

MINUTES
NAVAL WEAPONS STATION (NAVWPNSTA) SEAL BEACH
RESTORATION ADVISORY BOARD (RAB)
AND COMMUNITY MEETING
September 9, 2003

Participants:

Blake, Geoffrey
Carmody, Jack
Garrison, Kirsten / CH2M HILL
Hamparsumian, Hamlet / Tetra Tech FW, Inc.
Jordan, Jack
Le, Si / Southwest Division, Naval Facilities Engineering Command (SWDIV)
Leibel, Katherine / DTSC
Maylone, Ken
Monroe, Bruce
Peoples, J.P. / RAB Community Co-chair
Schilling, Bob / Bechtel Environmental, Inc.
Smith, Gregg / NAVWPSNTA Seal Beach Public Affairs Officer (PAO)
Stevens, Charles
Stillman, Glenn
Tamashiro, Pei-Fen / NAVWPNSTA Seal Beach and RAB Navy Co-chair
Welz, Ed
Willhite, Lindi
Wong, Bryant / CH2M HILL

WELCOME

At 7:05 p.m., P. Tamashiro, Navy Co-chair began the meeting by welcoming the participants. She introduced G. Smith, NAVWPNSTA Seal Beach Public Affairs Officer (PAO), and K. Leibel, DTSC Remedial Project Manager (RPM).

RAB members were encouraged to direct any questions regarding environmental issues or the Installation Restoration (IR) Program to P. Tamashiro or G. Smith. Participants were encouraged to direct any questions regarding regulatory issues to K. Leibel.

SELF-INTRODUCTIONS

Because there were four new RAB members in attendance, each meeting attendee was asked to give a brief self-introduction.

PROJECT HIGHLIGHTS

After the self-introductions, the RAB meeting continued with a status update on the ongoing IR Program presented by S. Le, the SWDIV RPM for the NAVWPNSTA Seal Beach IR Program. The following sites were discussed:

- Site 7 - Station Landfill, Engineering Evaluation and Cost Analysis (EE/CA) and Action Memorandum (AM)
- SWMU 24 – Station Demilitarization Furnace Facility, Removal Action
- Site 73 - Water Tower Area, Removal Action
- Site 14 - Abandoned Leaking Gasoline Underground Storage Tank (UST), Baseline Groundwater Investigation
- Site 40 - Concrete/Pit Gravel Area and Site 70 - Research, Testing, and Evaluation (RT&E) Area, Groundwater Monitoring Program
- Site 40 and Site 70 Feasibility Study, Proposed Plan (PP), and Record of Decision (ROD)
- Site 40 Pilot Testing
- Site 74 – Skeet Range, Tier II Ecological Risk Assessment
- Site 4 – Perimeter Road; Site 5 – Clean Fill Disposal Area; Site 6 – Explosives Burning Ground; and Site 7 – Station Landfill, Groundwater Monitoring Program

Copies of the Project Highlights slide presentation were made available as handouts at the meeting.

Questions and answers posed during and after the Project Highlights presentation are summarized below:

Slide 4

Question: A substantial amount of money was expended for archaeological recovery at Site 73 (Water Tower Area) but not much in the way of archeological discoveries were found. Was this money wasted?

Answer: Most of the effort associated with archeological data recovery at Site 73 involved cataloging and dating artifacts. Because archeological discoveries were not extensive, the curation budget was not spent, but the fieldwork budget devoted to archaeological data recovery was spent. This money was not wasted, however, because the archaeological data recovery is a requirement and it allowed a better understanding of this archaeological site.

Slide 5

Question: Who is the contractor for Site 14 (Abandoned Leaking Gasoline Underground Storage Tank [UST])?

Answer: GeoSyntech is the contractor at Site 14. They are a new contractor and have never participated in the IR Program at NVWPNSTA Seal Beach before.

GeoSyntech is currently evaluating the risk methyl-tertiary-butyl-ether (MTBE) presents to ecological receptors. They will present the findings of the risk evaluation at the November 2003 RAB meeting and recommend the best available technology based upon the groundwater treatment feasibility study currently being conducted at Site 14.

Question: Is Site 14 old enough to be considered for tetra-ethyl lead contamination? Has Site 14 been tested for this contaminant?

Answer: I believe Site 14 was tested for total lead concentrations; however, the Navy will research the response to this question and provide a complete answer in the meeting minutes.

