the FISCA Annex, Mr. Humphreys indicated that the burned building may have contained lead-based paint and asbestos. Mr. Humphreys also noted that there was a fire several years ago at the building adjacent to the Alameda collaborative building and inquired whether the soil there was tested for lead and asbestos. Mr. Humphreys suggested that soil samples should be collected at the area to determine whether asbestos is present. Ms. Lofstrom noted that DTSC is evaluating potential arsenic, lead, dioxin, and polycyclic aromatic hydrocarbons (PAH) contamination at the area. Mr. Humphreys noted that two fires broke out and that a community member had complained about ash falling out of the sky. Ms. Konrad asked who owned the property. Mr. Brooks replied the city owns the property.

Mr. Hoffman requested a contour map for the Site 1 DNAPL plume. Mr. Brooks indicated that the Site 1 groundwater plume is being monitored as part of the basewide groundwater monitoring program. Mr. Hoffman said that there was no monitoring at the DNAPL plume. Mr. Brooks said that a new evaluation of the DNAPL plume planned as part of the proposed Site 1 work has not been completed. Evaluation of the DNAPL plume is part of the plan for preliminary design at Site 1. He indicated that the preliminary design would also include the trenching and soil borings. Ms. Smith asked if the Navy had tested for seismic issues. Mr. Brooks said that he does not remember seismic testing but some of the soil samples are tested for geotechnical parameters, the results of which are used in the seismic modeling.

Ms. Davis said that SunCal discussed its development plan during the City Council meeting. She asked how the SunCal development affects the RAB, BCT, and the Navy. Mr. Hoffman said that SunCal said it has plans to invest a lot of money to clean up Alameda point and thinks it was advocating for citizens support. Ms. Davis said that cleanup should be separate from development. Mr. Brooks explained that the cleanup process is separate from the development process and is related only to ensure that the cleanup goals meet the planned reuse objectives. Ms. Konrad asked if the new proposed development plan will be negotiated. Mr. Brooks said that the Navy does not negotiate development plans with the developer. Development plans are the responsibility of the developer. Ms. Graber said that the areas of reuse in the SunCal development have changed from the Navy's preliminary design. If SunCal wants to clean up to residential use, then it will be financed by the city. Mr. Brooks agreed, and said for example, if an area has a planned industrial reuse, and the developer wants to develop as residential, then any additional cleanup necessary (beyond industrial goals) would be the responsibility of the developer or the city.

Mr. Hoffman asked the Navy to provide a one-sentence update on important sites. Mr. Brooks asked the RAB members to specify the sites. The RAB listed Sites 1, 2, 17, 26, 32, 32, 34, 35,

OU-2A, OU-2B, OU-2C, OU-5 (Bayport), Coast Guard housing, and the Site 25 groundwater plume.

Mr. Brooks noted the next RAB meeting will be held on May 7, 2009.

VII. Meeting Adjournment

The meeting was adjourned at 9:30 p.m.

Action Items

Action Items:	Action Item Update:
1. Request for Presentations: a. OU-5/FISCA IR02 groundwater cleanup b. Data gap sampling results of OU- 2A and OU- 2B c. Site 2 FS d. OU-2C e. Summary on Site 26 f. Bayport Sewer systems and change in the plumes over time.	1. Requests a, b, c, and e are completed; d and f are pending.
2. Mr. Moss will copy the OU-2B plume figures to CDs and mail them to Mr. Humphreys and Mr. Peterson.	2. Completed.
3. The Navy will provide a document tracking sheet for Alameda every quarter.	3. Completed.
4. RAB Technical Subcommittee meeting will discuss the government rules of operation document.	4. Completed.
5. The Navy will review the recording for the March RAB meeting correction.	5. New
6. Mr. Brooks will provide information on the large submerged, unidentified object and the radium-226 at the top of the Site 17 riprap.	6. New

ATTACHMENT A

NAVAL AIR STATION ALAMEDA
RESTORATION ADVISORY BOARD MEETING AGENDA

April 2, 2009

(1 page)

