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

February 5, 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), Navy Co-chair
Dale Smith	Restoration Advisory Board (RAB) Community Co-chair
Attendees:	
Steve Bachofer	Community Member (St. Mary's College)
Doug Biggs	Alameda Point Collaborative
Anna-Marie Cook	U.S. Environmental Protection Agency (EPA)
Tommie Jean Damrel	Tetra Tech EM Inc.
Frances Fadullon	Navy Project Manager (PM)
Fred Hoffman	RAB
John Kaiser	San Francisco Regional Water Quality Control Board (Water Board)
Joan Konrad	RAB
James Leach	RAB
Gretchen Lipow	Community member
Frank Matarrese	Alameda City Council
John McMillan	Shaw Environmental, Inc.
Derek Robinson	Navy Lead Remedial PM
Peter Russell	Russell Resources/Alameda Reuse and Redevelopment Authority (ARRA)
Marcus Simpson	Department of Toxic Substances Control (DTSC)
Radhika Sreenivasan	St. George Chadux Corp.

Jean Sweeney	RAB
Jim Sweeney	RAB
Michael John Torrey	RAB
John West	Water Board
Donald Williams	DTSC
Travis Williamson	Battelle

The meeting agenda is provided in Attachment A.

MEETING SUMMARY

I. Approval of Previous RAB Meeting Minutes

Mr. Brooks called the meeting to order at 6:35 p.m.

The approval of the January minutes was left open for discussion until the March meeting, when Mr. Humphreys will attend.

II. Co-Chair Announcements

Patrick Brooks (Navy co-chair) gave a brief update on the Navy's progress at several sites. Mr. Brooks noted that there were no health and safety incidents during January and congratulated the cleanup team for keeping safety as their primary goal. Mr. Brooks said that the Seaplane Lagoon debris pile was excavated in January. Debris pile 1 has been completely excavated, with approximately 25,000 cubic yards (cy) of soil excavated in total. Debris pile 2 work is ongoing; the orange boom that helps control turbidity has been removed and only a small portion of soil is left to be excavated. Mr. Brooks noted that all the debris is waiting to be hauled off. There is 30,000 cy of material left to be hauled away, and each truck holds approximately 14 cy; hence, this process will take time.

Mr. Brooks said that there has been progress in the storm drain removal. Forty percent of the work has been completed overall, including pipe removal, pipe replacement, backfilling, and screening.

Mr. Brooks reviewed the action items:

Action Item 1: Mr. Brooks said he would provide a short update on Site 26 and would cover progress at Site 26 in detail at the RAB technical subcommittee meeting. Fenton's reagent was used as the oxidant to treat chemicals in the groundwater. Fenton's reagent is a mixture of hydrogen peroxide (8 percent solution) and a catalyst). Mr. Brooks noted that the Navy encountered problems in treating the groundwater. It was difficult to inject the oxidant into less permeable zones in the sub-surface and as a result the planned volume of injection took much longer than anticipated. At five injection points, low permeability caused the oxidant to flow

past the seals and onto the asphalt surface. At these areas, the injection pressure had to be decreased. The rapid release of gas was also a problem. Hydrogen peroxide breaks down to oxygen and water, and carbon dioxide is released when organic compounds are oxidized. The oxidant was supposed to increase dissolved oxygen in groundwater for approximately 6 months after injection, but dissolved oxygen was observed to decrease to baseline conditions in several weeks. Mr. Brooks said the contaminant reduction results were mixed, with some points showing a reduction of contaminant while the concentrations increased in other areas. Mr. Brooks said that based on the problems encountered at Site 26, the Navy will use the "push-pull" method that was applied at Site 14, using a series of injection and extraction wells. Water will be pumped from extraction wells and sent to a mixing tank where the oxidant will be added. This amended water will then be injected in the injection wells where the oxidant will treat groundwater in-situ. The oxidant will also be changed from Fenton's reagent to sodium persulfate, which does not react as quickly. Sodium persulfate will allow the dissolved oxygen to build up in the groundwater. Ms. Sweeney asked about the "push-pull" method. Mr. Brooks explained that the groundwater is pumped from a series of extraction wells, blended with an oxidant in a mixing tank for about an hour, and then pumped back into another well. As the water is injected (pushed) into another well, the extraction well begins to pull the water, which forms a circulation loop.

Mr. Hoffman commented that that the design calls for injecting the oxidant into specific horizontal layers, allowing diffusion to contact the contaminant in different zones vertically. Mr. Hoffman asked if the Navy had enough information to determine if the layers were flooded with reagent. Mr. Brooks replied that the Navy has some information and the results were mixed. In some layers, there was good contaminant reduction, while in others there was less. He added that in the new design, several weeks will be available to circulate the material into the groundwater. Mr. Hoffman asked if hydraulic testing was done in each layer. Mr. Brooks replied injection data (flow and applied pressure) are available to evaluate the hydrology. Mr. Hoffman asked if the Navy has a list of lessons learned from the injection method at Site 26. Mr. Brooks said that he does not have a list of lessons learned. Ms. Cook said that for the February BRAC Cleanup Team (BCT) meeting, the regulators have asked the Navy to provide an in-depth technical evaluation of Site 26 and Site 14 and how decisions made relate to the design for Site 27. During the March RAB meeting, the Navy would be in a better position to detail the lessons learned. Mr. Brooks said that a thorough evaluation on Site 26 will be provided. Mr. Hoffman asked if Site 26 was on the agenda for the March RAB meeting. Mr. Brooks said that it will be on the agenda.

Action Item 2: Operable Unit (OU)-2C will be presented at the March RAB meeting.

Action Item 3: Mr. Brooks noted that Mr. Curtis Moss (Navy) is mailing out the OU-2B plume figures on CDs to the RAB members.

Action Item 4: Mr. Brooks provided a detailed trenching map and trenching logs for the Site 1 landfill investigation (Attachment B-1), which is a section of the trenching report. Mr. Brooks said that all the trench logs show orientation, except for trench log number T.015.01. He noted that the end points for all the trenches were surveyed. Mr. Brooks pointed out the trench log

number T.015.02, noting that the trench number is provided as the last two digits. Mr. Brooks noted that although the trenches are 25 feet long, they only appear as dots in Figure 1-1. The trench report is available at the information repository. Ms. Sweeney said that the trenches seem to be all at the border rather than in the middle. Mr. Robinson said that the trench locations were selected to stay away from the seasonal wetland boundary as well as the runway. Ms. Konrad asked about the line between the disposal cells. Mr. Brooks responded that the line represents the disposal cell boundary, which came from historical aerial photographs. Ms. Konrad asked why trench 11 was dug in the asphalt area and about the depth of the asphalt layer. Mr. Robinson said that the asphalt was 0 to 3 inches deep. Ms. Sweeney asked about the types of pipes found in the trenches. Mr. Brooks said that the Navy was not able to identify the previous use of the pipes and that the pipes were now debris rather than a functional pipeline. Ms. Sweeney said that the trenching report included photos of pipes. Mr. Brooks said that the report includes photos and a video. Mr. Robinson thought that the pipes were either old storm drains or possibly from a fire hydrant.

Mr. Brooks distributed the Alameda Point Restoration Advisory Board Rules of Operation handout (Attachment B-2). Mr. Brooks read out Rule G-2 on page 5 of the attachment. Mr. Brooks said that every 2 years the RAB should review the rules of operations to see if they need to be amended. Mr. Brooks asked the RAB to review the rules of operations. Ms. Sweeney asked if the Navy receives an update note for Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or Superfund Amendments and Reauthorization Act (SARA) about the changes of rules that need to be made. Mr. Brooks said that the Navy does not receive any updates and added that the amendments must be consistent with the rules that govern the RAB. Ms. Smith asked if Mr. Brooks could provide the RAB with the governmental rules. Mr. Brooks said that he would provide some of the governmental rules as a background. Mr. West asked if the RAB had a vice community co-chair. Ms. Smith said that the RAB has stopped nominating a vice co-chair.

Mr. Brooks said that the Navy will update the community relations plan (CRP), which was last updated in 2003. He asked Ms. Damrel (Tetra Tech) to provide an update. Ms. Damrel said that Tetra Tech will be updating the CRP. The 2003 updated CRP is in the information repository (Alameda Library at the base). Ms. Damrel said that the CRP is a document that guides the Navy on how to communicate with and involve the community. The document can also be used by the community to know about Alameda Point and who to contact at the Navy. Ms. Damrel said that the CRP would include how to demographically and geographically describe the base, history, and the current site status and the community involvement activities. One of the key components of the CRP is to interview people. A list of 25 potential interviewees and a questionnaire will be developed. Ms. Damrel said that the RAB could help in identifying the potential interviewees. She added that a broad variety of people need to be interviewed (RAB members, residents, environmental groups, religious groups, schools, city government, and so forth) and noted that the RAB mailing list will be used to start the identification process. Ms. Damrel said that a scoping call was conducted with the regulatory agencies to discuss plans and schedules. She added that a list of potential interviewees will be distributed during the next RAB meeting and she also wants the RAB members to sign up for an interview. Ms. Damrel noted that the interviews will be conducted in March and April.

Mr. Brooks asked if members from the regulatory agencies wanted to add more to the CRP update as they will be drafting the document with the Navy. Ms. Sweeney asked what types of questions will be asked in the interview. Ms. Damrel responded that questions such as *what do you know about the base, what to you want to know about the base, how do you want to get more information*, and perception questions such as *do you feel like the Navy and the regulatory agencies are keeping people informed*, and also identify what concerns people have and what would be the best method to contact them. Mr. Simpson (DTSC) added that one question that is largely asked to update the CRP is *who would you recommend we speak to next*, which provides an opportunity to take suggestions to other potential interviewees. Mr. Simpson said that the interview process not only helps get answers from the community but also gives the community an opportunity to ask questions and generate discussions. Ms. Konrad suggested a map that shows contaminated areas and measures being applied to clean up the contamination. She said that this information would help convey the problems and why things are done in a particular way. Mr. Simpson said that graphical representation will be a part of the CRP update.

Ms. Smith distributed the list of documents received in January (Attachment B-3). Mr. Torrey commented that the list of action items at the end of the minutes has been useful.

III. Installation Restoration Site 2 Feasibility Study

Mr. Brooks introduced Frances Fadullon (Navy) to begin the presentation on the Installation Restoration (IR) Site 2 Feasibility Study (FS) (Attachment B-4). Ms. Fadullon provided a brief introduction on Site 2, which is at the southwest portion of Alameda Point and is bordered by San Francisco Bay on the western and southern sides. Ms. Fadullon outlined the presentation topics (Slide 2). She noted that the changes to the FS were based on the agencies and RAB comments and the time critical removal action (TCRA) field work. Ms. Fadullon reviewed the remedial action and FS remedial alternatives on Slides 4 and 5.

Ms. Fadullon explained the comparative analysis of alternatives for soil on Slide 6. She said that the alternatives were compared using National Contingency Plan (NCP) criteria to help select the preferred alternatives. All of the alternatives were found to be equal in terms of compliance with applicable or relevant and appropriate requirements (ARARs) and long-term effectiveness. Ms. Fadullon noted that none of the alternatives would reduce toxicity because the contaminants would be either contained in place or transferred to a disposal facility. Evaluations of short-term effectiveness, implementability, and cost indicated differences among the alternatives. Ms. Fadullon noted that state acceptance and community acceptance will be considered during the proposed plan stage of the cleanup process.

Ms. Sweeney asked why Alternatives 4 and 5 were not shown in the comparative chart. Ms. Fadullon responded that Alternatives 4 and 5 did not provide enough benefits; hence, they were not carried forward to a detailed evaluation. Ms. Sweeney asked why focused removal could not be done with lower costs. Ms. Fadullon replied that a focused removal would not improve the current condition, as most of the contaminant would still be in place. Mr. Williamson (Battelle) explained that the focused removal would be carried forward only for areas outside of the landfill. The landfill would be covered with multi-layered soil or an engineered cap. He added

that the Navy evaluated hot spots outside the landfill for focused removal to reduce risk. The focused removal was not found to reduce the risk, and the costs for these alternatives were calculated in the FS. Ms. Smith commented that the costs for Alternative 4 and 5 were not presented in the FS. Mr. Williamson said that costs are shown on page 16 of the presentation, as well as in Appendix D of the FS.

