

MINUTES
NAVAL WEAPONS STATION (NAVWPNSTA) SEAL BEACH
RESTORATION ADVISORY BOARD (RAB)
AND COMMUNITY MEETING
City of Seal Beach Council Chambers
July 16, 2012

Participants:

Antos, Charles/Community Member
Antos, Marie/Community Member
Bettencourt, Philip/Community Member
Blake, Geoffrey/RAB Community Member
Gandara, Jose/RAB Community Member
Jordan, Jack/RAB Community Co-Chair
Jordan, Nancy/Community Member
Lee, Larry/RAB Community Member
Li, Li/Orange County Water District
Lieberman, Tara/Richard Brady and Associates (Brady)
Lippincott, William /CYK Inc.
Monroe, Bruce/RAB Community Member
Niou, Stephen/Department of Toxic Substances Control (DTSC)
Olivera, Jerry/City of Seal Beach
Reese, Brenda/Remedial Project Manager (RPM), Naval Facilities Command Southwest
Smith, Gregg/Public Affairs Officer, NAVWPNSTA Seal Beach
Tamashiro, Pei-Fen/RAB Navy Co-Chair, NAVWPNSTA Seal Beach
Thorpe, Darwin/RAB Community Member
Vesely, R. Gene/RAB Community Member
Walker, James/Community Member
Wittenberg, Howard / CYK Inc.

WELCOME

Pei-Fen Tamashiro commenced the meeting at 6:00 pm at the City of Seal Beach Council Chambers by welcoming all participants. Attendees were asked to introduce themselves and to sign-in and collect handouts at the front table.

P. Tamashiro introduced Gregg Smith, the Public Affairs Officer for NAVWPNSTA Seal Beach and Jack Jordan, the RAB Community Co-Chair.

P. Tamashiro announced that three presentations will be given tonight: A brief overview of the Installation Restoration Program (IRP) and Munitions Response Program (MRP) Project Highlights by Brenda Reese; a 5-Year Review for IRP Sites 40 and 70 by William Lippincott of CYK Inc.; and a Site 40 Long Term Monitoring Update by Howard Wittenberg of CYK Inc.

B. Reese began the Project Highlights presentation by recognizing the NAVWPNSTA Seal Beach Environmental Team Members. She then defined the Defense Environmental Restoration Program (DERP), and identified the active IRP and MRP Sites on a base

map. Next, she briefly reviewed NAVWPNSTA Seal Beach IRP/MRP site statuses and gave a short summary of the clean-up process and project status for the following open IRP Sites in more detail: Site 7, Station Landfill; Site 40, Concrete Pit/Gravel Area; Site 70, Research, Testing, and Evaluation Area; Site 74, Skeet Range; Site 75, Former Agricultural Well KAYO-SB; Underground Storage Tank (UST) 7 (Bldg 229), and UST 8 (Bldg 500). She concluded by briefly discussing the MRP Preliminary Site Inspection and Site Inspection statuses, noting that no additional work has been conducted at these sites since the April 2012 RAB Meeting.

Questions and answers discussed during the Project Highlights Presentation are summarized below.

Question: Are any of the IRP/MRP sites under restoration or enforcement orders from 3rd parties such as the RWQCB? At the Skeet Range for instance, is there an enforcement order from the Fish and Wildlife Service?

Answer: The Navy takes the lead on all of IRP/MRP sites. Furthermore, none of the sites are under any enforcement orders from a 3rd party. The U.S. Fish and Wildlife Service and California Department of Fish and Game are involved in the clean-up process at the Skeet Range, but the Navy is the lead federal agency for the cleanup action.

Question: The area outlined in red on the IRP/MRP Active Sites Map shown during the presentation is quite large. Is the entirety of the outlined UXO 6 area designated as an MRP area?

Answer: UXO 6, the site parallel with Westminster, was authorized for the deposition of excavated soils from the Port of Long Beach Mitigation Pond (as part of MRP Site UXO1) in the early 1990s. Since munitions debris were found in the excavated area, although it is uncertain whether the excavate soil was contaminated, the entire area was designated as an MRP site. A rough geophysical study at UXO6 did indicate some metals anomaly in some portion of the site. A larger geophysical survey will be conducted in the future.