RESTORATION ADVISORY BOARD

NAVAL AIR STATION, ALAMEDA

AGENDA

APRIL 2, 2009, 6:30 PM

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

TIME	SUBJECT	PRESENTER
6:30 - 6:45	Approval of Minutes	Ms. Dale Smith
6:45 - 7:00	Co-Chair Announcements	Co-Chairs
7:00 – 7:45	Review and Finalize Rules of Operation	RAB
7:45 – 8:00	RAB Involvement in Restoration Process	Fred Hoffman
8:00 – 8:15	BCT Update	Dot Lofstrom
8:15 – 8:30	Community & RAB Comment Period	Community & RAB
8:30	RAB Meeting Adjournment	

ATTACHMENT B

NAVAL AIR STATION ALAMEDA
RESTORATION ADVISORY BOARD MEETING HANDOUT MATERIALS

B-1 List of reports and correspondence received during February and March 2009. Distributed by Dale Smith, RAB Community Co-Chair (1 page)

B-2 Upcoming documents for RAB review. Distributed by Pat Brooks, Navy Co-Chair (1 page)

B-3 RAB Rules of Operation. Distributed by Pat Brooks, RAB Navy Co-Chair (6 pages)

B-4 RAB technical subcommittee meeting notes from January and February 2009. Distributed by Dale Smith, RAB Community Co-Chair (3 pages)

ATTACHMENT B-1

LIST OF REPORTS AND CORRESPONDENCE RECEIVED DURING FEBRUARY and MARCH 2009

(1 page)

Restoration Advisory Board

Documents and Correspondence

Received February and March 2009

Documents

1. January 31, 2009 "Final Work Plan for Closure of Aboveground Storage Tanks at Alameda Point"

2. February 25, 2009, "Drafter Technical Memorandum Data Gap Investigation Results, Installation Restoration Sites 2, 4, 34 and 35, Alameda Point, Alameda, CA"

3. March 6, 2009 "Appendix I, Land Use Controls – Insert for the Final Remedial Design/Remedial Action Work Plan Installation Restoration Site 26, Alameda Point, Alameda, CA"

4. March 17, 2009 "Appendix H, Land Use Controls – Insert for the Final Remedial Design/Remedial Action Work Plan Installation Restoration site 14, Alameda Point, Alameda, CA", prepared by SulTech for BRAC Program Management Office West

5. March 17, 2009 "Technical Memoranda for Fourth Quarter 2008, CAA3 and CAA C, Alameda Point, Alameda, CA" prepared by Shaw Environmental for BRAC Program Management Office West

Correspondence

1. February 10, 2009 "Draft Remedial Design/Remedial Action Plan, IR Site 27, Alameda Point" letter from Anna-Marie Cook to Mr. George Patrick Brooks, BRAC Program Management Office West

2. March 17, 2009 "Review of the Draft Work Plan for Indoor Air, Outdoor Air and Soil Gas Sampling, Alameda Point, Alameda, CA", letter and comments from Dot Lofstrom, PG, DTSC to George Patrick Brooks, BRAC Management Office West

3. March 19, 2009, "Draft Work Plan for Indoor Air, Outdoor Air and Soil Gas Sampling – Buildings 163 and 163A, Alameda Point, letter and comments from Anna-Marie Cook US EPA to George Patrick Brooks, BRAC Management Office West

ATTACHMENT B-2

UPCOMING DOCUMENTS FOR RAB REVIEW

(1 page)

Upcoming Documents for RAB Review

April 2009

Size	Document		Estimated Transmittal Date
Large	OU-2C	Draft Feasibility Study	April
Large	Sites 1, 2, and 32	Draft Time Critical Removal Action Closeout Report	April
Small	Sites 25 & 30	Draft Lead Based Paint Work Plan and SAP	April
Large	OU-2A/2B	Final Data Gaps Report	April
Large	Site 27	Draft Final Remedial Design/Remedial Action Work Plan	April
Large	Site 28	Draft Remedial Design/Remedial Action Work Plan	April
Large	Basewide	Draft Petroleum Summary Report	April
Small	Basewide	Draft TPH Strategy Update	April
Small	Site 24	Proposed Plan	May
Large	Site 1	Draft Preliminary Design Sampling and Analysis Plan	May
Large	OU-1	Draft Final Remedial Design/Remedial Action Work Plan	May
Large	Site 2	Proposed Plan	June
Large	OU-2B	Revised Draft Feasibility Study	June

ATTACHMENT B-3

RAB RULES OF OPERATIONS

(6 pages)

January 6, 2005

Alameda Point Restoration Advisory Board Rules of Operation

A. Background

1. The Navy is responsible for implementing the Installation Restoration Program at the former Naval Air Station, Alameda, now known as Alameda Point.