Mr. Torrey asked which alternative cleans up all the contamination. Ms. Fadullon said that the last alternative would be a near-complete removal, except for the wetland area, which needs to be protected. Ms. Smith said that the wetland is contaminated only by metals and the alternatives do not include the wetland area. She asked why volatile organic compounds (VOC) at the site are not being remediated. Mr. Williamson said that Alternative 6 considers removal of virtually all soils within the landfill area. Mr. Hoffman asked if any chemical drums would remain. Mr. Williamson replied that interviews with previous base personnel and historical reports indicated discrete disposal areas were potentially present at the site. However, geophysical surveying and test pitting conducted at the site uncovered no evidence of chemical drums being present at Site 2. He added that one of the primary objectives of the geophysical surveying conducted during the remedial investigation (RI) was to locate buried metal such as drums.

Mr. Williamson said that any areas of high concentration were noted and the data were used for the human health and ecological risk assessment. The results showed that the risk levels for human health were within the risk management range for the various receptors evaluated. He added that the primary risk was human and ecological exposure to soils. The idea behind the alternatives is to prevent exposure, which is accomplished by providing an isolating cover over the landfill.

Ms. Fadullon said that the field investigations did not support the information obtained regarding drum disposal from the historical record. Mr. Williamson added that the field investigations did not find any chemical drums, oily wastes, or disposal pits. Ms. Smith asked what the depth below ground surface was for the investigation. Mr. Williamson said that soil samples were collected in the dry season, and samples were collected until groundwater was encountered; exploratory trenches extended to a maximum of 10 to 12 feet deep, with some being less in certain areas – depending on the depth to groundwater. Soil samples were collected as deep as 15 feet in the landfill. Groundwater samples were also collected.

Ms. Sweeney asked if there was a map of locations where the contaminants were found. Mr. Williamson confirmed that the locations of contaminants have been placed on maps, and said that a cap is being placed over soil to prevent potential risk to humans or ecological receptors. He added that Section 3 of the FS shows the locations of the risk drivers. Ms. Smith commented that if only one sample is collected and the results are low, then the result will be discounted rather than collecting an additional sample to see if the location is at the edge or middle of the contamination. Ms. Fadullon responded that there are enough samples to design a remedy and that most of the remedy addresses the entire landfill and not just a single location. She added that the sampling was random and not based on preconceived patterns. The sampling reflected historical records but covered the entire landfill. Ms. Smith asked about the number of samples

collected and the spacing of the sampling locations. Mr. Williamson said that the samples were 25 feet to a several hundred feet apart.

Mr. Robinson said that Slide 9 shows the sampling points, which cover the entire landfill, and only six have non-risk driver locations; hence, results presented a potentially unacceptable risk to either human or ecological receptors at 34 of 40 sampling locations. He added that the sampling locations were widespread. Ms. Fadullon restated that the chosen remedy would be applied to the entire landfill. Ms. Smith said that although the sampling is widespread, the entire landfill area is 70 acres. She commented that the historical records show that there were chemical drums and airplane material but none was found at either Site 1 or 2. Mr. Williamson said waste has been found and soil contamination is confirmed, although no chemical drums were located. Mr. Williamson added that arsenic, benzo(a)pyrene, polychlorinated biphenyls (PCBs), radium 226 has been detected in soil and are the primary risk drivers. Thus, installing a landfill cover reduces risk by preventing exposure to contaminants and buried waste material.

Ms. Sweeney asked if the watershed will be protected with the cap. Mr. Williamson responded that surface drainage will be a major consideration for the remedial design. He added that close attention has been given to the wetland during the remedial design

Ms. Smith noted that the FS did not provide a through explanation of potential methane production if capping is done. Ms. Fadullon responded that it will be addressed in the remedial design based on the alternatives selected. She added that recent methane sampling has just been completed, and up-to-date results will be available in a month.

Ms. Fadullon reviewed the comparative analysis of groundwater alternatives on Slide 7 and introduced Mr. Williamson to continue the presentation.

Mr. Williamson reviewed the significant changes between the draft and final FS on Slide 8. Mr. Hoffman asked if the groundwater data were displayed in the FS. Mr. Williamson replied that Appendix G of the FS contains groundwater information. Mr. Williamson described the landfill footprint on Slide 9 and said Slide 10 shows the wetland. Mr. Williamson said that the South Pond wetland is dry during the summer but contains water in winter and supports wildlife. The north pond is connected to the bay through the culvert, and this connection will be improved to ensure the overall functionality of the wetland. Mr. Williamson noted that the existence of the wetland was considered during the investigations, and plans were evaluated to protect it from the potential impacts of alternative Site 2 cleanup activities. Ms. Konrad asked if the boundary of the wetland could be changed to make it appear more natural and aesthetic. Mr. Williamson said that it is possible to make it appear more natural and aesthetic, and Ms. Fadullon added that it could be evaluated during the remedial design, which would be developed with input from the RAB. Mr. Robinson said that wetland enhancement at Site 1 and a connection from the north pond to the south pond is being considered. Mr. Brooks noted that it will be difficult to connect them because the north pond and south pond have different water sources and wildlife inhabitants, but a number of things could be considered to increase the functionality of the wetland, including aesthetic contouring, improving the North Pond's connection to the bay, and removal of invasive species such as the ice plant and pampas grass.

Mr. Bachofer asked if Mr. Williamson could explain the two triangles in the FS and whether they are being addressed. Mr. Williamson responded that the two triangles show radium 226 detected at levels of about 0.5 picocuries per gram (pCi/g). The background level is 0.471 pCi/g and the two locations are close to that level. He added that 1 plus background is the actionable level, which would imply that the actionable level at Site 2 is 1.471 pCi/g. Both of the locations show results much below the actionable level; thus, the plan now was to not address them. Mr. Brooks clarified that the background for radium varies across the base, as it is naturally occurring, and that 0.471 pCi/g is the background value used for the Sites 5 and 10 storm drain line removal action.

Mr. Williamson reviewed Slide 11. Ms. Smith asked if enhancement of the wetland would consist of removing the ice plant, but not enlarge the wetland. Ms. Fadullon responded that any impacts to the wetland must be mitigated. The area where wetlands would be increased will be selected in the remedial design. Ms. Smith noted that there are VOCs in the wells that are not decreasing but are fluctuating at the site. Ms. Fadullon said that the VOCs are at low level and are not a concern at Site 2. Ms. Smith said that EPA and the Water Board are not satisfied with the VOC assessment. Ms. Fadullon noted that the groundwater is described in Appendix G of the FS and it shows the VOCs in groundwater are not an issue.

Mr. Williamson reviewed Slide 12 and noted that the groundwater is not a designated source of drinking water at Site 2. During the risk assessment of groundwater, dermal contact to a construction or site restoration worker at the wetland was noted as a concern. Dermal contact was the only risk identified from the RI for groundwater. Mr. Torrey asked if any ecological risk was associated with the groundwater. Mr. Williamson said that there was no ecological risk from groundwater because there are no potentially complete exposure pathways. Mr. Torrey asked if an ecological risk assessment was completed. Mr. Williamson replied that an ecological risk assessment was completed for the surface water and sediments in the pond. The sampling and risk assessment at the pond were intended to evaluate whether contamination in the groundwater is posing a risk to ecological receptors, such as clams and worms. Surface water and sediments were analyzed for contaminants and sent to a toxicity laboratory. Mr. Williamson noted that there are 22 monitoring wells around the site. Ms. Smith said that the number of monitoring wells present is too few for the 4,200 feet around the site. Mr. Hoffman asked about the concentrations of VOCs in the groundwater. Ms. Fadullon said that the concentration is low and that she would provide the exact results. Mr. Williamson said that natural attenuation is occurring and tidal influence is noted in the groundwater.

Slide 13 summarizes the results of the contaminant trend analysis for wells along the shoreline. Mr. Williamson believes there are 20 wells along the shoreline. Any chemical that is shown in the slide are detected in the groundwater above the most conservative applicable surface water criteria. Some of these criteria are protection of ecological receptors and some are for human consumption of fish. He added that the Navy selected the lowest of the criteria and compared these concentrations with the groundwater data collected from the wells. Any well with chemical concentrations above the surface water criteria has been considered in Appendix G of the FS, which presents a concentration versus time plot for each chemical in groundwater at each well. The data plotted were collected from 1991 until 2007. Mr. Williamson said that the results indicated that most of the chemicals are pesticides at low concentrations and the surface water

criteria used were very low. The overall long-term trend shows that the contaminant levels are stable or declining over time, which indicates that there is no ongoing source. Mr. Williamson said that the background concentration of metals was also incorporated into this evaluation.

Mr. Williamson reviewed Slide 14 and noted that results of the toxicity and bioaccumulation test showed no ecological risks. Ms. Smith asked when the water was collected for the test. Mr. Williamson replied that the water was collected during the wet season because the south pond was dry in the dry season. Ms. Smith noted that concentrations would be diluted in the wet season. Mr. Williamson said that the water was collected at a time when water could be obtained. Ms. Smith said that the samples should have been collected in March to avoid the collection of diluted samples, and that the report does not provide evidence of groundwater discharge. Mr. Williamson said that no quantitative analysis was completed to evaluate discharge but that the potential discharge of groundwater to surface water in the ponds is clearly acknowledged in the FS.

Mr. Williamson noted that there was similar testing for the off-shore area. No risks were found in the ponds or the bay in the toxicity study, so that the groundwater will not pose a risk even if it drains into the surface water. Mr. Bachofer asked if studies were done with saltwater organisms. Mr. Williamson said that he was not sure and would have to check. Mr. Simpson asked if worms and clams were included in the tests. Mr. Williamson confirmed that these organisms were part of the tests, as were birds. Mr. Williamson noted that the results of the bioaccumulation testing are used in the model for calculating uptake in the birds. Mr. Torrey asked if a bioaccumulation test was done with fish. Mr. Williamson replied that no fish could be caught.

Mr. Williamson reviewed Slide 15 and noted that discharge modeling was done for each of the chemicals detected in the shoreline and the volume of water discharged into the surface water along the shoreline was calculated. By calculating the volume of water being discharged, the mass of contaminant discharged on a daily and yearly basis was calculated. Mr. Williamson noted that the result of the analysis did not exceed the surface water criteria. This analysis is presented in Appendix G of the FS.

Mr. Williamson said that the groundwater well network will be evaluated during the remedial design to determine whether additional wells need to be incorporated. Mr. Hoffman noted that there are only 19 wells. Mr. Williamson said that the 19 wells are in the first water bearing zone and that the FS has a figure depicting wells in the second water bearing zone.

Slide 16 shows the remedial alternative costs. Mr. Williamson noted that the costs changed based on extending the footprint, adding an animal intrusion layer, and checking on the radiological removal action. Mr. Williamson said that the preferred alternative at this point will be Alternative 2 for soil and Alternative 2 for groundwater. Mr. Hoffman said that with Alternative 2 the plume would extend to the bay and be diluted. Ms. Fadullon said that natural attenuation involves not only degradation of organic compounds but also reductions in metal concentrations through absorption and other physical processes; an in-depth analysis is presented in the FS. She added that there would also be a comprehensive well network and monitored natural attenuation. Ms. Smith said that the bigger issue would be with the Water Board as it

will not accept contaminants entering the bay. She mentioned that the Water Board asked the Navy to remove contaminants up to 27 feet bgs at Site 32 at Treasure Island. Ms. Fadullon said that there was no plume, but Ms. Smith disagreed. Mr. Brooks said he would research on how the Treasure Island Site 32 would compare with Alameda Point Site 2. Ms. Smith thought that the groundwater plumes shown in the FS were in the landfill rather than being close to the bay, so the Water Board is not concerned. She added that there are pesticides on the south side. Mr. West said that modeling would be used to assess the concentrations and determine if there are any hotspots. Ms. Smith said that the two or three sample locations are not adequate to draw conclusions. Mr. Hoffman said that the concern is that the contaminated water is entering the bay. Mr. Williamson said that he understands the RAB concerns but the concentration of the contaminants are low and do not appear to pose risk.

Mr. Williamson reviewed slide 18. He noted that the proposed plan would be issued soon for public review.

IV. BCT Update

Mr. Brooks noted that Ms. Cook to provide the BCT update. Ms. Cook recalled that during the January RAB meeting the oil water separator (OWS) near Building 163 (OU-2B area) was discussed. Ms. Cook shared her experience on the OWS removal. The Navy planned to remove the OWS a week after the RAB meeting. Ms. Cook said she and Michelle Dalrymple (DTSC) were on site to observe the removal and one of EPA's contractors was also on site to help decide where to collect soil samples. Ms. Cook distributed a photograph she took of the OWS (Attachment B-5). She noted three holes at the bottom of the OWS. These holes must have allowed the solvents to enter the soil. She added that the concrete bottom of the OWS was disintegrated. Ms. Cook said that the conditions explained why contaminations were found below the OWS. She noted that there was a strong odor and sheen. In addition, a thin horizon of contaminated soil and groundwater was observed. She said the message is that characterizing the area thoroughly is important before any remediation begins. Hence, the next phase would be to characterize the area before pilot test is done. The pilot test will also be designed based on the new characterization results. Ms. Cook said that the characterization results should be able to provide a clear picture of the hydrogeology of the area.

