

**FINAL MEETING MINUTES  
NAVAL STATION TREASURE ISLAND  
SITE 27 CLIPPER COVE SKEET RANGE  
TECHNICAL MEETING**

**May 3, 2005**

These minutes summarize the discussions from the Site 27, Clipper Cove Skeet Range, Response to Comments (RTC) technical meeting for the former Naval Station Treasure Island (NAVSTA TI). The meeting was held at 1:00 p.m. on May 3, 2005, at the Tetra Tech EM Inc. (Tetra Tech) office in San Francisco, California. The agenda and sign-in sheet are included as Attachment 1. The following participants attended the meeting:

Phil Burke	CH2M Hill
Patti Collins	U.S. Environmental Protection Agency (EPA) (via telephone)
Debbie de León	Tetra Tech
Victor Early	Tetra Tech
Alan Friedman	Regional Water Quality Control Board (Water Board)
La Rae Landers	U.S Department of the Navy (Navy) Base Realignment and Closure (BRAC) Program Management Office (PMO) West
Marcie Rash	Tetra Tech
David Rist	Department of Toxic Substances Control (DTSC)
Cindi Rose	Tetra Tech
Keith Sheets	CH2M Hill
James Sullivan	Navy BRAC PMO West

**I. Agenda Review**

La Rae Landers (Navy) reviewed the agenda.

**II. Response to Comments (RTC) on Site 27 Revised Draft Feasibility Study (FS)**

***EPA Comments***

Patti Collins (EPA) said the Navy's RTCs did not adequately address one of EPA's comments on the Revised Draft Site 27 FS, specifically comment number five in the Navy's RTCs. The EPA had commented that the use of the phrase "sediment dredging or disturbance" was not clear and did not specify what other disturbances have been identified and analyzed, and whether both planned and unplanned disturbances to the sediments have been included. In response, the Navy agreed to change the phrase "sediment dredging or disturbance" to "sediment dredging or fill" in all appropriate

sections of the Final Site 27 FS. The Navy also noted in the RTCs that unplanned or natural disturbances were considered not to have any likelihood of occurring.

Ms. Collins emphasized if the Base Realignment and Closure (BRAC) Cleanup Team (BCT) agrees unplanned or natural disturbances are unlikely to occur, a justification of this should be included in the text of the Final Site 27 FS and regular monitoring should be conducted. Ms. Collins suggested the 5-year review might be an appropriate time to conduct monitoring, but it may be necessary to monitor sooner. Ms. Collins said an institutional control (IC) for dredging would prevent planned disturbances without the appropriate procedural processes; however, it would not address unplanned or natural disturbances. Ms. Collins noted the risk at Site 27 is not from the dredging process itself, but from the potential release of lead from the dredged sediments migrating to the surface, where it could be consumed by diving ducks. Ms. Collins said dredging is the most likely cause of lead release, but other potential mechanisms of lead release should be considered.

Ms. Landers noted the implementation of the Remedial Action Plan (RAP) will include monitoring. Ms. Landers said the Navy is examining the possibility of conducting annual reporting for land use controls; however, she suggested the BCT might want to discuss quarterly or semiannual inspections. Alan Friedman (Water Board) asked Ms. Landers what the Navy would be inspecting. Ms. Landers explained there would be visual inspections to ensure there is no unplanned dredging or disturbance at Site 27. Ms. Landers explained the Comprehensive Environmental Response, Liability, and Compensation Act (CERCLA) requires inspections for the enforcement of ICs, and noted if there is major disturbance, either natural or accidental, the CERCLA 103 comeback clause will address the issue.

Ms. Collins specified monitoring should include an evaluation of lead shot staying buried at depth, not just monitoring for the IC of dredging, due to the potential for a natural or unplanned disturbance to go unnoticed. Ms. Collins emphasized a discussion of unplanned and natural disturbances should be included in the Final Site 27 FS. In conclusion, Ms. Collins said the RTCs addressed all of the other EPA comments on the Draft Site 27 FS.