2. The Restoration Advisory Board (RAB) Rules of Operation, herein referred to as the "Rules of Operation", are entered into by the following parties; Base Realignment and Closure (BRAC) Program Management Office West (Navy); U.S. Environmental Protection Agency (USEPA), Region 9; California Department of Toxic Substances Control (DTSC), Region 4; California Regional Water Quality Control Board, (RWQCB), and RAB community co-chair.

3. The basis and authority for these Rules of Operation are contained in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986, particularly Sections 120 (a), 120 (f), and 10U.S.C. 2705, enacted by Section 211 of SARA.

4. The RAB has a Mission Statement, originally authored in 1996, which is attached to these Rules.

B. Purpose and Scope

1. The purpose of the Restoration Advisory Board (RAB) is to review, comment, and make recommendations to the Base Realignment and Closure (BRAC) Cleanup Team (BCT on matters pertaining to the environmental restoration of Alameda Point to facilitate the cleanup and conversion of Alameda Point in a timely manner. In addition, the RB is the primary public forum for interest groups and regulatory agencies.

2. The Navy will provide the RAB with information and documentation that is relevant to these activities. The RAB shall be conducted in accordance with all applicable DOD and Environmental Protection Agency (EPA) guidelines.

3. The Navy developed a Community Relations Plan that outlines the details of the community involvement program. The RAB supplements the community involvement effort.

4. Each member of the RAB is encouraged to provide comments, suggestions, and recommendations and participate in open discussion about all environmental issues related to the cleanup of Alameda Point.

C. RAB Structure

1. The RAB shall be co-chaired by a Navy co-chair and a community co-chair (or Vice community co-chair). The responsibility of presiding over each meeting will be the joint responsibility of the Navy and RAB community co-chairs. In the instance that the co-chairs are unable to effectively run the meeting, the Navy will provide an independent facilitator.

2. The RAB community membership is responsible for terminating a community co-chair who is ineffective or detrimental to the progress of the RAB. Community co-chair removal is determined by a majority vote of the RAB community members present at the meeting for which it was placed on the agenda.

3. The RAB will meet once a month at a time, day and location acceptable to the RAB. More frequent meetings may be held if deemed necessary by the RAB. Schedule changes must be placed on the agenda and passed by a majority vote of the RAB community members, the Navy, City Representatives and the Regulators, affected by the change, who are present at the meeting for which it was placed on the agenda.

4. All meetings of the RAB shall be open public, and all persons shall be permitted to attend any meeting of the RAB or its subcommittees, including special meetings.

5. The Navy co-chair will prepare the draft RAB agenda after consultation with the community co-chair. The co-chairs will coordinate agenda items to permit mailing of the agenda not later than seven days prior to the RAB meeting. The Navy will provide written notification to all RAB members of the upcoming agenda, date, time, and place of RAB meetings. The agenda will provide for a public and RAB comment period. Usually, comments by the public and other community members will be made during the public comment period.

Deleted: Agenda items for the RAB meetings will be submitted to the co-chairs.

6. The RAB may vote to extend the agenda times at the meeting. However, the maximum length of a RAB meeting will not exceed three hours unless previously specified in the agenda as described in C.5 above. Agenda items that are incomplete will automatically be added to the next meeting's agenda or, if necessary, another future meeting at the discretion of the co-chairs.