Ms. Cook said that the January BCT meeting was a conference call that focused on preparation of the Site 2 proposed plan. Ms. Cook said that the next BCT meeting will discuss development of the remedial design for Site 27, which will involve in situ chemical oxidation.

V. Community and RAB Comment Period

Ms. Smith asked if there is a pattern to the way documents that are sent to her. Mr. Brooks confirmed whether she wanted only CD copies. Ms. Smith said that she would like CDs for the final reports and a paper copy for the draft reports.

Ms. Smith distributed the Treasure Island document tracking sheet by Tetra Tech (Appendix B-6). She noted that this sheet is an example of a helpful format for tracking the documents to be submitted. A field investigation summary sheet is also distributed at Treasure Island. Ms. Smith requested the Navy consider sending out a similar document tracking sheet for Alameda Point at least on a quarterly basis.

Mr. Hoffman said that there was a RAB technical subcommittee meeting in January about the OWS. He said that there were significant discussions at the meeting that he would like to summarize for the RAB. Mr. Hoffman asked Mr. Brooks if he could have 10 minutes to talk during the next RAB meeting, and Mr. Brooks agreed.

Mr. Brooks said that Michelle Dalrymple (DTSC) has been instrumental in bringing Kerr Laboratory to Alameda and to evaluate their interest in investigating Plume 4-1. There are two phases of investigation: primary site and secondary site. Plume 4-1 has been selected as a secondary site, which includes more historical data evaluation and field testing than a primary site. He said that if Alameda Point is selected as the primary site the data will be interesting and helpful.

Mr. Brooks noted the next RAB meeting will be held on March 5, 2009. There would be presentations on OU-2C and a summary of Site 26.

VI. Meeting Adjournment

The meeting was adjourned at 8:50 p.m.

Action Items

Action Items:	**Action Item Update**:
1. Site 26 Status Report	1. Completed
2. 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	2. Requests a, b, and c are completed; d and e are pending.
3. Mr. Moss will copy the OU-2B plume figures to CDs and mail them to each RAB member.	3. Pending
4. Mr. Brooks will provide a detailed trenching map and trenching logs for the Site 1 landfill investigation.	4. Completed
5. Mr. Brooks will provide the government rules of operation document	5. New
6. The Navy will provide a document tracking sheet for Alameda every quarter.	6. New
7. Mr. Brooks will provide information regarding Site 32 at Treasure Island and its applicability to Site 2.	7. New
8. Mr. Brooks and Mr. Williamson to confirm whether or not saltwater organisms were used in the toxicity tests for the wetlands.	8. New

ATTACHMENT A

NAVAL AIR STATION ALAMEDA
RESTORATION ADVISORY BOARD MEETING AGENDA

February 5, 2009

(1 page)

RESTORATION ADVISORY BOARD

NAVAL AIR STATION, ALAMEDA

AGENDA

FEBRUARY 5, 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 – 8:00	Site 2 Feasibility Study	Frances Fadullon
8:00 – 8:15	BCT Update	Anna-Marie Cook
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 Trenching map and trenching logs for the Site 1 landfill investigation. Distributed by Pat Brooks, RAB Navy Co-Chair (12 pages)

B-2 Alameda Point Restoration Advisory Board Rules of Operation. Distributed by Pat Brooks, RAB Navy Co-Chair (6 pages)

B-3 List of Reports and Correspondence Received During January 2009. Distributed by Dale Smith, RAB Co-Chair (1 page)

B-4 Installation Restoration Site 2, Final Feasibility Study Presentation handouts. Distributed by Frances Fadullon, Navy (9 pages)

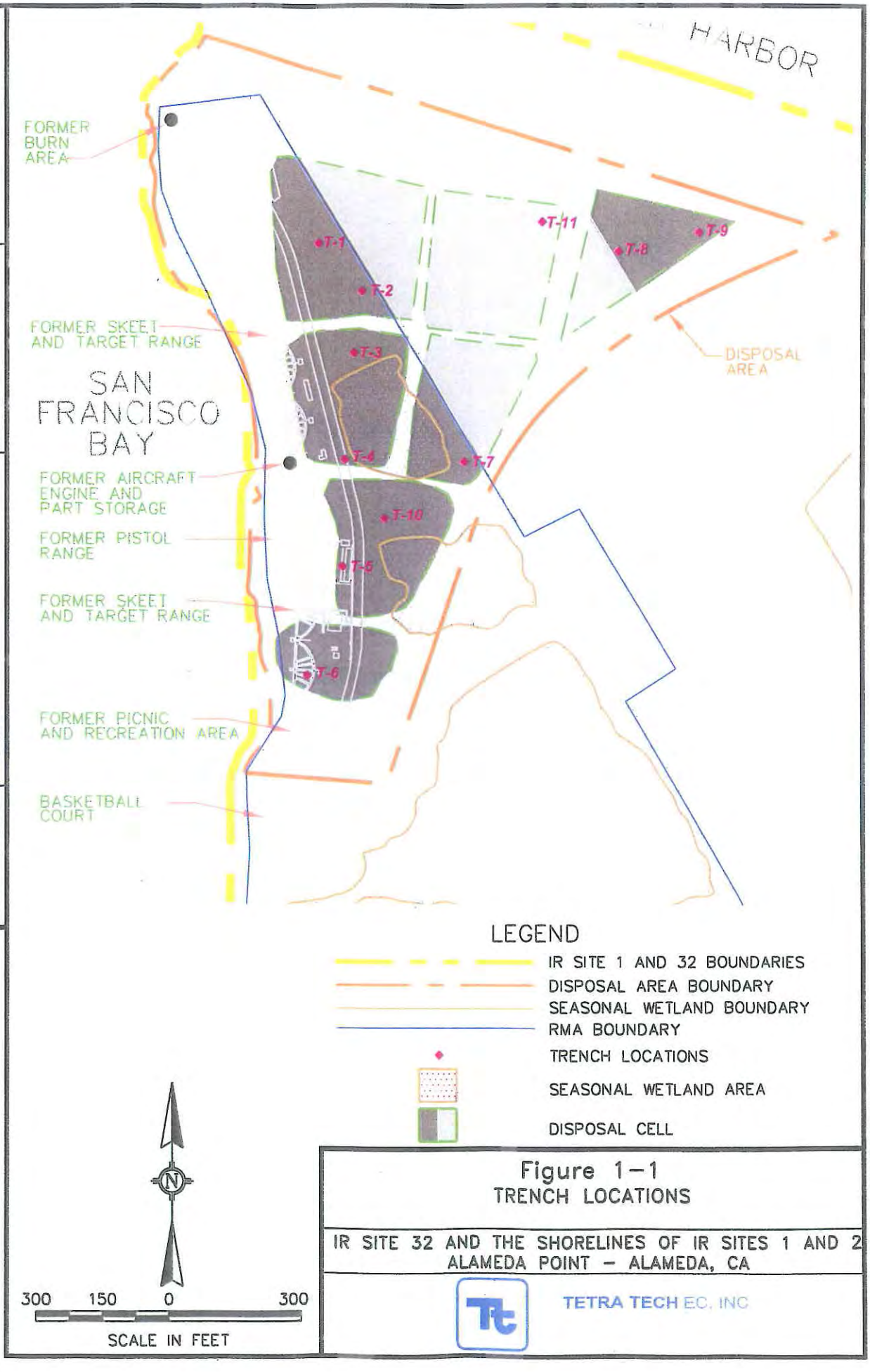
B-5 Oil Water Separator Removal Photograph. Distributed by Anna Marie Cook, EPA (1 page).

B-6 Naval Weapon Station Treasure Island, Environmental Cleanup Program, Document Tracking Sheet. Distributed by Dale Smith, RAB Co-Chair (4 pages).

ATTACHMENT B-1

TRENCHING MAP AND TRENCHING LOGS FOR THE SITE 1 LANDFILL INVESTIGATION

(12 pages)



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DATE: 10/19/07 | REVISION: 0 | CTO: #0015

Figure 1-1
TRENCH LOCATIONS

IR SITE 32 AND THE SHORELINES OF IR SITES 1 AND 2
ALAMEDA POINT – ALAMEDA, CA

TETRA TECH EC, INC

P:\3210-RAC IV\CTO-0015\DWG\0004\000411.DWG
PLOT/UPDATE: OCT 11 2007 11:22:13

TRENCH LOG

Project: RAC IV, CTO 15, Alameda

TRENCH: T-15-01	LENGTH: 25'	EQUIPMENT: 350 excavator	LOCATION: Alameda
	WIDTH: 3'	BUCKET SIZE: 3' 2cy	DATE: 9/5/07
	DEPTH: 6' (Avg)	OPERATOR: Steve	LOGGED BY: L. Hargle

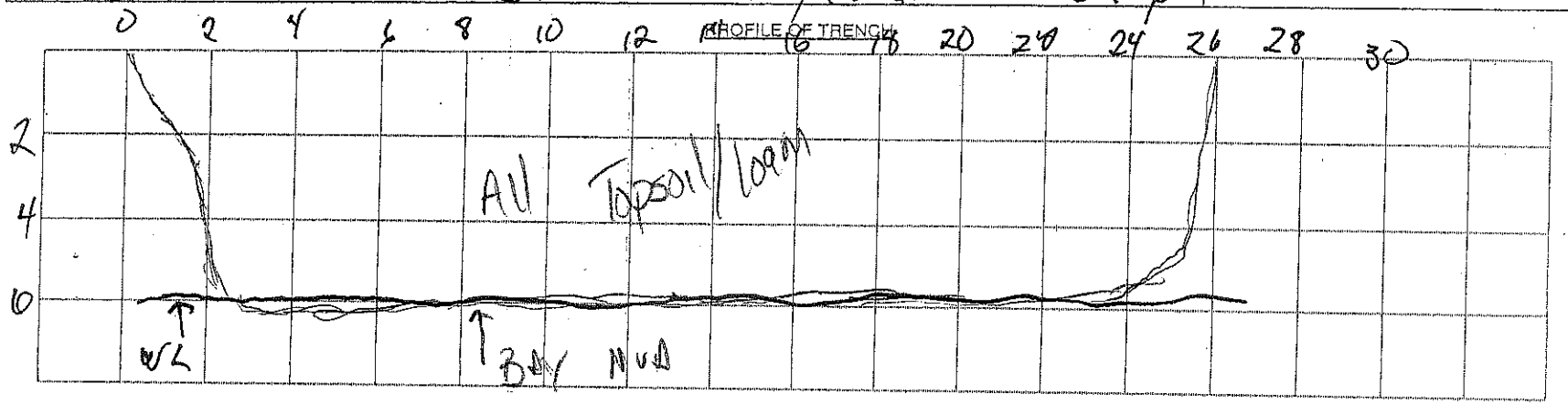
DESCRIPTION & REMARKS: START: 0915 FINISH: 1020

0-6' TopSoil - limited debris

6'- Bay MUD & watertable reached

No UXO NO Drums Soil w/ elevated RAD Readings

PLAN VIEW SKETCH OF TRENCH:



HORIZONTAL SCALE: _____ VERTICAL EXAGGERATION: _____ ORIENTATION: _____

TETRA TECH EC, INC.

