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MINUTES  
NAVAL WEAPONS STATION (NAVWPNSTA) SEAL BEACH  
RESTORATION ADVISORY BOARD (RAB)  
AND COMMUNITY MEETING  
June 12, 2002

Participants:

Bradley, John / United States Fish and Wildlife Service  
Carmody, Jack  
Chatters, Jim / Foster Wheeler Environmental Corporation  
Foreman, Kim / Department of Toxic Substances Control (DTSC)  
Garrison, Kirsten / CH2M HILL  
Hamparsumian, Hamlet / Foster Wheeler Environmental Corporation  
Le, Si / Southwest Division, Naval Facilities Engineering Command (SWDIV)  
Leibel, Katherine / DTSC  
Smith, Gregg / NAVWPSNTA Seal Beach Public Affairs Officer (PAO)  
Voce, Mario  
Welz, Ed  
Willhite, Lindi / RAB Community Co-chair  
Wong, Bryant / CH2M HILL

WELCOME

At 7:05 p.m., S. Le, the Remedial Project Manager (RPM) from SWDIV Engineering Command, began the meeting by welcoming the participants. S. Le explained that he would be sitting in for Pei-Fen Tamashiro, the Navy Co-Chair, who was in training all week and would not return until the following week. S. Le introduced L. Willhite, the Community Co-chair, and G. Smith, the Public Affairs Officer (PAO) for NAVWPNSTA Seal Beach.

Participants were encouraged to direct any community relations issues to P. Tamashiro or G. Smith, who can be contacted via telephone or e-mail.

S. Le announced that the meeting would proceed with the Installation Restoration Program (IRP) Project Highlights, followed by two presentations: Non-Time Critical Removal Action at Installation Restoration (IR) Site 73 (the former Water Tower Area) and Non-Time Critical Removal Action at Solid Waste Management Unit (SWMU) 24 (the former Stationary Demilitarization Furnace site). The presentations would be followed by the Community Forum discussion.

PROJECT HIGHLIGHTS

S. Le provided the RAB with an overview of the progress at the NAVWPNSTA Seal Beach's IRP sites. The following sites were discussed:

- Site 5- Fill Disposal Area, Removal Action
- Site 7 - Station Landfill, Engineering Evaluation and Cost Analysis (EE/CA) and Action Memorandum (AM)
- Site 73 - Water Tower Area, EE/CA and AM

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- SWMU 24 - Demilitarization Facility, EE/CA and AM
  - Site 14 - Abandoned Leaking Gasoline Underground Storage Tank (UST), Baseline Groundwater Survey 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, and Record of Decision (ROD)
  - Site 40 and Site 70, Treatability Study
  - Site 74 - Skeet Range, Tier II Ecological Risk Assessment

Copies of the Project Highlights slide presentation were made available as handouts at the meeting. Questions and answers made during the presentation are summarized below:

**Slide 8**

**Question:** When was the underground storage tank (UST) at Site 14 removed ?

**Answer:** I am not sure, but I believe it was removed in the mid- to late- 1980s.

*Later the Site Management Plan was consulted which indicated that three USTs were removed from the Site 14 area in 1983 based on base records.*

**Question:** Was MTBE (methyl-tertiary-butyl-ether) used at that time?

**Answer:** It was primarily used in the 1990's as an oxygenate.

*After the meeting, it was determined that MTBE was used in the United States since 1979, usage increased in the 1980s, and dramatically increased in the 1990s.*

**Question:** It is strange that MTBE is present in the groundwater at Site 14 if use of the chemical didn't occur until the 1990's and the UST was removed in the late 1980's. This indicates a recent introduction of the chemical, or possibly false positives in the laboratory?

**Response by H. Hamparsumian:** The concentrations of MTBE seen in the groundwater samples could not have been the result of laboratory contamination. The concentrations of MTBE were too high. MTBE concentrations at the center of the groundwater plume were found to be 1,200 microgram per liter ( $\mu\text{g/L}$ ) and concentrations along the outer edge of the groundwater plume were found to be 130-150  $\mu\text{g/L}$ .

**Question:** Do we have any idea how the MTBE contamination was introduced at Site 14?

**Answer:** We will research when MTBE was introduced on-site. Use of the UST was discontinued after the tank was found to have leaked gasoline. The leak was discovered during an evaluation of subsoil properties prior to the replacement of the tank with two new fiberglass fuel-storage tanks.