7. The Navy co-chair shall be responsible for recording and disseminating meeting minutes. Draft copies of the meeting minutes shall be supplied to the members and the ARRA/City Council approximately seven days before the next meeting for correction at the next scheduled meeting. The Navy co-chair shall collect a written list of attendees at each meeting, which will be sent to all RAB members in the monthly agenda packet and will be made available for public review in the navy's Information Repository (listed below).

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8. The Navy will arrange for a timely presentation of current documents at RAB meetings for review and comment. The RAB may request the Navy provide training to increase the RAB's understanding of environmental restoration issues and processes.

9. Where necessary, special focus groups of the RAB may be called to review and comment on key documents. A focus group can be suggested b RAB members, and membership to the group will be by self-nomination. The RAB or focus groups should review, discuss and provide comments on a wide variety of technical documents and plans. Focus meetings will typically be held outside of the normal RAB meeting times at a location and time agreed upon by the focus group. Normally, focus groups will be comprised of community and institutional RAB members. If deemed appropriate by the focus group, the Navy, regulatory agencies, City, or other participants may be invited to attend.

Deleted: Each focus group will have a chair that is a member of RAB.

10. Written comments from RAB members, RAB focus groups, and TAPP (Technical Assistance for Public Participation) contractors will be submitted directly to the Navy co-chair, which will provide them to the BCT. Verbal discussion is to be promoted as much as possible. To facilitate communication, individual RAB members may comment directly to the Navy, if they prefer. Any written response by the Navy shall also be placed in the Information Repository.

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11. The RAB may request a written response to written comments.

12. The Navy has established an information repository for public documents related to environmental restoration activities at Alameda Point and will maintain the repository. RAB members are expected to report to the Navy co-chair if the documents appear out of order or out of date. The RAB section should include minutes of RAB Meetings, member and BCT comments/responses, an administrative record index, these rules of operation, any supplemental RAB procedures, as well as all relevant technical publications arising from the environmental restoration activities. The repository is located at:

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City Hall West Annex
950 West Mall Square
Alameda, CA 94501
Rooms 240 and 241
(415) 743-4713

Deleted: Alameda Main Library
Deleted: 2200-A Central Ave.
Deleted: Alameda, CA 94501
Deleted: (510) 747-7777

D. Membership

1. RAB community membership is approximately 10 members. The community membership shall serve without compensation. The RAB should consist of the following:
   a. Designated representatives of the Navy, Federal and State Regulatory agencies.
   b. Designated representatives of the ARRA/Alameda City Council, and Alameda Unified School District.
   c. Community members including representatives of environmental organizations, local businesses, community based non-profits and residents at large.
   d. An alternate, selected by a member, will be allowed to vote.

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2. Members should be willing to communicate with local community people and interest groups concerned with general or specific base cleanup issues. Members serve as a direct conduit for the flow of information to and from the community.

3. All RAB community members are expected to attend regularly meetings. If any member has four or more unexcused absences in a calendar year, he or she will be automatically removed from the RAB. Inactive members may be retained at the discretion of the RAB. RAB community members who have been removed for absences can reapply.

4. Although the RAB has no power to force government agency representatives or members designated by government agencies to attend the meeting, the RAB may write letters to the respective agency to encourage their participation or request their appointed representatives(s) be replaced.

5. The community co-chair and vice co-chair shall serve a term of one year from January 1, through December 31. Prior to the expiration of the Community co-chair term, the RAB will announce the availability of the co-chair or vice co-chair position. Interested RAB members will have the opportunity to "self nominate" or nominate a member of the RAB for the co-chair and vice co-chair position. At the first regular meeting of the RAB, prior to the community co-chair and vice co-chair term expiration, a majority of the RAB members shall elect a co-chair and vice co-chair. The community co-chair or vice co-chair may be re-elected for another term. If the community co-chair or vice co-chair resigns or loses his/her seat, a new co-chair or vice co-chair will be elected and will finish out the term and then have the opportunity to run for re-election to a subsequent term.

6. When necessary, the community co-chair will convene a membership selection panel. The panel will announce the vacancy (ies), evaluate the applications and submit one or more nominees to the RAB. Community groups, citizens, and interest groups reflecting the diverse interests of the community may be referred to the RAB membership selection panel. The selection panel will seek consultation from the navy co-chair on the diversity of the RAB. Nominations ware to be approved by a majority vote of the RAB community members present at a RAB meeting for which the nomination was placed on the agenda.