The following response was obtained after the RAB meeting in response to the above question:

Organic lead results were reported in the 26 July 2000 Final Baseline Survey for Site 14. Organic lead, which would have included tetra-ethyl-lead, if present, was not detected in the soil. Groundwater was tested for dissolved lead. Dissolved lead was reported in only one well at an estimated value of 0.89 microgram per liter, which was below any action level for lead in groundwater.

Slide 12

Question: Are “emergent chemicals” being tested for at Site 14 and other IR Program sites at NAVWPNSTA Seal Beach?

Note: The term “emergent chemicals” is used by the United States Environmental Protection Agency (USEPA) and other regulatory agencies to identify a group of chemicals associated with explosives and solvent release sites. Of particular concern to the Regional Water Quality Control Board is groundwater contamination at former and active military facilities. In California, “emergent chemicals” include N-nitrosodimethylamine (NDMA), Perchlorate, 1,4-Dioxane, Hexavalent chromium, 1,2,3-Trichloropropane (TCP), and Polybrominated diphenyl ether (PBDE).

Answer: The Regional Water Quality Control Board (RWQCB) has asked the Navy to test for “emergent chemicals” and Navy headquarters are determining what IR Program sites should be tested. The Navy works closely with the environmental regulatory agencies (including the RWQCB) regarding the decision-making process. It is a difficult process because many IR Program sites are closed.

We have tested for perchlorate at Site 40 (Concrete/Pit Gravel Area) and Site 70 (Research, Testing, and Evaluation [RT&E] Area) and perchlorate has not been detected at either site.

Hexavalent chromium is not considered an “emergent chemical” by the Navy and has always been tested at groundwater contamination sites where metals are of concern.

Question: The analyses that are required for “emergent chemical” testing could be expensive. Will testing be a blanket requirement for every site?

Answer: “Emergent chemical” testing will not necessarily be conducted at every site, but IR Program sites associated with past explosive use, including munitions, rockets, etc. would be subject to testing. The general rationale that has been applied is that if known historical activities at a site indicate that it is reasonable to suspect the possible presence of an “emergent chemical”, then the Navy will test for it.

RAB Member Comment: I believe testing of “emergent chemicals” has been a blanket requirement for the entire Los Angeles Basin.

Response by P. Tamashiro: The Navy will have to determine whether the regulatory testing requirement is reasonable at all IR Program sites. A review of each site must be conducted to assess if the historical activities of each site indicate that it is reasonable to suspect the possible presence of an “emergent chemical.” Otherwise, the testing of all of these sites may not be the most effective use of the taxpayers’ money.

RAB Member Comment: I believe that the approach the Navy is taking with respect to this issue is really commendable.

PRESENTATION – SITE 40 (CONCRETE PIT/GRAVEL AREA) PILOT TEST UPDATE

P. Tamashiro introduced B. Schilling, Bechtel National, Inc.

Copies of the slide presentation were made available as a handout at the meeting. An additional graphic was provided that illustrated Site 40 and showed the Phase II pilot test area well locations. The questions and answers posed during and after the presentation are summarized below:

Slide 10

Question: Is sodium lactate derived from dairy products?

Answer: No, sodium lactate is not derived from dairy products, but it is used in the food industry. The sodium lactate used at Site 40 (Concrete Pit/Gravel Area) is of food-grade quality and is an environmentally benign product.

Slide 14

Question: The microbes at Site 40 are not selected to consume tetrachloroethene (PCE)?

Answer: The indigenous microbes will preferentially consume the oxygen, nitrogen, iron and sulfates in the groundwater before consuming the chlorinated solvents.

Question: So PCE is the least attractive to the microbes present at Site 40?

Answer: In a manner of speaking, yes. The other competing electron acceptors (oxygen, nitrogen, iron, and sulfates) must be consumed before the chlorinated solvents.

Question: Assuming lactate injection results in complete reductive dechlorination from PCE to ethene and ethane. Aren't these flammable gases with risk of explosion?

Answer: In the case of Site 40, these by-products would be dissolved in the groundwater. Therefore, they would not pose an explosive threat.

The bigger issue is the microbes produce methane gas during the reductive dechlorination process, which can migrate to the soil. The Phase II Pilot Test monitors methane gas production.

Slide 16

Question: So, at this point (in the Phase I Pilot Test), the *Dehalococcoides ethenogenes* were introduced at Site 40 for complete reductive dechlorination?