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*As noted above, MTBE has been used in the United States since 1979, so it is possible that the MTBE found at the site is attributable to the former USTs there.*

**Slide 10**

**Question:** Is lactate bioremediation an experimental? Do we have many success stories?

**Answer:** Lactate bioremediation is a leading edge technology; however, we do have some success stories. A large scale test was conducted at the Idaho National Engineering and Environmental Laboratory (INEEL) in Idaho Falls.

It seems that the enhanced lactate bioremediation for Site 40 has biodegraded the parent product, perchloroethene (PCE), to trichloroethene (TCE), which has been biodegraded to dichloroethene (DCE). At this point we have not been able to biodegrade the DCE any further, but ultimately, the goal is to create harmless byproducts (i.e. carbon dioxide, chloride, and water). We now believe that Site 40 soils and groundwater do not contain the proper micro-organisms to achieve complete biodegradation to the desired level. Discussions concerning introduction of these micro-organisms have begun.

**Question:** So there are specific micro-organisms that must be present for the technology to work and they are not currently present at Site 40?

**Answer:** Right. Initially, it was thought that the conditions at Site 40 were similar to those at INEEL and complete biodegradation through enhanced lactate bioremediation would be possible. Since this time, specific micro-organisms present at Site 40 were identified through DNA identification. The micro-organism population present at Site 40 do not appear to be as diverse as those present at INEEL. On June 27<sup>th</sup>, the Navy and its contractor are meeting with the regulators to discuss these findings and talk about the results of the feasibility study at Site 40 and propose additional testing.

**Question:** Does the site in Idaho Falls have similar soil chemistry to Site 40?

**Answer:** Yes, the sites have similar soil conditions.

**Question:** It is surprising that the site in Idaho Falls would have a similar saline content to Site 40, considering the proximity of Site 40 to the Pacific Ocean.

**Answer:** I am not sure if the similarities between the two sites were physical or biological.

**Question:** So the two sites have similar substrate chemistry, but not similar microbiology? There are micro-organisms naturally occurring at the site in Idaho Falls that are not occurring at Site 40 and now we are

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considering introducing them?

**Answer:** Yes. We are considering bio-augmentation (introducing the micro-organisms) to breakdown the DCE. We are also considering co-metabolic oxidation.

**Question:** Can these micro-organisms not found at Site 40 be found in substrates anywhere locally?

**Answer:** Possibly in small amounts. It is not understood exactly what conditions they occur. After the June 27<sup>th</sup> meeting, experts will be brought in from Idaho Falls to make a presentation to the RAB on this topic.

**Question:** When might this presentation occur?

**Answer:** With the regulators meeting scheduled for late June (and the RAB tour scheduled for July 10<sup>th</sup>), we may have a presentation as soon as August or September 2002.

**Question:** Do we know why the micro-organism doesn't occur at Site 40? Beyond the microbiological and macrobiological conditions, what prevents the organism from proliferating?

Before introducing the micro-organism we need to understand this better, to prevent failures in colonization or other problems that might be associated with introducing a foreign micro-organism.

**Answer:** Absolutely. A better understanding of the micro-organism and its requirements will be obtained before a decision on introduction is made.

**Additional Response by J. Chatters:** I know something about the soil chemistry at each site and I can say that the Idaho Falls site and Site 40 are similar. Both are located in arid environments under a sage scrub vegetation community. The soils are fine textured and saline contents are similar. The Idaho Falls site is built around a series of inland lakes with no outlet, and after repeated ponding and evaporation, the salinity of the underlying groundwater has increased the salt content similar to that of the ocean.

**Question:** Is the hydrogeology between the two sites similar? What about the water tables?

**Answer:** The water table at the Idaho Falls site is fairly high and fairly salty; similar to conditions at Site 40.

**Question:** What about the total dissolved solid (TDS) concentrations? Are they similar?

**Answer:** Yes.

### Slide 11

**Question:** Concerning the remedy for groundwater contamination at Site 70, what is the normal response time to RAB comments? I feel fairly strongly that

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the proposed treatment for contamination at Site 70 is unwarranted and have submitted comments to that effect. I would like my comments to be considered prior to moving forward with the removal action at Site 70.

**Answer:** The Navy is waiting for RWQCB comments and we are told they are forthcoming. Once received, it should be two weeks before the responses to comments are released.

**Question:** Will commentors have the opportunity to debate these responses, once provided?

**Answer:** Yes. A consensus on the appropriate remedy for Site 70 will be reached after consideration of all comments received on the subject. We are not locked into the Geo-Cleanse chemical oxidation process. We recognize that it is very costly. When we enter into the remedial design process, we will consider the use of a less aggressive agent.