FIGURE 1-2

TRENCH LOG

Project: RAC IV, CTO 15, Alameda

TRENCH: T-05-02	LENGTH: 25'	EQUIPMENT: 350 Excavator	LOCATION: Alameda
	WIDTH: 3'	BUCKET SIZE: 3' 2cy	DATE: 9/5/02
	DEPTH: _____ (Avg)	OPERATOR: Steve	LOGGED BY: L. [illegible]

DESCRIPTION & REMARKS: STARTED: 1300 Finished - WATER LEVEL - 1445

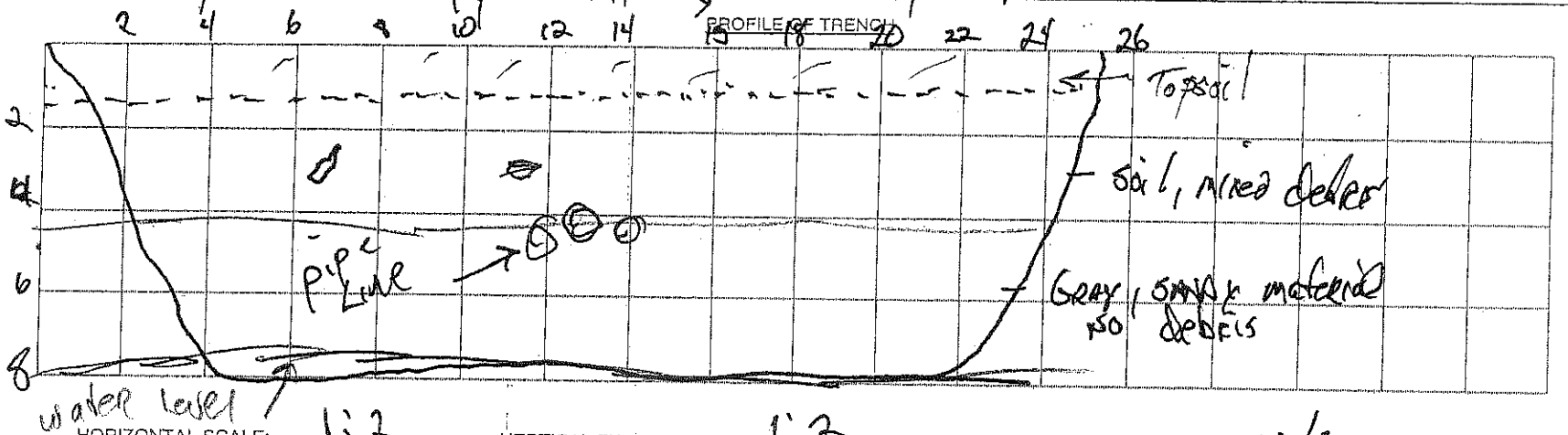
0-1.5' Topsoil 1.5'

1.5'-4.5' - ~~Black~~, ~~sandy~~ soil - Mixed debris (wood, glass, metal)

4.5 - 8' - Gray, sandy soil, little debris

- Cut through abandoned pipeline approx 5' - SAND is probably backfill

PLAN VIEW SKETCH OF TRENCH:



HORIZONTAL SCALE: 1:2 VERTICAL EXAGGERATION: 1:2 ORIENTATION: N/S

NO OXO, 1 deer carcass, small ant RAD compacted soil

TETRA TECH EC, INC.

FIGURE 1-2

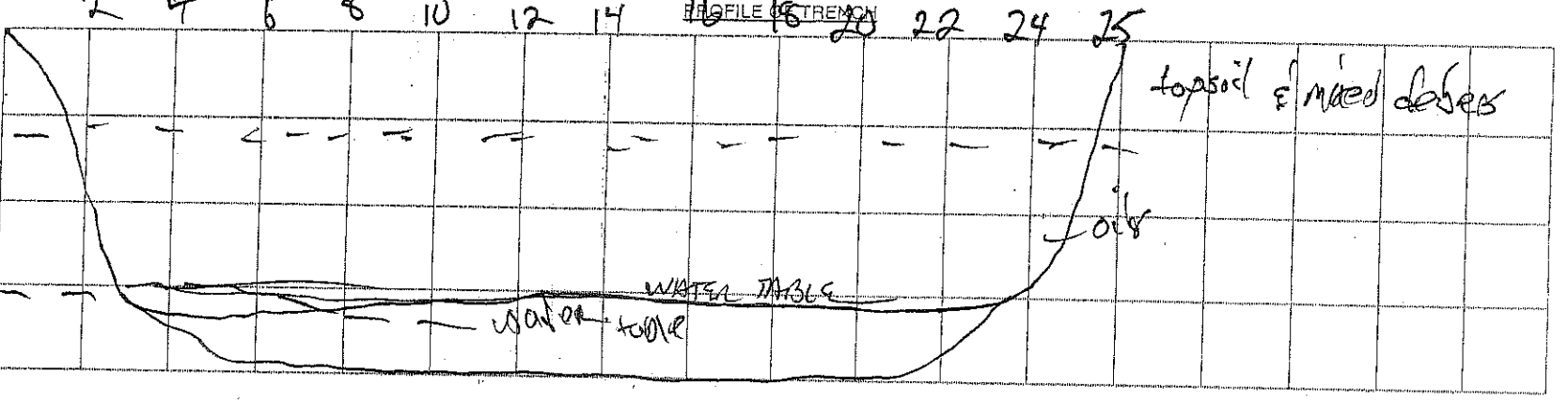
TRENCH LOG

Project: RAC IV, CTO 15, Alameda

TRENCH: T-015-03	LENGTH: 25' WIDTH: 3' DEPTH: _____ (Avg)	EQUIPMENT: 350 excavator BUCKET SIZE: 2cy OPERATOR: Steve	LOCATION: Alameda DATE: 9/06/07 - 9/07 LOGGED BY: L. Humphrey

DESCRIPTION & REMARKS: START 0830 - Secured 0915 9/7/07 Start 0800 Stop
0-2½' - topsoil & mixed debris - wood, metal, Rubber
2½-7' - oily, sandy soil and mixed debris
water table - 7' - Dig to 8' Bgs - No change -
No drums, No UXO, Red impacted soil - lots

PLAN VIEW SKETCH OF TRENCH:



HORIZONTAL SCALE: _____ VERTICAL EXAGGERATION: _____ ORIENTATION: N-S

S N

TETRA TECH EC, INC.

FIGURE 1-2

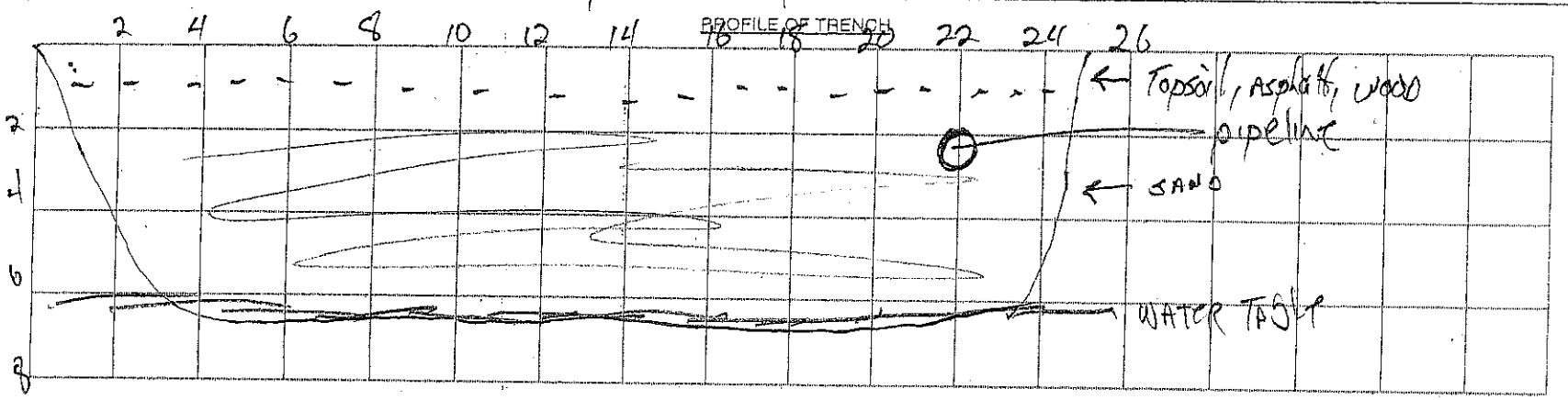
TRENCH LOG

Project: RAC IV, CTO 15, Alameda

TRENCH: T-015-04	LENGTH: 25' WIDTH: 2' DEPTH: 7' (Avg)	EQUIPMENT: 430 Backhoe BUCKET SIZE: 3' OPERATOR: Mike	LOCATION: ~~430~~ Alameda DATE: 9/6/07-9/07/07 LOGGED BY: L. Ny

DESCRIPTION & REMARKS: START: 0830 - SECURE 0915 9/7/07 - START 0800 FINISH - 0822
0-1' - topsoil & asphalt debris - wood
1'-7' - SAND - NO debris
water table - 6½'
NO UXO, NO DRUMS, NO RAD

PLAN VIEW SKETCH OF TRENCH:



HORIZONTAL SCALE: _____ VERTICAL EXAGGERATION: _____ ORIENTATION: E-W

W E

TRENCH LOG

Project: RAC IV, CTO 15, Alameda

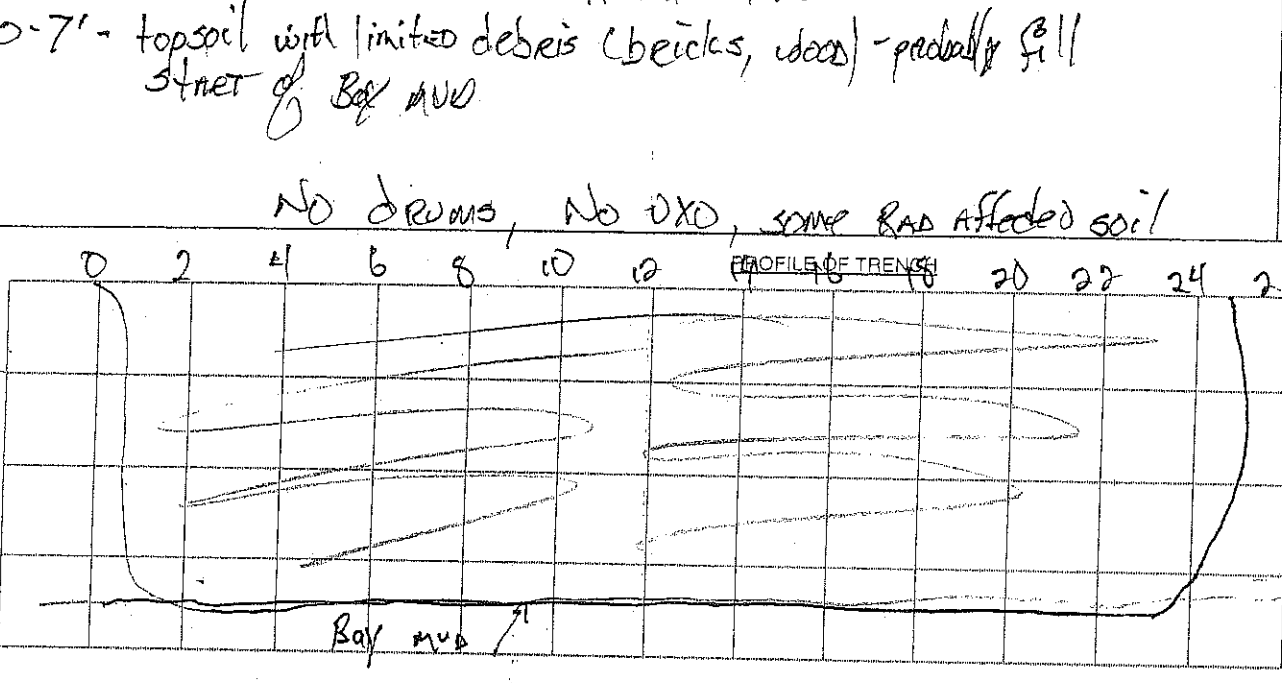
TRENCH: T-15-05	LENGTH: 25'	EQUIPMENT: 430E Backhoe	LOCATION: Alameda PX
	WIDTH: 3'	BUCKET SIZE: 3'	DATE: 9/2/02
	DEPTH: 7' (Avg)	OPERATOR: Steve	LOGGED BY: L Humphrey

DESCRIPTION & REMARKS: Started: 1025 Finished: 1410

0-7' - topsoil with limited debris (bricks, wood) - probably fill
Street of Bay MUD

No drums, No UXO, some Rad affected soil

PLAN VIEW SKETCH OF TRENCH:



HORIZONTAL SCALE: 1-2 VERTICAL EXAGGERATION: 1-2 ORIENTATION: N-S

TETRA TECH EC, INC.