#### ***Water Board Comments***

Mr. Friedman said the Water Board also submitted a comment on the Draft FS suggesting continual monitoring at Site 27 to ensure lead does not become biologically available. Ms. Landers noted Site 27 is a depositional environment, so ongoing monitoring is unnecessary. Ms. Collins said the Navy should include the sediment accretion rate data in the Final FS, but expressed doubt the data could support the argument that lead would remain buried in the sediment indefinitely. Ms. Collins stated if the Navy has data to support no monitoring is needed from the point of the ROD to the 5-Year review that this information needs to be in the FS, but she can't support the assumption to be true that lead shot wouldn't come to the surface in perpetuity.

Mr. Friedman noted the Navy is proposing an IC in the form of a deed restriction. In light of this, Mr. Friedman said he thinks it's best for the lead shot to remain in place, rather than risk a release; however, if this is the course of action taken, the Navy should conduct monitoring to ensure the lead remains buried. Mr. Friedman said it is not sufficient to simply notify future occupants of the presence of lead shot.

Cindi Rose (Tetra Tech) emphasized there is substantial data supporting the continual accretion of sediment at Site 27. Ms. Collins said these data are likely to provide support for reduced monitoring frequency; however, if the remedy is to leave the lead shot undisturbed, there must be verification the remedy is still protective. Mr. Friedman said most protective remedies require periodic evaluations to confirm the remedy remains protective. Ms. Collins further noted the 5-year review requirement is a minimum and cannot be overlooked. Ms. Collins said the Navy has to show evidence that the ICs are working, not just based on historical information. Ms. Collins suggested reviewing the 5-year review requirements to determine what monitoring would have to be done at a minimum.

Ms. Landers said the EPA's and Water Board's request to conduct additional monitoring will need to be discussed with Navy management.

Mr. Friedman thanked the Navy for providing the history of how the Navy has been meeting the Water Board's cleanup requirements through CERCLA and he noted the Navy's position is the substantive requirements of Order Number 93-130 have been met. James Sullivan (Navy) explained when Order Number 93-130 was issued there was consensus among the BCT that Site 27 would be dealt with through the CERCLA process. Mr. Friedman stated he does not have a problem with the BCT's decision to deal with the site through the CERCLA process; however, he noted Order Number 93-130 requires the removal of lead from the cove and adjacent land area. Mr. Friedman said that was the intent of the Order, study the problem and evaluate the removal of the lead; and the Navy's position is that the future land owner can remove it. Mr. Friedman stated although it doesn't matter if the Navy removes the lead shot or the City of San Francisco (City) removes it, the City may not be in agreement with assuming the responsibility for the removal. Phil Burke (CH2M Hill) said the City recognizes the lead shot at Site 27 is a burden the City will have to deal with in the future. Rather than who assumes responsibility for removal, Mr. Friedman noted the Water Board will want assurance that either the City or the Navy will assume financial responsibility.

Mr. Sullivan explained Site 27 is adjacent to a marina that is planned for redevelopment, and is likely to require dredging. Mr. Sullivan noted lead shot would be removed from any portion of the Site 27 footprint that is dredged during redevelopment. David Rist (DTSC) asked Mr. Friedman if the Water Board would be okay with partial dredging of the site. Mr. Friedman said his primary concern was the proper treatment of the lead disturbed by the dredging including lawfully monitoring and disposal, and until that time and including any portion that is not dredged, continued monitoring will need to be done to ensure the lead shot is not brought up to the surface, planned or unplanned. Mr. Rist

asked Mr. Friedman if that will satisfy the Board's Order. Mr. Friedman replied that it would have been better if someone would have rescinded the Order.

Ms. Landers stated there is documentation that the Navy met the requirements to rescinding the Order, but no documentation confirming it was done. Mr. Friedman said the Order can still be rescinded with the proviso that lead would still be dealt with either safely undisturbed or dredged and hauled out. Mr. Rist confirmed that the Water Board is looking for assurance that either the Navy or the City is going to assume financial responsibility for the lead removal. Mr. Friedman replied with the Navy stating this is the City's responsibility and with no statement from the City accepting financial responsibility, and with no monitoring to ensure the lead shot is going to stay buried and unavailable, the Water Board feels like the Navy is walking away from the site.

Mr. Sullivan emphasized that Site 27 would be treated just like any terrestrial CERCLA site leaving contaminants in place. Mr. Sullivan further explained the Record of Decision for Site 27 would address the presence of lead shot and mandate it stays in situ, or is properly removed. Mr. Sullivan and Ms. Landers noted the U.S. Army Corp of Engineers regulates all dredging activities through their permitting process, so the IC at Site 27 is even more protective than a similar IC on land.