**Comment by Ed Welz:** I feel that, with the use of the Geo-Cleanse process at Site 70, we are killing an ant with an atomic bomb, so to speak. I don't see any reason to erupt the soil as the pilot-study has shown will happen. Peroxide over 20 percent will blow up PVC piping with no outlet.

**Answer:** With the results of the existing Geo-Cleanse pilot study, there are obviously issues that remain to be addressed. We will consider your comments on the subject.

**Comment by Ed Welz:** The secret is to conduct a pilot study at the bench scale level. There are a number of companies that will conduct studies of our samples for free.

**Question by G. Smith:** For clarification, how is the response to comments handled and how are responses distributed?

**Answer:** Once responses to comments are finalized, the entire comment and response package is distributed to all those who submitted comments. The comments and responses are also included as an appendix to the final report.

If any one who did not submit comments would also like to review the response to comments, contact P. Tamashiro or S. Le and you will be added to the distribution list.

#### PRESENTATION – SITE 73- NON-TIME CRITICAL REMOVAL ACTION

S. Le introduced H. Hamparsumian, Project Manager for the IR Site 73 Removal Action from Foster Wheeler Environmental Corporation, who provided the RAB with an update on the Former Water Tower Area (Site 73). S. Le also introduced J. Chatters, an archeologist with Foster Wheeler and indicated that any cultural resources-related questions at Site 73 could be directed to him.

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Copies of the slide presentation were made available as a handout at the meeting. The questions and answers posed during and after the presentation are summarized below:

**Slide 6**

**Question:** The contours shown stop abruptly at Seal Beach Boulevard. Could this suggest that the contamination continues under Seal Beach Boulevard?

**Answer:** No sampling was conducted beyond the Navy property (the fence line along Seal Beach Boulevard). The contour lines you see in the figure were generated by a computer software program that takes data collected south of the fence line to complete the contours. It is not intended to mean that contamination is known to exist beyond the Navy property.

**Question:** Were any samples taken beyond the fence line along Seal Beach Boulevard?

**Answer:** No. Samples stopped at the Navy property line.

**Slide 12**

**Question:** What is involved in archeological data recovery?

**Answer:** This will be covered in the next slide (Slide 13).

**Slide 14**

**Question:** Do you assume you will find artifacts at Site 73?

**Answer:** There is a high expectation that we will find artifacts at Site 73. Shell midden can be seen along Seal Beach Boulevard adjacent to the site.

**Question:** How were the shells deposited?

**Answer:** The site is known to have been a prehistoric dump for long-ago inhabitants. Shell and bone artifacts are also thought to occur there.

**Question:** Is there evidence that anything else occurred at Site 73 besides being a place for shell midden?

**Answer:** It is difficult to determine.

**Question:** Is there a pattern of shell midden occurrences in the local area?

**Answer:** Site 73 is known to be part of the Landing Hill archaeological complex. Site 73 occurs in the southeast corner of this complex. The rest of the complex is located to the north of Seal Beach Boulevard where the Boeing buildings are located. It is not unusual to see shell middens along lagoons and estuaries.

**Question:** What is the process once the artifacts are recovered from the substrate at Site 73?

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**Answer:** The artifacts are boxed and placed in an appropriate repository. For this area, the repository is probably the University of California, Los Angeles.

**Question:** Does any affiliation to the original inhabitants of Site 73 exist? Are there any living descendants?

**Answer:** The site is estimated to be 2,000 to 5,000 years old. During that period, multiple inhabitants have come and gone, and the middens are from various ages. There is no means to establish a relationship to anyone living today.

**Question:** Have there been more recent artifacts found at Site 73?

**Answer:** Nothing yet, but the data recovery will focus on looking for artifacts dated more recently.

**Question:** Will the archeological data recovery be confined to the area being excavated?

**Answer:** Yes.

**Question:** How will the data recovery be conducted? Only 1 percent sample will be removed during the remediation?

**Answer:** We would expand our study if we came across a significant archeological deposit and if we felt more than a 1 percent sample should be removed.

The current data recovery plan has not been reviewed and approved by the State Historic Preservation Office (SHPO). They may have comments that may result in changes to this plan.

### **Slide 19**

**Question:** There seems to be a spot of contamination along Seal Beach Boulevard that is identified in the figure as a "hot spot." However, the highest concentration at this point is 243 mg/kg. This concentration hardly qualifies as a "hot spot" compared to the stated cleanup goal of 317 mg/kg.