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E. Membership Selection Criteria

1. The membership selection panel or entire RAB membership will use, at a minimum, the following criteria for selecting RAB members. Additional criteria may be established at any time by the membership subcommittee or the entire RAB. Members will be evaluated for:
   b. Willingness to meet the purpose of the RAB.
   c. Ability to work effectively and cooperatively with other RAB members.
   d. Ability to make a positive contribution to the RAB by virtue of experience, education, community interest or area of expertise.
   e. Willingness to serve for a minimum of two years.
   f. No apparent conflict of interest.

2. Applicants are required to be present at the RAB meeting when his/her membership is being brought to vote.

F. Voting

The following general process will be followed:

1. A motion must be made and seconded by a RAB member, (or their alternate).
2. The RAB members will hold discussion on the matter.
3. The community will be afforded a reasonable amount of time to add comment on the matter, if requested.
4. The motion will be put forth for a vote by the RAB members, (or alternates).
5. Members who become aware of a potential conflict of interest will abstain from voting.
6. Navy and regulatory agency (USEPA, DTSC, and Water Board) are not voting RAB members.

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G. Effective Date and Amendments

1. The effective date of these Rules of Operation shall be January 6, 2005 – subject to prior approval. These Rules of Operation shall replace the RAB Charter dated May 26, 1996.

2. These Rules of Operation may be amended by a majority vote of the RAB members present at the meeting for which it was placed on the agenda. Amendments must be consistent with the CERCLA and SARA statutes as stated previously. A Rules of Operation Committee may be appointed bi-annually to look at any proposed amendments to be then brought back to the membership for discussion and a determination.

H. Termination

Generally, these Rules of Operation will remain in effect until amended or until dissolution of the RAB in accordance with Department of Defense RAB Final Rules 32 CFR Part 202.10 RAB Adjournment and Dissolution, dated May 12, 2006.

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I. Signatories to the RAB Rules of Operation

Community co-chair, Dale Smith	DTSC Representative, Dot Lofstrom
	RWQCB Representative, John West
Navy co-chair, George Patrick Brooks	USEPA Representative, Anna-Marie Cook

Deleted: Jean Sweeny

Deleted: Marcia Liao

Deleted: Vice Community co-chair, Jim Sweeny

Deleted: Judy Huang

Deleted: Thomas L. Macchiarella

ATTACHMENT B-4

RAB TECHNICAL SUBCOMMITEE MEETING NOTES
FROM JANUARY AND FEBRUARY 2009

(3 pages)

Technical Committee Meeting, January 15, 2009

Present: Derick Robinson, Curtis Moss, Fred Hoffman, Jean Sweeny, Jim Sweeny, Anna-Marie Cook, Peter Russell, Dale Smith and George Humphreys

Fred Hoffman agreed to give a recap at the next RAB meeting.

Curtis Moss presented the navy's proposed plan which is based on a previous clean-up at another Navy base. If there is 10,00 μ/g of TCE the Navy considers the site to have dense non-aqueous phase liquid (DNAPL), in other words 1% solution means DNAPL is present.

CM: Iron tends to adhere to itself; therefore, it is coated with gold, titanium or palladium.

FH: If an injection well showed a drop in contamination level, it might be showing natural improvement. Vinyl chloride degrades quickly in an oxygen environment.

The case study didn't show abiotic destruction of TCE. Organisms may have played a role.

OU-2b

CM: The contractor removed the oil-water separator found when taking samples. They removed the soil below the vault as well as around it. It had been punctured to increase draining. That might have led to the plume creation. The oil-water separator was 4' x 4' x 10'; the resulting hole was 10' x 20' x 7'. Water was oozing into the hole from the side wall.

FH: Was a water sample taken?

CM: No, the water bearing zone was only about 1" thick. Eight soil samples were taken and one slurry sample.

Treatment of the plume by nano zero valent iron (nZVI) may not degrade vinyl chloride. Degradation chart showed no connection of vinyl chloride to the nZVI.