Answer: No, bioaugmentation with *Dehalococcoides ethenogenes* was not introduced until the Phase II Pilot Test, which we will discuss later in the presentation tonight.

Slide 19

Question: Who manufactures the KB-1™ bacteria?

Answer: KB-1™ is a proprietary product of GeoSyntech Consultants. A wholly owned subsidiary lab of GeoSyntech known as SiREM produces KB-1™.

Question: Are KB-1™ naturally occurring bacteria?

Answer: Yes, the KB-1™ bacteria are naturally occurring. However, this bacteria do not occur at all sites and were found to be absent from Site 40. The bacteria are not genetically altered. The culture was originally obtained from a contaminated site and grown in a lab.

Slide 24

Question: Between the Phase I and Phase II Pilot Tests, did the one-year absence of lactate injection result in a rebound of PCE concentrations at Site 40?

Answer: No, not in this particular well (MW-40-22). PCE buildup was observed in well MW-40-23 which is likely the result of PCE migration into the well from upgradient.

General

Question: The introduction of a foreign species into an ecosystem can often times have undesirable results. What potential changes to the ecosystem could the KB-1™ bacteria bring to Site 40?

Answer: The KB-1™ bacteria have been tested for pathogens, so the potential for affecting human health and ecological receptors is unlikely. The bacteria will remain healthy until the electron donor (sodium lactate) and/or electron acceptor (chlorinated solvent) are no longer present. Once sodium lactate is consumed and/or the electron acceptors are no longer available, the bacteria will die out.

Question: Will the technology learned from bioaugmentation at Site 40 become property of the Navy so that the techniques can be applied to other IR Program sites?

Answer: Yes, the information gained from this pilot test is Navy property and the information learned at Site 40 can be used at other Navy IR Program sites.

Question: Is bioaugmentation at Site 40 cheaper than digging or thermal desorption?

Answer: Because only groundwater contamination remains at Site 40 and some of the groundwater contamination has been found as deep as 66 feet below ground surface (bgs), contaminant removal by digging or thermal desorption is not applicable.

Question: Is lactate-enhanced bioremediation and bioaugmentation a positive technological advancement to the pump and treat technique?

Answer: The Feasibility Study conducted for Site 40 evaluated pump-and-treat remedial technology and concluded that it was not cost-effective and the time to achieve cleanup goals was prohibitive.

Question: Did the pump and treat technique involve some type of carbon treatment?

Answer: Granular activated carbon would typically be used with the pump-and-treat technology designed to remove volatile organic compounds (VOCs) such as chlorinated solvents. The Feasibility Study assumed granular activated carbon treatment.

Question: Are total costs available for the pump-and-treat and lactate-enhanced bioremediation/bioaugmentation remedial alternatives for cost comparison purposes?

Answer: Total costs are presented in the Proposed Plan and Feasibility Study conducted for Site 40.

BREAK

P. Tamashiro announced that there would be a 10-minute break.

PRESENTATION – NON-TIME CRITICAL REMOVAL ACTION – IR PROGRAM SITE 7 AND SITE 4 (AREAS OF POTENTIAL CONCERN 1A AND 2A) STATION LANDFILL AND PERIMETER ROAD)

P. Tamashiro introduced H. Hamparsumian from Tetra Tech FW, Inc.

Copies of the slide presentation were made available as a handout at the meeting. No questions were posed after the presentation, however one comment was received. The questions and answers posed during and after the presentation are summarized below:

Slide 19

Question: Is the final target cleanup goal (TCG) for lead at Site 4 (Perimeter Road) 100 mg/kg?

Answer: No, the lead TCG for Site 4 is 600 mg/kg. Grid cells with lead concentrations exceeding 600 mg/kg will be excavated. After the Removal Action, the average residual lead concentration at Site 4 must be less than 100 mg/kg.

Question: What is 100 mg/kg in parts per million (ppm)?

Answer: They are essentially the same. 100 mg/kg equals 100 ppm.

Question: Isn't 100 ppm above USEPA land disposal restrictions (LDRs)?

Answer: No, the USEPA Preliminary Remediation Goal (PRG) for residential use for lead is 130 mg/kg. The California Resource Conservation and Recovery Act (RCRA) hazardous waste limit for lead in soil is 1,000 mg/kg (i.e., total threshold limit concentration). The LDR standards are for treatment standards of hazardous waste and are not applicable for health risk evaluation.

Slide 23

Question: How will excavation of Site 7, Area 5 (Station Landfill) be accomplished with the tides?