FIGURE 1-2

TRENCH LOG

Project: RAC IV, CTO 15, Alameda

TRENCH: T-015-06	LENGTH: 25'	EQUIPMENT: 430E Backhoe	LOCATION: Alameda Pt
	WIDTH: 3'	BUCKET SIZE: 3'	DATE: 9/10/07
	DEPTH: 7 1/2 (Avg)	OPERATOR: Steve	LOGGED BY: LN

DESCRIPTION & REMARKS: Started: 0817 Finish: 1510

0 - 1½' - topsoil, asphalt debris - some metal

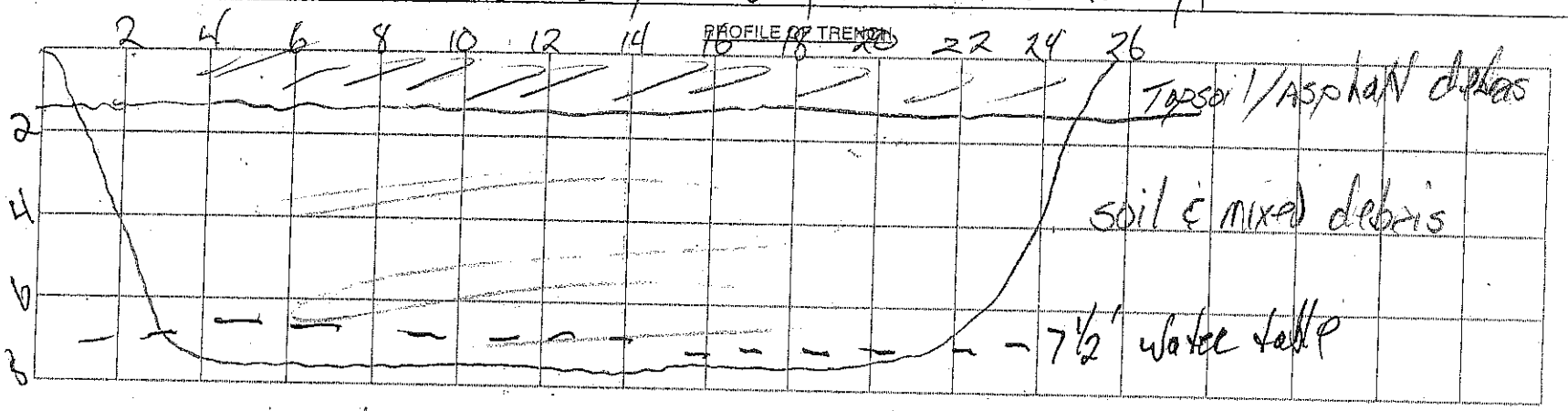
1½ - 7½ soil & mixed debris (metal, wood, glass, etc)

water table: 7½'

No Drums, No UXO, All soil was Rad impacted

PLAN VIEW SKETCH OF TRENCH:

PROFILE OF TRENCH



HORIZONTAL SCALE: 1:2'

VERTICAL EXAGGERATION: 1:2'

ORIENTATION: N-S

TETRA TECH EC, INC.

FIGURE 1-2

TRENCH LOG

Project: RAC IV, CTO 15, Alameda

TRENCH: T-015-07	LENGTH: 25' WIDTH: 3' DEPTH: 8' (Avg)	EQUIPMENT: 350 Excavator BUCKET SIZE: 3' OPERATOR: Mike	LOCATION: Alameda DATE: 9/10/07 LOGGED BY: hf

DESCRIPTION & REMARKS: Started: 0859 Finished: 1010

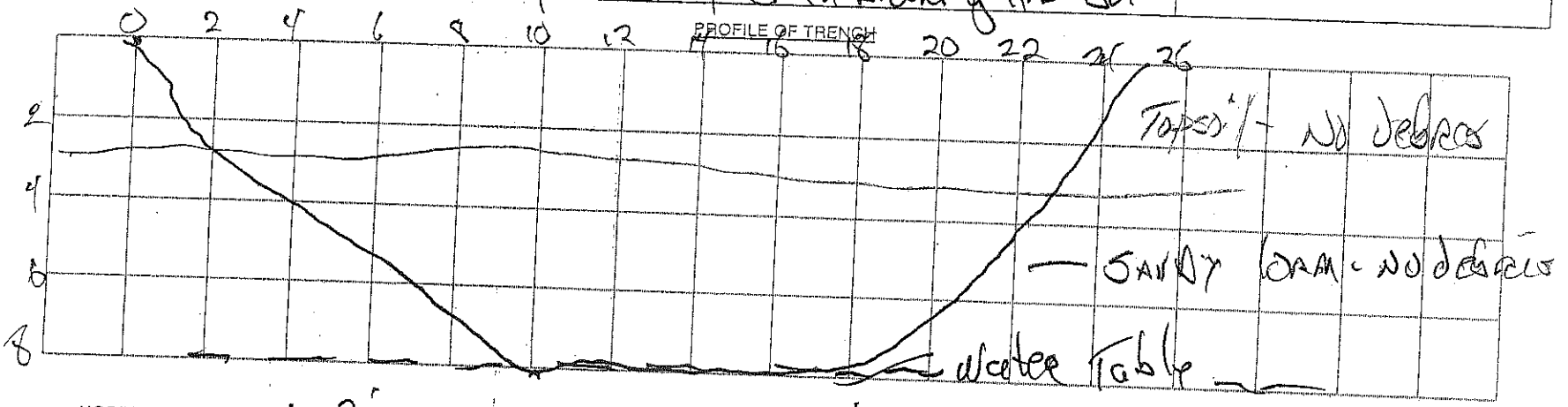
0-3': topsoil, no debris

3'-8' sandy loam - no debris

water table - 8'

No drums, no UXO, small amount of RAD soil

PLAN VIEW SKETCH OF TRENCH:



HORIZONTAL SCALE: 1-2'

VERTICAL EXAGGERATION: 1-2'

ORIENTATION: N-S

TETRA TECH EC, INC.

FIGURE 1-2

TRENCH LOG

Project: RAC IV, CTO 15, Alameda

TRENCH: T-015-08	LENGTH: 25' WIDTH: 3' DEPTH: 7' (Avg)	EQUIPMENT: 430E Excavator BUCKET SIZE: 3' OPERATOR: Steve	LOCATION: Alameda P DATE: 9/10/07 LOGGED BY: SN

DESCRIPTION & REMARKS: START 1457 FINISH 1530

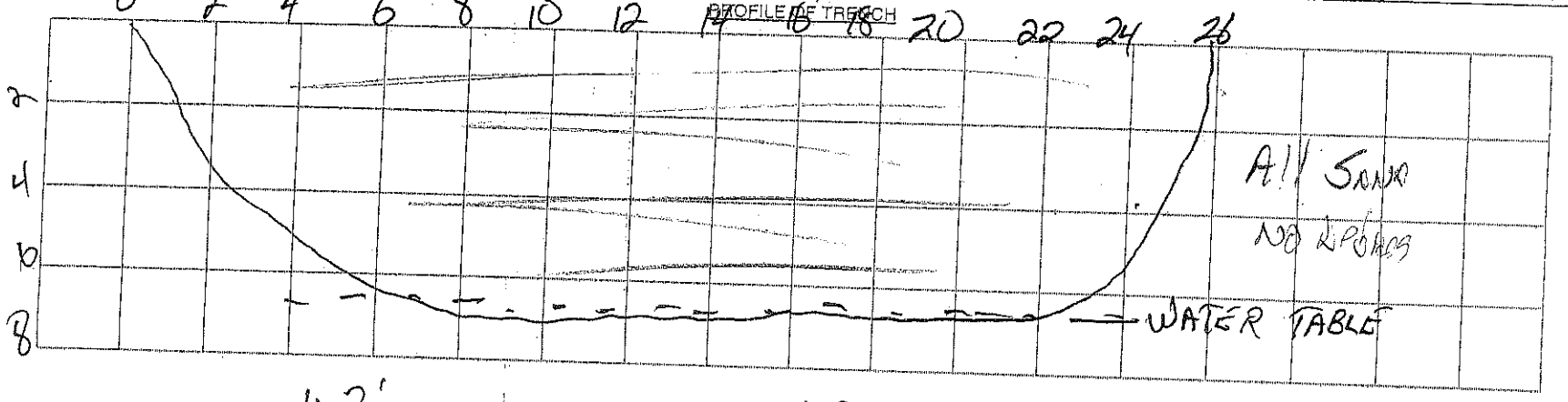
0~7' : All SAND, No debris

water table ~ 2'

No DRUMS, No RAD, No UXO

PLAN VIEW SKETCH OF TRENCH:

PROFILE OF TRENCH



HORIZONTAL SCALE: 1-2'

VERTICAL EXAGGERATION: 1-2'

ORIENTATION: N-S

TRENCH LOG

Project: RAC IV, CTO 15, Alameda

TRENCH: T-015-09	LENGTH: 25' WIDTH: 3' DEPTH: 6 1/2' (Avg)	EQUIPMENT: 430 Backhoe BUCKET SIZE: 3' OPERATOR: Steve	LOCATION: Alameda POF DATE: 9/11/07 LOGGED BY: LN

DESCRIPTION & REMARKS: Start: 0826 Finished: 1010

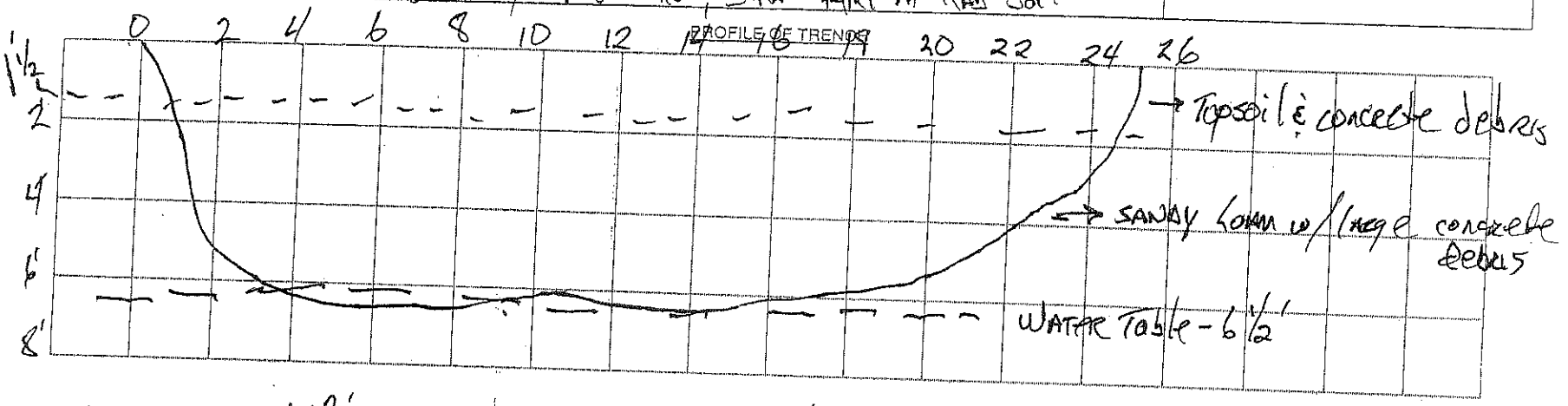
0-1 1/2' Topsoil w/ concrete debris

1 1/2'-6 1/2' - SANDY loam w/ large concrete debris & some wood

Water Table - 6 1/2'

No drums, No UXO, Small Amt of Rad Soil

PLAN VIEW SKETCH OF TRENCH:



HORIZONTAL SCALE: 1" = 2'

VERTICAL EXAGGERATION: 1" = 2'

ORIENTATION: N - S

S

N

TETRA TECH EC, INC.

FIGURE 1-2

TRENCH LOG

Project: RAC IV, CTO 15, Alameda

TRENCH: T-015-10	LENGTH: 25' WIDTH: 3' DEPTH: _____ (Avg)	EQUIPMENT: 350 Excavator BUCKET SIZE: 3' OPERATOR: Mike	LOCATION: Alameda PX DATE: 9/11/07 LOGGED BY: LK

DESCRIPTION & REMARKS: START: 1120 FINISH 1320 - 7'

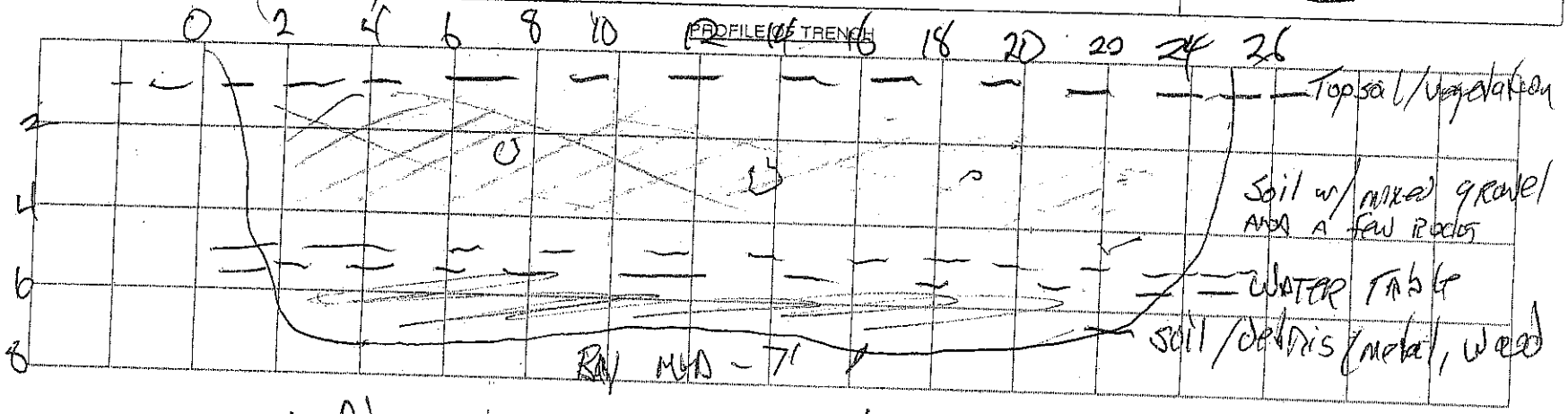
0-1' - Topsoil/vegetation

1'-5' soil w/mixed gravel & a few larger rocks

5'-6' dark soil, debris → WATER TABLE: 5 1/2' BAY MUD 7'

No drums, No UXO

PLAN VIEW SKETCH OF TRENCH:



HORIZONTAL SCALE: 1-2' VERTICAL EXAGGERATION: 1-2' ORIENTATION: E-W

TETRA TECH EC, INC.