Question: In the 1980s, there used to be a gas station located across from the Seal Beach Police Station. Do you know if the underground storage tanks were ever removed from this location?

Answer: UST sites on Base were covered separately under a NAVWPNSTA Seal Beach UST program. If the UST was active in the 1980s, there should be information in the UST Program. (Post-meeting note: The UST Program archived file was searched after the RAB meeting. The record indicated the aforementioned UST, located near Building 10 at the NAVWPNSTA Seal Beach, was properly removed and closed in March 1996.)

P. Tamashiro introduced W. Lippincott of CYK Inc. to deliver the 5-Year Review

Presentation for IRP Sites 40 and 70. P. Tamashiro announced that 5- Year Review Report for these two sites will be addressing the specific 2005-2010 time period. Additional work has been performed at IRP Sites 40 and 70 since 2010, and these updates have been presented annually at the RAB meeting.

W. Lippincott began with an overview of the 5-year review purpose, requirements, and time period. Beginning with IRP Site 40, he outlined the history of VOC groundwater contamination, discussed a figure of the baseline perchloroethylene (PCE) plume, and compared the maximum baseline contamination to the target cleanup goals. Next he discussed the groundwater remedy, which involved enhanced in-situ bioremediation (EISB), followed by monitored natural attenuation (MNA) and land use controls (LUCs). The results of the May 2010 Performance Monitoring Report were reviewed. To illustrate the EISB remedy performance, W. Lippincott displayed a figure showing residual contaminants of concern (COCs) and COC Time Series Plots for selected wells. Next he summarized the Technical Assessment, briefly discussed the vapor intrusion potential for the site, and concluded with the Protectiveness Statement and recommendations for the site. Following a question and answer period for IRP Site 40, W. Lippincott continued with IRP Site 70. After reviewing the history of contamination, and baseline trichloroethylene (TCE) plume, he discussed the EISB, LUC, and biobarrier installation and injections, noting that not all biobarriers were installed at the same time. Next he reviewed the bioremediation layout, and the Fall 2010 Performance Monitoring Results, highlighting depth profiles of the TCE, dichloroethylene (DCE), and vinyl chloride (VC) plumes and site geology. W. Lippincott continued with a review of the technical assessment, and vapor intrusion potential. Finally he concluded with the Protectiveness Statement and Recommendations for the site.

Questions and answers discussed during the 5-Year Review Presentation are summarized below.

Question: *By continuing to monitor the primary action you have taken at IRP Site 40, is there going to be any action to aggressively attack the daughter products with injection wells?*

Answer: *The second hydrogen release compound (HRC) substrate injection was intended to optimize distribution of electron donors in order to treat the daughter products of PCE. Diminishing returns are experienced when adding additional HRC substrate once COC levels are below approximately 40 µg/l. This is demonstrated on the remediation timeline graph discussed in the Site 40 updated presentation.*

Question: *Was the sodium lactate that was injected not as effective as the HRC? The lactate appears to have dispersed very quickly while the HRC, which has a higher viscosity, remained in place.*

Answer: *When bioremediation first begun at this site, sodium lactate injections were selected as the best strategy based on the initial understanding of the site conditions. However, the geology of the site was not homogenous, and the sodium lactate was not distributed evenly across the site. Certain formations were treated quickly; however the tighter formations were not treated as effectively. During optimization, HRC*

was used to target these areas. HRC does not distribute as widely, and therefore would not have been cost effective to use across the entire site.