**Answer:** You are correct. It is not a "hot spot" but it is still considered elevated. The Navy wants to remove and test this soil to be on the safe side. If we determine during excavation that no areas of higher concentration exist in this vicinity, excavation will cease in this area.

### **Slide 20**

**Question:** How many trucks are anticipated to haul contaminated soil from Site 73?

**Answer:** Forty trucks.

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**Question:** Wasn't rail used for a recent excavation at another IRP site for a much reduced cost?

**Answer:** Use of rail for contaminated soil transport from Site 73 is not feasible. Even if rail were used, truck transport of the materials would be needed from Site 73 to the railroad tracks located on the Station. The previous site was located immediately adjacent to the railroad and no truck transport was required.

BREAK

S. Le announced that there would be a 10-minute break and indicated that the SWMU 24 Non-Time Critical Removal Action presentation would recommence after the break.

PRESENTATION – SWMU 24 - NON-TIME CRITICAL REMOVAL ACTION, FORMER STATIONARY DEMILITARIZATION FURNACE SITE

S. Le re-introduced H. Hamparsumian from Foster Wheeler Environmental Corporation, who provided the RAB with an overview of the non-time critical removal action at SWMU 24.

Copies of the slide presentation were made available as a handout at the meeting. The questions and answers posed immediately following the presentation are summarized below:

**Slide 22**

**Question:** The lead contamination at SWMU 24 and Site 73 is similar, however they have different recommended clean-up levels. Why?

**Answer:** The removal action and clean-up activities are based on potential receptor risk. These potential risks are documented in the EE/CA for each site.

**Question:** The amount of soil removal at SWMU 24 and Site 73 is fairly similar. However, the cost for removal at Site 73 is more than twice as much. Why are there increased costs associated with contaminated soil removal at Site 73?

**Answer:** Archeological data recovery is required at Site 73 and this type of work is very labor intensive and, therefore, expensive.

**Question:** Is revegetation planned for SWMU 24?

**Answer:** No.

**Comment by M. Voce:** At Site 73, the plan is to revegetate with grass similar to what is there now. I feel that revegetation should be added to the list of activities after the removal action occurs at SWMU 24. Vegetation cover will help to reduce erosion and also enhance native plants.



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- Response:** SWMU 24 is fairly flat and erosion (run-on and run-off) is not considered a potential problem.
- Comment by M. Voce:** The revegetation would not just provide erosion control but also habitat for wildlife species.
- Response:** The Navy will return the site to its original condition and in compliance with the Station's Integrated Natural Resource Management Plan (INRMP).
- Comment by J. Bradley:** I concur with Mario, however it is important to remember that the Navy must be in compliance with its INRMP.
- Comment by M. Voce:** I think it is important to raise the standard for restoration on the NAVPWNSTA Seal Beach. We need to restore that part of California that has been destroyed.
- Response by S. Le:** The Navy will look into potential revegetation options at SWMU 24 to be consistent with the Station's INRMP.
- Comment by M. Voce:** I want to stress that I believe revegetation at SWMU 24 should be addressed now and not put off. The Navy should address it and consult the NWR Manager.

#### COMMUNITY FORUM

S. Le opened the Community Forum by soliciting questions from the RAB. The following questions were posed:

- Question:** Is an August RAB meeting anticipated?
- Answer:** Probably not.
- Question:** When is the presentation on Site 70 anticipated?
- Answer:** Either in August or September. Probably September since the RAB will most likely not meet in August.

S. Le closed the Community Forum by reminding participants that the next RAB meeting would be held on July 10, 2002.

The July RAB meeting will begin one hour earlier than usual at 6:00 p.m. because the IRP Site Tour will be conducted. Eight sites will be visited, including:

- Site 5 – Fill Disposal Area
- Site 7 – Station Landfill
- Site 22 – Oil Island
- SWMU 24 – Demilitarization Facility
- Site 40 – Concrete Pit/Gravel Area
- Site 70 – RT&E Area

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Site 73 – Water Tower Area  
Site 74 – Former Skeet Range

S. Le indicated that P. Tamashiro would be coordinating the IRP Site Tour and passing the pertinent information on to the RAB in the next few weeks, including the specific meeting location for the start of the site tour. G. Smith requested acknowledgements from those who planned on attending the site tour, as the number of vans required during the tour will need to be arranged in the coming weeks. Attendees were reminded to bring a sweater or jacket for the site tour.

ADJOURNMENT

S. Le concluded the meeting by thanking everyone for attending. The meeting was adjourned at 8:50 p.m.

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