FIGURE 1-2

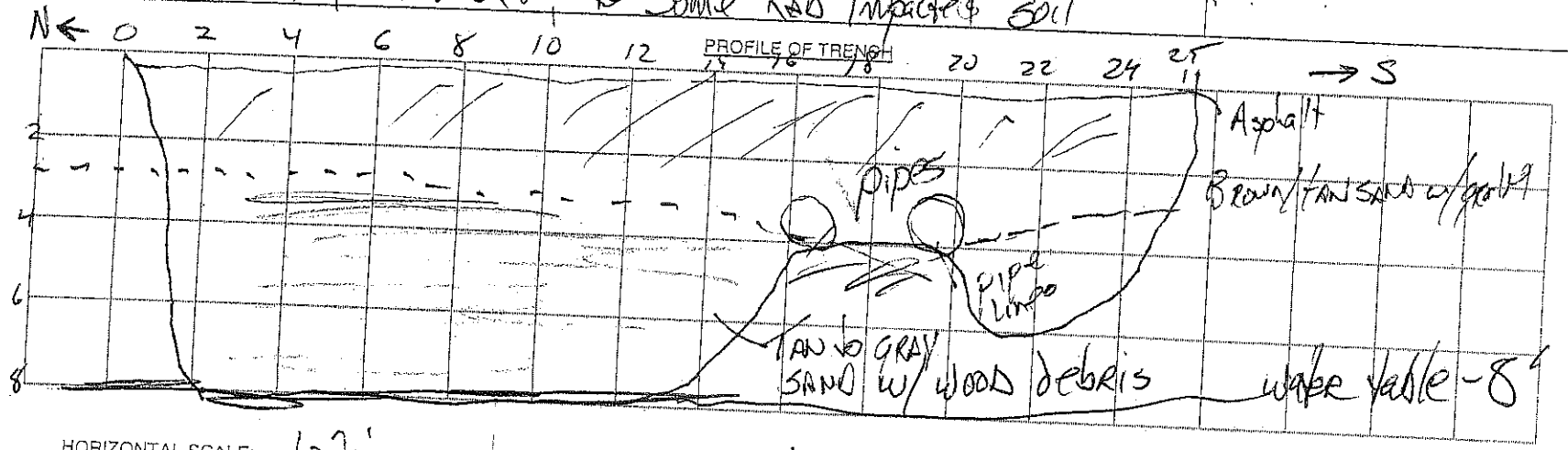
TRENCH LOG

Project: RAC IV, CTO 15, Alameda

TRENCH: 11	LENGTH: 25 WIDTH: 3' DEPTH: _____ (Avg)	EQUIPMENT: CAT 430 E BACKHOE BUCKET SIZE: 3' OPERATOR: STEVE DUGGOON	LOCATION: T-11 EAST SIDE RUNWAY 13 DATE: 9/11/07 LOGGED BY: V.R.W.

DESCRIPTION & REMARKS: 0-3" BGS Asphalt @ 1418hrs
@ 3" - Brown to tan fine sand w/ gravel - RAD HITS -
3'-8' - SAND (Gill) and GRAY SAND with some WOODEN debris - telephone poles
water table - 8'
No drums, No UXO, Some RAD impacted soil

PLAN VIEW SKETCH OF TRENCH:



HORIZONTAL SCALE: 1-2'

VERTICAL EXAGGERATION: 1-2'

ORIENTATION: N-S

ATTACHMENT B-2

ALAMEDA POINT RESTORATION ADVISORY BOARD RULES OF OPERATION

(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 121 (f), and 10 U.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 RAB 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.

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

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

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 be automatically 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 to the ARRA/City Council no later than 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 Repositories (listed below).

8. The Navy will arrange for a timely presentation of current documents at RAB meetings for review and comment.

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 by RAB members, and membership to the group will be by self-nomination. Each focus group will have a chair that is a member of RAB. 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.

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 Repositories.

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

12. The Navy has established two information repositories for public documents relating to environmental restoration activities at Alameda Point and will maintain them. RAB members are expected 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. These repositories are located at:

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

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

D. Membership

1. RAB community membership is approximately 20 members. The community membership shall serve without compensation. The RAB shall consist of the following:
   a. Designated representatives of the Navy Federal and State Regulatory agencies.
   b. Designated representatives of the ARRA/Alameda City Council, Alameda Unified School District School Board, and Alameda Development Services Department.
   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.

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 regular meetings. If any member has four or more unexcused absences in a calendar year, he or she will be automatically removed from 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 that their appointed representative(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 are 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.

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:
   a. Willingness to meet the purpose of the RAB.
   b. Ability to work effectively and cooperatively with other RAB members.
   c. Ability to make a positive contribution to the RAB by virtue of experience, education, community interest or area of expertise.
   d. Willingness to serve for a minimum of two years.
   e. No apparent conflict of interest.

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

F. Voting

The following general process will be followed:

A. A motion must be made and seconded by a RAB member, (or their alternate).

B. The RAB members will hold discussion on the matter.

C. The community will be afforded a reasonable amount of time to add comment on the matter, if requested.

D. The motion will be put forth for a vote by the RAB members, (or alternates).

E. Members who become aware of a potential conflict of interest will abstain from voting.

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 dissolution of RAB according to Department of Defense RAB proposed Rules Section 202.10 RAB Adjournment and Dissolution.

I. Signatories to the RAB Rules of Operation

Community co-chair, Jean Sweeney

Vice Community co-chair, Jim Sweeney

Navy co-chair, Thomas L. Macchiarella

DTSC Representative, Marcia Liao

RWQCB Representative, Judy Huang

USEPA Representative, Anna-Marie Cook

NAS ALAMEDA
RESTORATION ADVISORY BOARD

MISSION STATEMENT

The mission of the Alameda Point Restoration Advisory Board is to encourage and facilitate the participation of the community in the environmental cleanup decision making process. The RAB's goal is to ensure that the cleanup of Alameda Point: 1) protects human and ecological health; 2) responds to the diverse interests, needs, and concerns of the community; and 3) promotes environmental restoration to the greatest extent possible in a manner that facilitates timely transfer of the base to civilian and public use.

The RAB endeavors to achieve its mission and goals by pursuing the following objectives:

- *to serve as a forum for effective communication and consensus building among the community, the Navy, and the environmental agencies on cleanup issues*
- *to promote community awareness and to educate and inform the community on issues related to the cleanup process*
- *to review and comment on cleanup activities, documents and plans*
- *to assist in the identification and resolution of environmental issues in a manner satisfactory to the community*

ATTACHMENT B-3

LIST OF REPORTS AND CORRESPONDENCE RECEIVED DURING JANUARY 2009

(1 page)

Restoration Advisory Board

Documents and Correspondence

Received January 2009

Documents

1. December 30, 2008 "Final Record of Decision, IR Site 20, Alameda Point, Alameda, CA

2. December 30, 2008 "Final Record of Decision, IR Site 31, Alameda Point, Alameda, CA

3. January 22, 2009, "Draft Work Plan for Indoor Air, Outdoor Air and Soil Gas Sampling, Alameda Point, Alameda, CA

4. January 23, 2009, "Final Sampling Analysis Plan Ad Hoc Sampling Task to Address Data Gaps at IR Sites 2, 4, 34 and 35, Alameda Point, Alameda, CA", prepared by SulTech for BRAC Program Management Office West

Correspondence

1. December 17, 2008, "Comments on Revised Final Feasibility Study Report, IR Site 2, West Beach Landfill and Wetlands, Alameda Point, Alameda, CA" letter from Ms. Dot Lofstrom, PG, DTSC to Mr. George Patrick Brooks, BRAC Program Management Office West

2. January 5, 2009, "Memorandum to File for Non-significant Post-ROD Modification to Final Remedial Design for IR Site 26, Alameda Point, Alameda, CA" letter from Mr. George Patrick Brooks to Ms. Anna-Marie Cook US EPA, Ms. Dot Lofstrom, PG, DTSC and Mr. John West, Regional Water Quality Control Board

ATTACHMENT B-4

INSTALLATION RESTORATION SITE 2, FINAL FEASIBILITY STUDY PRESENTATION HANDOUTS

(9 pages)

Welcome

Installation Restoration Site 2
West Beach Landfill And Wetlands
Alameda Point, California

Final Feasibility Study Presentation

5 February 2009

Presentation Outline

- FS Outline
- Remedial Action Objectives (RAOs)
- Summary of FS Remedial Alternatives
- Comparative Analysis of Remedial Alternatives
- Significant Changes Between Draft and Final FS
- Preferred Remedial Alternative
- Planned Path Forward

IR Site 2 FS Outline

- Section 1 – Introduction
- Section 2 – Site Setting and Description
- Section 3 – Remedial Action Objectives (RAOs)
- Section 4 – Remediation Technologies
- Section 5 – Remedial Alternatives
- Section 6 – Summary and Conclusions

IR Site 2 Remedial Action Objectives

- Protect sensitive human receptors, avian species, and mammal species from exposure to contaminants of concern (COCs) in surface soil in the landfill and wetland portions of the site;
- Protect viable wetland area in the southwest portion of the site from impacts associated with the landfill;
- Protect sensitive human receptors from exposure through external radiation from surface soil in the landfill and wetland portions of the site; and
- Protect beneficial uses of surface water in San Francisco Bay from the potential for discharge of site groundwater containing COCs.

* Note: see Section 3.2.1 of the Final FS dated October 23, 2008 for a complete listing of Remedial Action Objectives

Summary of FS Remedial Alternatives

Soil Remedial Alternatives

1. ***No Action***
2. ***Multilayer Soil Cover, Engineering and Institutional Controls (ICs), and Monitoring***
3. ***Engineered Cap, Engineering and ICs, and Monitoring***
4. Focused Removal and Backfill, Dewatering, Disposal, Multilayer Soil Cover, Engineering and ICs, and Monitoring
5. Focused Removal and Backfill, Dewatering, Disposal, Engineered Cap, Engineering and ICs, and Monitoring
6. ***Near-Complete Removal and Backfill, Dewatering, Engineering and ICs, Disposal, and Monitoring***

Groundwater Remedial Alternatives

1. ***No Action***
2. ***Monitored Natural Attenuation and Engineering and ICs***
3. ***Hydraulic Barrier, Pump and Treat, Disposal, Monitored Natural Attenuation, and Engineering and ICs***

Alternatives shown in ***bold and italicized text*** were carried into the detailed analysis of the FS Report.