Ms. Rose clarified that the requirement for removal of contaminants in Order Number 93-130 was based on risk, and there is currently no complete exposure pathway, and therefore no current risk at Site 27. Mr. Friedman reiterated the Water Board would want verification that either the City or the Navy will assume monitoring and financial responsibility for the lead shot at Site 27. Ms. Landers asked if the Water Board preferred to rescind the Order, and continue through the CERCLA process. Mr. Friedman agreed to discuss the matter with Water Board management.

Ms. Landers said the Navy wants to work with DTSC through the coordination of the Site 27 Proposed Plan and RAP. Ms. Landers asked Mr. Rist if the IC at Site 27 would require an environmental review by DTSC, and Mr. Rist said it would. Ms. Landers also stated the Navy wants to ensure the Site 27 Proposed Plans meets the Water Board's Order RAP requirement and will need to coordinate efforts and schedules with DTSC and the Water Board.

Mr. Friedman reiterated, if the Navy can resolve the monitoring issue that would go a long way in eliminating the Water Board's concerns, knowing at some point the site will be dredged in accordance with the ICs. Phil Burke (Geomatrix) asked the agencies if visual inspections for dredging or disturbance at Site 27 would be sufficient. Mr. Friedman said depth soundings should be conducted to ensure the sediment depth is sufficient to be protective, and Ms. Collins agreed. Mr. Burke asked if the monitoring would occur every 5 years. Ms. Landers explained this is yet to be determined. Ms. Collins noted the monitoring must occur at a minimum interval of 5 years.

Keith Sheets (CH2M Hill) asked at what stage in the CERCLA process the Navy planned to transfer Site 27. Ms. Landers noted the Navy has funded the Site 27 CERCLA process through the ROD. Mr. Sullivan said the requirements of the ROD may be transferred to the City.

Mr. Friedman addressed the Water Board's comment on the toxicity criteria for lead shot. Ms. Rose explained setting a toxicity criteria for risk to diving ducks will not be addressed in the Final FS because there is no complete exposure pathway. Mr. Rist said he needs to check with James Polisini (DTSC) and see if he is OK with the Navy's response to that comment. Ms. Rose noted Dr. Polisini agreed there is no risk to diving ducks unless the sediment is disturbed, and his statement was documented in the February 10, 2000 BCT meeting minutes.

In closing, Mr. Friedman noted it would be easier to rescind Order Number 93-130 if the Navy would provide assurance the lead shot would remain safely buried until such time that it is lawfully dredged and removed.

#### *DTSC Comments*

Mr. Rist said he concurred with the RTCs on the Draft Site 27 FS; however, he said he will need to confer with Dr. Polisini before he can provide an official consensus.

#### *City Comments*

Mr. Rist addressed the City's comment that there is lead shot near the surface of the sediment at Site 27. Ms. Rose said during the 1996 sediment sampling event lead shot was detected within the 0- to 1-foot interval; however, sediment has accreted since that time. Mr. Rist asked about the annual deposition rate at Site 27. Ms. Rose said the long-term management strategy (LTMS) survey and previous hydrographic surveys indicate an average annual deposition rate of 0.5- to 1-inch. Mr. Rist said if there is lead shot in the upper foot and if only 4.5-inches has accreted this may be insufficient to be protective to diving ducks, and he is not sure if Dr. Polisini is still okay with the original risk determination. Ms. Rose stated the 0.5- to 1-inch annual sediment accumulation rate is only an estimate. A review of previous hydrographic surveys estimates an annual accumulation rate of 0.5- to 2-inches and the LTMS survey estimates an annual accumulation rate of 2- to 6-inches.

Mr. Sheets asked about the dredging history of Site 27. Mr. Sullivan said the Navy has been unable to locate any historical documentation of dredging in the main cove since the cove was constructed. Historical dredging permits obtained by the Navy indicted dredging in the southeast corner of the island outside of the cove presumably for the military piers that were there. Mr. Sheets questioned whether the depositional rates at Site 27 are constant.