DS: Photo of treatment of VOCs showed mounding caused by displacement of soil by the reaction of the contaminants to the nZVI.

EPA: 6-phase heating may be more efficient, as it will remove all contaminants. Site soil used in the benchscale may not have had vinyl chloride or daughter products, thus showing false success.

FH: Injection will displace dissolved plume away from the treatment zone.

GH: Iron becomes ferrous hydroxide, which is gelatinous. This will cause the plume to move around it and not be treated. You will end up with essentially a slurry cut-off wall in the ground that will persist for years.

FH: What is the objective here, advanced research on clean-up technologies or clean-up of the groundwater? The most efficacious remedy would be to pump and treat the source area with the highest contamination levels and follow-up with another treatment regime to get the contaminants down below PRGs.

CM You are talking about Pump and Treat. The Navy has a policy against the use of Pump and Treat.

EPA The EPA is in complete agreement with the Navy. Pump and Treat doesn't work, even at Lawrence Livermore National Laboratory.

FH That's not true.

EPA It is true and EPA has a court case concerning the subject right now.

CM: The proposal is to inject from 50 to 10 feet in depth at 10 foot intervals. Just go in and blast the whole thing.

PR: If there is an impermeable layer at 5 feet, injection should occur there where the contaminants are trapped.

EPA: Without knowing the full extent of the plume and its boundaries, the treatment may merely move the plume or push it further out. There needs to be containment wells to cause pressure against the expansion force.

DS: This is the technique used at Treasure Island on a 6-phase project near the Bay to keep the VOCs from moving into the Bay.

The Navy has actually found the process infeasible for large plumes.

DS: Brooks made a presentation at some conference showing clean-up of the VOC plume at Hunter's Point. That plume was huge. We don't know all the details of that remediation. It might not be such a good technology.

Tech Committee meeting February 19, 2009

Site 26

Battelle is the contractor.

From November to January a pilot test remediation with Fenton's Reagent and iron was injected at 10 locations, then 11 locations and then finally 10 locations. Each had multiple screens at intervals to 15 feet bgs in a 6000 ft^2 area. The plume boundary was based on hydropunches. The pilot program saw a 60-90% reduction in TCE, VC and DCE. The injection wells were used as monitoring wells in some cases.

FH Could not the monitoring well results have been affected by the injection of the reagent?

There was some heating caused by the Fenton's Reagent and some surfacing of the chemicals occurred, but the biggest effect was the rebound. To be expected as the pilot did not encompass all the contamination. The full-scale project included 17 injections wells. Much more heat was created this time and mounding occurred. This was because petroleum was encountered and consumed the Reagent. Wells vented oxygen and CO_2. The consultation knew there was petroleum in the site because a sheen could be seen on the surface of the water in the well samples. It had not be detected in earlier investigations.

FH There's no data to support the presence of petroleum and the petroleum is not definitely there.

GB Contracts are the most difficult part of the BEC's job.

FH The failure of the program was blamed on petroleum that they aren't sure is or isn't there. Now they're advocating a new approach without any analysis of the site. How can you know this will work, if you don't know what's present?

JS I think you need more wells than 4. You can't have too many wells.

There are 18 extraction wells and 7 injection wells planned. It's much more important to monitor extraction wells for contaminant and reagent to confirm that the reagent is moving through the soil.

FH Flip the protocol so extraction occurs in the center of the plume, pulling contamination back into the site. The injection water may still contain contaminants, if complete remediation of the pumped water doesn't occur.

PR Install a surge tank to hold contaminants until the water is clean.

DCE dropped from 700ppb in November to 150 in January. Not all the wells were sampled. Monitoring wells outside the area have not detected the contaminants, indicating the plume has not moved. As a result the first interval is clean.

FH Does dissolved oxygen change characteristics with depth? Extraction and injection should be in the middle zone if there is no contamination in the first zone. Sample for evidence of catalyst or reagent. Perhaps a tracer could be added so it could be detected in the extracted water.

(Tritium was facetiously suggested as a good tracer.)