Comparative Analysis of Soil Alternatives

Comparative Analysis of Soil Alternatives for IR Site 2

NCP Criterion	Soil Alternative			
	1 No Action	2 Multilayer Soil Cover	3 Engineered Cap	6 Near-Complete Removal
Protective of Human Health and the Environment	NO	YES	YES	YES
Compliant with ARARs	NE	YES	YES	YES
Long-term Effectiveness and Permanence	○	●	●	●
Reduction of Toxicity, Mobility, and Volume through Treatment	○	○	○	○
Short-term Effectiveness	○	●	●	◑
Implementability	○	●	◑	○
Cost ($M)*	($0)	($21)	($47)	($900)
State Acceptance	To be evaluated during Proposed Plan review process			
Community Acceptance	To be evaluated after public comment period on Proposed Plan			
Notes: * = cost evaluation is based on net present value	NE = not evaluated because no action does not trigger evaluation of criteria. M = millions.		Relative Performance: ○ Low ◑ Medium ● High	

Comparative Analysis of GW Alternatives

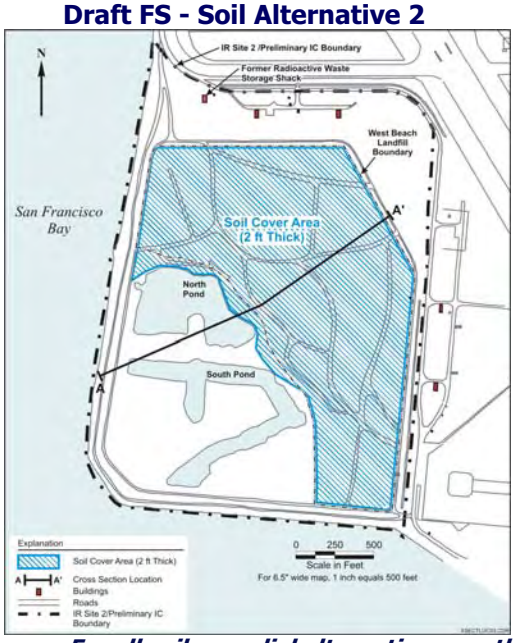
Comparative Analysis of Groundwater Alternatives for IR Site 2			
NCP Criterion	Groundwater Alternative		
	1 No Action	2 Monitored Natural Attenuation	3 Hydraulic Barrier
Protective of Human Health and the Environment	NO	YES	YES
Compliant with ARARs	NE	YES	YES
Long-term Effectiveness and Permanence	○	●	●
Reduction of Toxicity, Mobility, and Volume through Treatment	○	◑	●
Short-term Effectiveness	○	●	◑
Implementability	○	●	◑
Cost ($M)*	($0)	($6.5)	($23)
State Acceptance	To be evaluated during Proposed Plan review process		
Community Acceptance	To be evaluated after public comment period		
Notes: * = cost evaluation is based on net present value	NE = not evaluated because no action does not trigger evaluation of criteria. M = millions.	Relative Performance: ○ Low ◑ Medium ● High	

Significant Changes Between Draft and Final FS

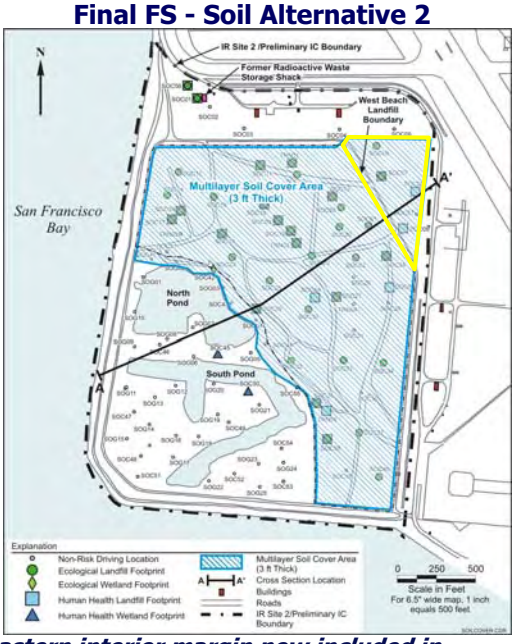
- ***Remediation Footprint –*** expanded to include the northeast interior margin to address comments from U.S. EPA, Peter Strauss, Water Board, Golden Gate Audubon Society (GGAS), DTSC, and the RAB
- ***Soil Cover/Engineered Cap Thickness –*** increased from 2-feet to 3-feet thick and incorporated an animal intrusion layer based on comments from U.S. EPA, DFG, GGAS, and DTSC; engineered cap incorporated into detailed alternatives analysis in the Final FS to address comments from DTSC
- ***Wetlands Mitigation -*** potential for wetland impacts acknowledged and subsequently addressed by incorporating wetlands construction to resolve comments from U.S. EPA, Peter Strauss, DFG, Water Board, GGAS, and the RAB
- ***Groundwater Data Analysis*** - nature and extent of groundwater contamination and monitored natural attenuation as a reasonable groundwater remedial strategy was evaluated in great detail to address comments from U.S. EPA, Water Board, Peter Strauss, GGAS, DTSC, and the RAB
- ***Cost*** – reviewed the reasonableness of draft cost estimates and revised accordingly to address comments from U.S. EPA, Peter Strauss, and the RAB

Remediation Footprint Changes from Draft to Final FS

Draft FS - Soil Alternative 2



Final FS - Soil Alternative 2

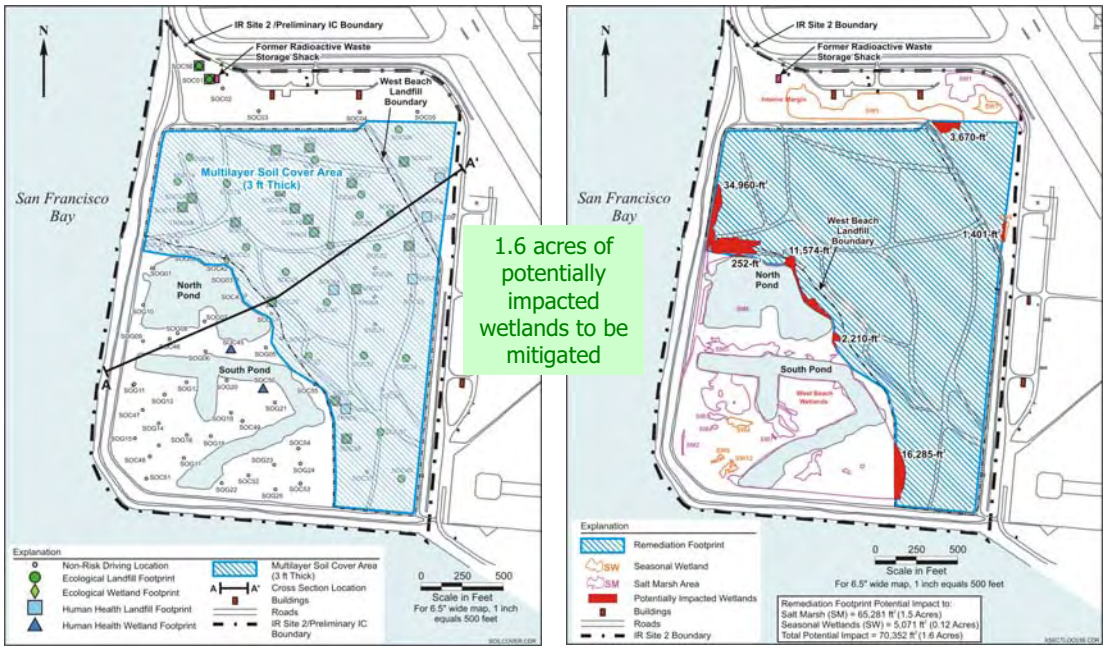


For all soil remedial alternatives, northeastern interior margin now included in remediation footprint; remedial action will be flexible enough to respond to conditions at the eastern site boundary

West Beach Wetlands

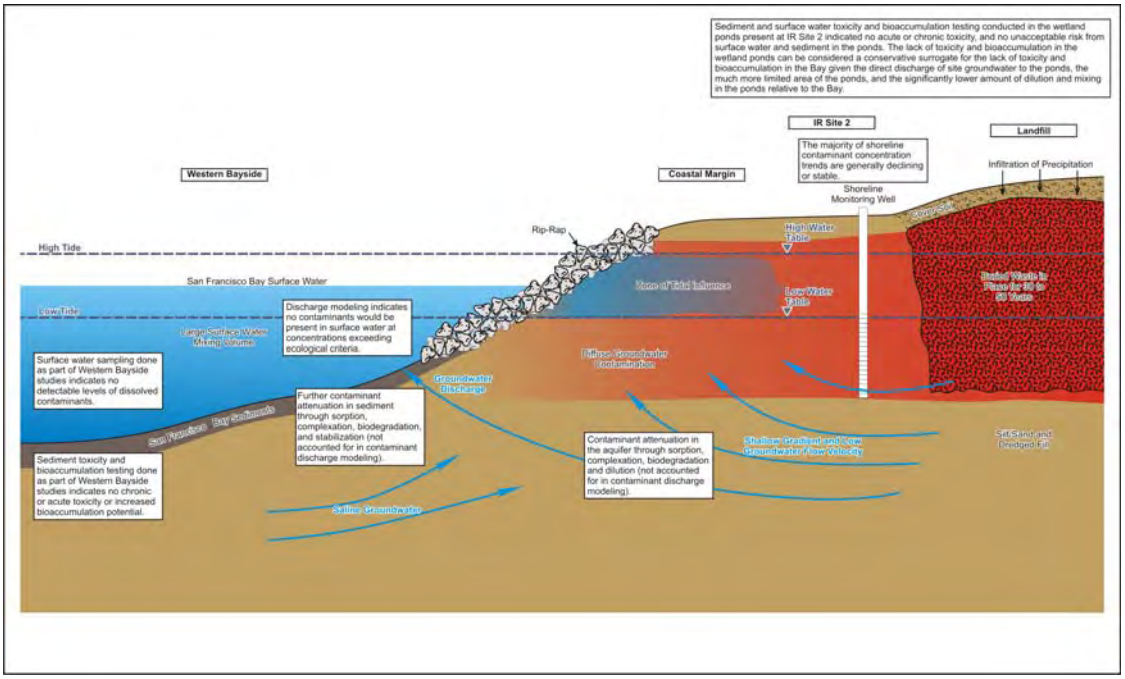
Wetland Mitigation
Changes from Draft to Final FS

Soil Alternative 2



1.6 acres of potentially impacted wetlands to be mitigated

Groundwater Discharge to Surface Water
Conceptual Site Model (CSM)



Groundwater Data Analysis
Changes from Draft to Final FS

- **Long-term Contaminant Trend Analysis**:
  - Comprehensive analysis confirms there is minimal groundwater impact at the IR Site 2 shoreline.
  - Long-term trends show contaminant levels are stable or declining.
  - Results indicate no significant ongoing source of contamination to groundwater, or that the groundwater system at IR Site 2 is at least at steady-state with respect to contaminants.
- **IR Site 2 Groundwater Data:** There is a general absence of PCBs and chlorinated VOCs in IR Site 2 groundwater, certain metals concentrations in IR Site 2 groundwater are consistent or below observed background conditions.

Groundwater Data Analysis
Changes from Draft to Final FS (cont'd)

- **IR Site 2 Pond and Western Bayside Characterization:** IR Site 2 wetland pond and offshore (i.e., Western Bayside) toxicity and bioaccumulation, as well as the conclusions for the Western Bayside site, directly support that there is no material threat to San Francisco Bay from groundwater discharging IR Site 2 that would require an active groundwater remedy as opposed to monitored natural attenuation.

Bioaccumulation/Toxicity Test System

Bioaccumulation Test of South Pond Sediment

Groundwater Data Analysis
Changes from Draft to Final FS (cont'd)

- **Waste Saturation:** Physical site conditions and historical waste disposal practices suggest that the buried waste mass has been in nearly constant contact with groundwater and/or infiltrating precipitation. This suggests that the buried waste mass is at steady state with groundwater and there is no continuing source of contamination.
- **Contaminant Discharge Modeling:** Contaminant discharge modeling was performed to predict the concentrations of contaminants that would be expected in the Bay given known concentrations in shoreline groundwater. Assuming conservative input parameters for the discharge model, no contaminants were found to exceed applicable surface water criteria following discharge to San Francisco Bay.
- **Beneficial Use of IR Site 2 Groundwater and Regulatory Guidance on Monitored Natural Attenuation:** IR Site 2 groundwater is not designated as a potential drinking water source, and available regulatory guidance on the proper consideration and application of monitored natural attenuation as a groundwater remedy supports its use at IR Site 2.