Mr. Rist asked when the study was conducted that determined Site 27 was a depositional area. Ms. Rose said the LTMS study was conducted in 1996, and noted Site 27 contains substantial quantities of fine-grain sediment, which is indicative of a depositional environment. Mr. Rist stated it can be assumed that at least 9 more inches of sediment has accumulated since 1996. Ms. Rose noted the 1996 sediment sample that resulted in a lead shot detection was a 1-foot composite of a core sample, which does not necessarily indicate the lead shot was present on the surface of the sediment bed.

Mr. Friedman stated he will defer to the experts whether the lead shot is biologically unavailable, if it is, he will go with his conclusion to monitor. If the experts can't agree, Mr. Friedman stated an immediate action will need to be taken. Mr. Rist will check with Dr. Polisini about the Navy's response on this issue. Ms. Landers pointed out that part of this response addresses the Navy's attempt to determine a lead shot toxicity criteria and researched the literature on which it based its recommendation, which is different than the lead shot toxicity criteria DTSC recommends. Since the Navy and DTSC can not agree upon a number of lead shots, and setting a criteria is not needed to evaluate Alternative 3 in the FS, it will not be addressed in the final document. Mr. Rist asked if the toxicity section will be taken out of the document and Ms. Landers confirmed it will be.

Mr. Rist addressed the City's comment on the vertical characterization of 5-feet for Site 27 and the proposed remedial depth of 7-feet for Alternative 3. Ms. Landers stated the 7-foot depth is based on the deepest depth lead shot was encountered, 5-feet, plus an additional amount to account for the potential for lead shot below 5-feet, added depth for sediment accumulation since the 1996 investigation, and an additional amount to ensure over-dredging. In closing, Ms. Rose noted the skeet range was used only for recreational purposes for a period of 10 years.

Mr. Rist addressed the City's comments on the Site 27 FS regarding cost analysis. Ms. Landers explained no other feasible disposal option exists. Mr. Sheets asked why the disposal could not occur in the San Francisco Bay or Pacific Ocean, since the lead concentrations are relatively low. Victor Early (Tetra Tech) explained the EPA would not allow this option because of the presence of lead shot. Mr. Sheets asked about the Navy's justification for not evaluating a limited removal. Ms. Landers explained a limited removal is an alternative motivated by the redevelopment, and the Navy must evaluate alternatives per CERCLA and Department of Defense policy. Mr. Friedman noted any partial removal would leave a portion of the lead exposed. Mr. Burke said it is likely only the near shore areas will require dredging, the center of the cove could be left in situ, and additional sediments could be used to provide any necessary protective cover.

Mr. Sheets asked about the characterization of Site 27, and if there is enough data to evaluate risk, as well as the actual depth of sediment. Ms. Landers said there is no complete exposure pathway because of the significant quantity of deposition and the characterization is sufficient. In closing, Mr. Sheets said there will probably be additional discussions about the assumptions made to determine the sediment

accumulation rates for the larger footprint of the site. Ms. Rose noted the areas with the highest probable shot density at Site 27 have been fully characterized.

### **III. Site 27 Proposed Plan Scoping Meeting**

The meeting participants agreed to delay the scheduling of the Site 27 Proposed Plan scoping meeting until the Navy discusses the monitoring issue with management. Ms. Landers suggested Mr. Rist and she present a brief on the California Health and Safety Code RAP requirements at the next BCT meeting. The Navy will present an outline of the RAP process at the June 7, 2005, BCT meeting.

### **IV. Site 27 Schedule**

Ms. Rose distributed the Site 27 schedule. Ms. Landers noted the schedule will be modified based on the results of today's discussion.

### **V. Action Items**

Navy – Discuss with Navy management long-term monitoring to include depth sounding measurements.

Water Board – Discuss with Water Board management requirements to rescind the Board Order.

DTSC – Follow-up with Dr. Polisini on the Navy's RTC.

Navy – Prepare and present a brief on the California Health and Safety Code RAP requirements.

The meeting was adjourned.

ATTACHMENT 1

AGENDA AND SIGN-IN SHEET

THIS ATTACHMENT WAS NOT RECEIVED IN THE  
RESTORATION RECORDS FILE.

FOR ADDITIONAL INFORMATION, CONTACT:

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