Answer: We have experience from the removal action that was successfully completed at Site 5 (Clean Fill Disposal Area), which was also located in the tidal zone area. We will conduct the removal action at Site 7, Area 5 using methods similar to those used previously at Site 5. The tidal fluctuations will be monitored. We plan to start with the excavation of the inland trench located further east (and away) from Perimeter Pond. Excavation of the west trench will only occur during the lowest tide levels to avoid complications.

Question: However, the maximum excavation depth proposed in this area is 9 feet
hrc?

bgs?

Answer: Yes, the groundwater is tidally influenced in this area. Three to four feet of the trench can be excavated easily. Once the tide recedes, the remaining 5 to 6 feet can then be excavated. An excavator bucket will be used to avoid sediment disturbance.

Question: Will all graded areas be re-seeded for vegetation growth or only portions?

Answer: The Seal Beach National Wildlife Refuge (NWR) Manager, Dr. John Bradley of the U.S. Fish and Wildlife Service, will be consulted for all vegetation restoration activities.

Question: Are the Removal Actions consistent with RWQCB requirements?

Answer: Yes, a Stormwater Pollution Prevention Plan (SWPPP) has been prepared. While it will not be officially submitted and reviewed by the RWQCB, measures outlined in the SWPPP are anticipated to meet agency requirements.

Question: Are the contaminated soils removed at Site 7 subject to USEPA's LDRs?

Response by P. Tamashiro: The USEPA's LDRs are standards required to be followed for RCRA hazardous waste. If the contaminated soils removed at Site 7 are classified as RCRA hazardous waste, the USEPA's LDRs will apply.

COMMUNITY FORUM

For the benefit of new RAB members, P. Tamashiro explained the document review process for the IR Program.

- Every RAB member will receive a copy of the draft IR Program documents.
- Review periods for most draft documents are 60-days, however for expedited projects the Navy may request a shortened review period (usually 30 days). The cover letter provided with each draft IR Program document will clearly specify the comment period and due date.
- Comments to draft IR Program documents should be forwarded to P. Tamashiro via U.S. Mail or e-mail. RAB members are not required nor should they feel obligated to provide comments. P. Tamashiro indicated that comments provided should be constructive and aimed at positive resolution of the issue.
- The Navy will provide specific responses to comments that cannot be complied with. Responses to draft IR Program document comments will be provided all at once within a certain period of time (usually dependent upon responses to regulatory agency comments, which may take longer to develop).
- Final IR Program documents are provided to the RAB Navy Co-chair and RAB Community Co-chair. Final IR Program documents are also available at the Seal Beach Public Library, Mary Wilson Branch. RAB members and other interested parties can make copies of Final IR Program documents sited at these locations.

The following questions were posed after the IR Program document review process explanation:

Question: Pei-Fen, is your office located in Cypress?

Answer: No, I am a Navy employee. My office is located at NAVWPNSTA Seal Beach.

P. Tamashiro explained to the RAB meeting attendees that the purpose of the Community Forum is to address community questions or concerns related to the IR Program. She indicated that each RAB meeting would contain discussion time for this purpose. If questions or concerns cannot be responded to immediately, discussions will be carried over to the next RAB meeting.

P. Tamashiro continued the Community Forum by announcing the next scheduled RAB meeting would take place at 7:00 p.m. on the second Tuesday of November (November 11, 2003). A meeting notice will be distributed to all RAB members announcing the meeting time and location. P. Tamashiro indicated it would likely be held at the Seal Beach City Council Chambers again. (Because November 11 falls on a holiday, the next meeting is changed to November 12, 2003.)

P. Tamashiro requested feedback from the RAB members on whether using the Seal Beach City Council Chambers or NAVWPNSTA Seal Beach was preferred as a RAB meeting location.

L. Willhite indicated that during future RAB meetings at the Council Chambers, the public restrooms should be left unlocked. In addition, she indicated that coffee would be appreciated.

No other comments were made.

P. Tamashiro announced that beginning in January 2004, IR Program training sessions would be held for new and returning RAB members. The training sessions are intended to educate RAB members on common environmental laws and risk assessment methods. The 30-minute presentations are intended to help with review of IR Program documents.

ADJOURNMENT

P. Tamashiro concluded the meeting by thanking the participants for attending. The meeting was adjourned at 8:58 p.m.

Note: This is a meeting summary, not an actual transcript.