Remedial Alternative Costs
Changes from Draft to Final FS

Summary of Changes in Cost Estimates for Soil Alternatives From Draft to Final FS

Soil Alternatives	Cost [(a)]
1. No Action	N/A
2. Multilayer Soil Cover, Engineering and ICs, and Monitoring	($10,978,000) $21,020,000
3. Engineered Cap, Engineering and ICs, and Monitoring	($32,755,000) $46,547,000
4. Focused Removal and Backfill, Dewatering, Disposal, Multilayer Soil Cover, Engineering and ICs, and Monitoring	($28,070,000) $41,001,000
5. Focused Removal and Backfill, Dewatering, Disposal, Engineered Cap, Engineering and Institutional Controls, and Monitoring	($49,874,000) $66,526,000
6. Complete Removal and Backfill, Dewatering, Engineering and Institutional Controls, Disposal, and Monitoring	($198,895,000) $903,001,000

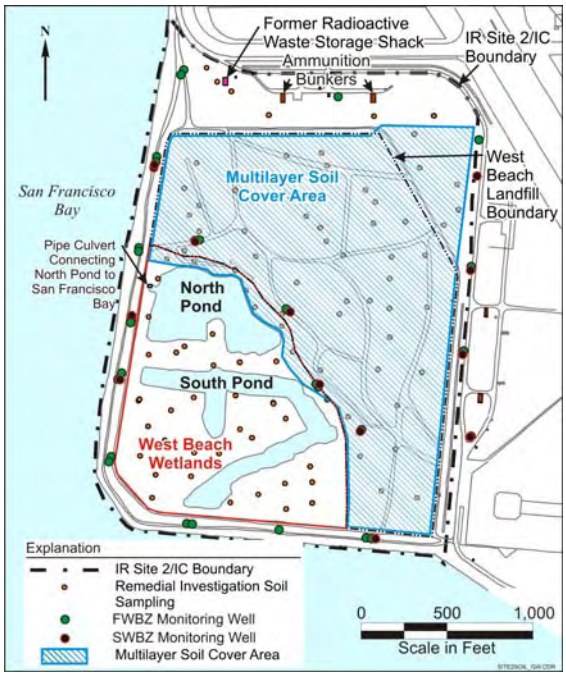
Summary of Changes in Cost Estimates for GW Alternatives From Draft to Final FS

GW Alternatives	Cost[(a)]
1. No Action	N/A
2. Monitored Natural Attenuation and Engineering and Institutional Controls	($4,813,000) $6,452,000
3. Hydraulic Barrier, Pump and Treat, Disposal, Monitored Natural Attenuation, and Engineering and Institutional Controls	($11,477,000) $23,122,000

(a) Cost is based on a Net Present Value calculation using a 3% discount rate and assuming a 30-year remediation duration.

Preferred Remedial Alternative

- **Soil:** Install a **multilayer soil cover** to isolate buried waste and soil contaminants, and prevent animal burrowing; implement **engineering controls and ICs** to protect human health and the soil remedy itself; **mitigate and enhance existing wetlands**; and **monitor** the soil cleanup action and wetlands mitigation to ensure its proper construction and long-term effectiveness. Conduct **methane gas monitoring** as appropriate.
- **Groundwater:** Conduct m**onitored natural attenuation** for site groundwater by regularly monitoring groundwater quality using an extensive network of groundwater monitoring wells; and implement **engineering controls and ICs** to protect human health and the groundwater remedy itself.



Planned Path Forward

- Proposed Plan to be distributed for public review in March or April 2009
- RAB presentation on first Thursday in April or May 2009
- Public meeting after the RAB meeting
- Develop Record of Decision along with responsiveness summary to address public comments

ATTACHMENT B-5

OIL WATER SEPARATOR REMOVAL PHOTOGRAPH

(1 page)

ATTACHMENT B-6

NAVAL WEAPON STATION TREASURE ISLAND, ENVIRONMENTAL CLEANUP PROGRAM, DOCUMENT TRACKING SHEET

(4 pages)

Naval Station Treasure Island
Environmental Cleanup Program
Document Tracking Sheet
December 2008 - April 2009

			INTERNAL DRAFT				DRAFT										RTC				INTERNAL FINAL				FINAL		
									Agency Comments																		
Item	Document Title & Information	CTO/DO	Internal Draft Due to Navy		Navy Comments Due		Draft to Agencies		Date Due	DTSC	Water Board	EPA	TIDA	RAB	OTHER	Priority Level	Preliminary RTCs to Agencies		Resolve and Concur on RTCs		Internal Final to Navy		Navy Comments Due		Final to Agencies		Comments
	SulTech - Non Petroleum Related Documents																										
	Site 32 Remedial Investigation Report RPM: Scott Anderson PM: Christopher Ohland	94	08/18/06	✓	09/17/06	✓	10/20/06	✓	02/14/07	✓	✓	✓	✓		✓		07/27/07	✓	NA		08/29/08	✓	09/26/08	✓	10/28/08	✓	
1	**Site 33 Remedial Investigation Report** RPM: Scott Anderson PM: Kevin Hoch	103	09/07/06	✓	10/16/06	✓	10/17/08	✓	11/26/08		✓		✓			3	12/24/08		01/07/09		01/21/09		01/31/09		02/14/09		
2	**Sites 8, and 29 Interim RI Report** RPM: James Whitcomb PM: John Warmerdam	104	07/23/07	✓	08/10/07	✓	11/19/07	✓	12/19/07	✓	X	✓	✓				09/22/08	✓	10/22/08	✓	12/12/08		12/16/08		12/30/08		Water Board deferred to DTSC by email 1/15/2008.
3	**Site 28 Revised Remedial Investigation Report** RPM: James Whitcomb PM: John Warmerdam	104	NA	✓	NA	✓	NA	✓	NA	✓	X	✓	✓				09/22/08	✓	10/22/08	✓	12/12/08		12/16/08		12/30/08		Site 28 Revised RI was separated from Sites 8 and 29 Data Summary for the Internal Final and Final versions.
4	**Site 21 Feasibility Study** RPM: Scott Anderson PM: Jean Michaels	144	7/28/08* 9/30/08**	✓ ✓	9/10/08* 10/22/08**	✓	11/10/08	✓	12/10/08							1	TBD		TBD		TBD		TBD		TBD		* Navy technical review ** Navy legal review
	Soil Gas Investigation SAP RPM: James Whitcomb PM: John Warmerdam	117	04/11/08	✓	05/28/08	✓	06/04/08	✓	06/17/08	✓	✓	✓	✓				09/26/08	✓	10/09/08	✓	11/03/08	✓	11/05/08	✓	11/18/08	✓	
5	**Site 27 Feasibility Study** RPM: Charles Perry PM: Katie Henry	43	09/24/08	✓	11/07/08	✓	12/19/08		01/18/09								02/15/09		03/01/09		03/17/09		03/27/09		04/10/09		Navy legal and technical reviews to occur concurrently.
6	**Soil Gas Investigation Tech Memo** RPM: Charles Perry PM: John Warmerdam	117	02/24/09		03/10/09		03/17/09		03/31/09								04/14/09		TBD		04/14/09		04/28/09		05/05/09		
	Sullivan Consulting Group - Non Petroleum Related Documents																										
	2007 Annual Groundwater Status Report, Site 12 RPM: James Whitcomb Hannah Thompson	CLIN0002	05/30/08	✓	06/17/08	✓	07/03/08	✓	09/12/08	✓	✓	X	✓				11/07/08	✓	11/19/08		11/21/08	✓	12/01/08	✓	12/10/08	✓	
7	**2007 Annual Groundwater Status Report, Sites 6 and 25** RPM: James Whitcomb Hannah Thompson	CLIN0002	06/20/08	✓	09/02/08	✓	09/05/08	✓	11/12/08	X	X	X	✓				12/02/08		NA		12/17/08		12/27/08		01/07/09		EPA will not comment per eamil 9.16.2008 DTSC no comments 10.20.2008

Naval Station Treasure Island
Environmental Cleanup Program
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December 2008 - April 2009

			INTERNAL DRAFT		DRAFT									RTC		INTERNAL FINAL		FINAL	
						Agency Comments													
Item	Document Title & Information	CTO/DO	Internal Draft Due to Navy	Navy Comments Due	Draft to Agencies	Date Due	DTSC	Water Board	EPA	TIDA	RAB	OTHER	Priority Level	Preliminary RTCs to Agencies	Resolve and Concur on RTCs	Internal Final to Navy	Navy Comments Due	Final to Agencies	Comments
	Shaw Group																		
	Site 12 Work Plan for Arsenic in Groundwater Pilot Study RPM: Scott Anderson PM: Pete Bourgeois	FZN1	09/27/07 ✓	10/29/07 ✓	11/15/07 ✓	12/21/07	✓	✓	X	✓				10/08/08 ✓	10/24/08 ✓	TBD	TBD	10/31/08	EPA deferred comments to DTSC/Water Board via email 1/11/2008.
8	**PCB Field Activity Report** RPM: Scott Anderson PM: Pete Bourgeois	FZN1	08/05/08 ✓	09/08/08 ✓	09/11/08 ✓	10/24/08	✓	X	X	✓				TBD	TBD	TBD	TBD	TBD	EPA deferred comments to DTSC. Water Board deferred comments to DTSC.
9	**PCB Soil Abatement Parcel T-111/Site 32 Work Plan** RPM: Scott Anderson PM: Pete Bourgeois	FZN1	11/24/08 ✓	01/05/09	01/15/09	02/14/09								TBD	TBD	TBD	TBD	02/11/09	
	Tetra Tech EM Inc.																		
10	**Island Times Newsletter #15** RPM: Charles Perry PM: Marcie Rash	FZN6	12/09/08	12/23/08	01/09/09	01/23/09								NA	NA	01/30/09	02/06/09	02/13/09	
11	**Fact Sheet: Radiological Program Update** RPM: James Whitcomb PM: Marcie Rash	FZN6	TBD	TBD	TBD	TBD								TBD	TBD	TBD	TBD	TBD	
12	**Site 12 Radiological Risk Assessment** RPM: James Whitcomb PM: Marcie Rash	FZN6	09/24/08 ✓	10/07/08 ✓	10/07/08 ✓	10/31/08				✓			2	TBD	TBD	TBD	TBD	TBD	The version sent 10/7/08 is really a Draft Final version.
	Site Management Plan RPM: Charles Perry PM: Marcie Rash	FZN6	05/30/08 ✓	06/23/08 ✓	06/27/08 ✓	08/01/08	✓	✓	X	✓				09/05/08 ✓	09/19/08 ✓	10/21/08 ✓	11/17/08 ✓	11/26/08 ✓	
	Barajas & Associates, Inc.																		
13	**Site 30 Record of Decision** RPM: Charles Perry PM: Margaret Berry	25	04/30/08 ✓	08/18/08 ✓	10/17/08 ✓	12/02/08				✓			4	12/30/08	01/06/09	02/05/09	02/12/09	02/19/09	
14	**Site 31 Record of Decision** RPM: Charles Perry PM: Margaret Berry	25	04/23/08 ✓	09/11/08 ✓	10/17/08 ✓	12/02/08				✓			5	12/30/08	01/06/09	02/05/09	02/12/09	02/19/09	
	Site 11 Remedial Investigation Report																		

Naval Station Treasure Island
Environmental Cleanup Program
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						Agency Comments														
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15	RPM: Scott Anderson PM: Margaret Berry	24	01/18/08 ✓	10/07/08 ✓	11/06/08 ✓	12/30/08								TBD	TBD	TBD	TBD	TBD	
	Tetra Tech EC, Inc.																		
	Final Status Survey for Building 343 RPM: James Whitcomb PM: Brian Maidrand	21	12/26/07 ✓	03/13/08 ✓	04/07/08 ✓	05/07/08 ✓	X	X	✓		✓			05/21/08 ✓	10/27/08 ✓	10/27/08 ✓	10/27/08 ✓	10/31/08 ✓	
	Final Status Survey for Building 344 RPM: James Whitcomb PM: Brian Maidrand	21	01/02/08 ✓	01/31/08 ✓	05/07/08 ✓	07/11/08 ✓	X	X	✓		✓			07/10/08 ✓	10/27/08	10/27/08 ✓	10/27/08 ✓	10/31/08 ✓	
	Scoping Survey Report for Building 233 RPM: James Whitcomb PM: Brian Maidrand	21	01/04/08 ✓	03/13/08 ✓	05/07/08 ✓	07/11/08 ✓	X	✓	✓		✓			09/23/08 ✓	10/27/08	10/27/08 ✓	10/27/08 ✓	10/31/08 ✓	
	Chadux and Tetra Tech JV																		
16	**Site 12 EE/CA** RPM: Jim Whitcomb PM: John Warmerdam	44	01/23/09	02/22/09	03/08/09	04/07/09								05/05/09	TBD	TBD	TBD	TBD	

Naval Station Treasure Island
Environmental Cleanup Program
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Abbreviations:

✓ Production or review of document is complete.

X Received notification of no comments or comments deferred to other agency.

Grey shading indicates the document is finalized.

Blue shading indicates agency review comments are due within the next 60 days or are outstanding.

Yellow shading indicates documents that will be issued draft or final within the next 60 days.

CTO = Contract Task Order
DHS = Department of Health Services
DO = Delivery Order
DTSC = Department of Toxic Substances Control
EU = Exposure Unit
HSP = Health and Safety Plan

NA = Not Applicable
PCB = Polychlorinated Biphenyls
PM = Project Manager
RAB = Restoration Advisory Board
RPM = Remedial Project Manager
SAP = Sampling and Analysis Plan

TBD = To Be Determined
TIDA = Treasure Island Development Authority
Water Board = Regional Water Quality Control Board