Question: *When the remedies are completed at IRP Sites 40 and 70, will you calculate the total cost of the bioremediation clean up strategy compared to alternate strategies such as pump-and-treat, or dig-and-haul?*

Answer: *A cost estimate comparison was completed during the Feasibility Study, and will be completed every 5 years as part of the 5-Year Review Report. In addition, prior to site closure, the total cost will be calculated and documented. Please note that the total cost for the selected strategy is compared to an estimated cost for the alternate strategies, and therefore is not an exact comparison.*

Comment: *This is cutting edge technology; historically there has been a lot more money spent on research and development than on treatment.*

Response: *We have taken a proactive approach to the problems we have encountered at this site. Often sites undergoing bioremediation will stall at DCE because they are not utilizing the right kind of bacteria or treatment. At Site 40, we did not delay on progressing because we acted quickly and injected HRC substrate to optimize lactate distribution.*

Question: *In the past there has been a split between those who favor bioremediation, and those who are against it. Has the body of geologists moved towards favoring bioremediation?*

Answer: *It all depends on the particular site. There is not a one size fits all treatment, it is entirely dependent on the site conditions and particular circumstances.*

Question: *Is the ethane that is produced toxic in any way?*

Answer: *No, it is not of concern.*

Question: *In the IRP Site 70 discussion the term 'beneficial use' was used in reference to the aquifer. Is there a beneficial use for the soil substrate, or does this term refer strictly to water?*

Answer: *This term is only related to water quality. In this particular instance it refers specifically to the fact that the aquifer is not being pumped for use.*

Question: *Can you return to slide 23? Is the plume shown on the figure going to come into contact with the surface water?*

Answer: *The plume and surface water are in different strata. In addition, there is a clay layer between the surface water and the plume. This portion of the plume is very deep, and the plume will not come into contact with the surface water.*

Comment: *The probability of an earthquake and fault shift in this area in the next 10 years is 62%. It is possible that the two water bodies could come into contact if new faults were created by a large earthquake.*

Question: *Does the plan for IRP Site 70 envision any future injections?*

Answer: *The Navy is planning on doing additional injections in late 2012 or early 2013.*

Question: *Is the Navy any closer to identifying a Potential Responsible Party (PRP) for IRP Site 70?*

Answer: *They Navy recognize the RAB Members' concern with this issue. We are working closely with the Navy Litigation Office at this time and cannot discuss specifics..*

P. Tamashiro Introduced H. Wittenberg of CYK Inc. to give the Site 40 Long Term Monitoring Update.

H. Wittenberg began with a brief review of the Site 40 Location and History, followed by a summary of the Remedial Action (RA) and monitoring from 2005 to the present. He then discussed a remediation timeline for one of the wells. Next he gave an overview of the 2011 Monitoring results, highlighting COC trends by key wells and the reduction in DCE and VC. He briefly discussed other monitoring parameters and soil gas concerns before concluding with a summary of the main points of the presentation.

Questions and answers discussed during the Site 40 Monitoring Presentation are summarized below.

Question: *What does the 'vadose zone' refer to?*

Answer: *The soil area above groundwater table or above the groundwater saturated zone.*

Question: *Why was bioremediation selected for this site?*

Answer: *One of the big selling points is that it is a green remediation. We are treating the problem in-situ.*

Question: *Is there any benefit to extract the methane created in the vadose zone as a result of bioremediation?*

Answer: *As long as there are no vapor intrusion issues, there is no benefit to extract the methane as it will just return. Unlike at landfill, there is not a large quantity of methane being produced at this site. The 75.7% by volume in air concentration reported is likely from a pocket of methane which has been trapped in the clay layer near the surface. As methane is produced through dechlorination, it builds up in the vadose*

zone and dissipates slowly. It will remain until the biological processes are complete. One option is to vent the methane once the processes are complete.

Question: *Is the methane naturally occurring due to the oil wells in the area?*

Answer: *Not at this location specifically. Site 40 is not close enough to the oil reservoirs.*

ANNOUNCEMENTS

The following documents will be available for review in the next few months:

Draft IRP Sites 40 and 70 5-Year Review Report

Final Preliminary Assessment/Site Inspection Report for Site 75 – This report will be posted on the NAVWPNSTA Seal Beach website and available for information only.

Draft 2011 Performance Monitoring Report for Site 70

Final Fall 2011 and Winter 2012 Annual Post-Closure Inspection and Maintenance Report - This report will be posted on the NAVWPNSTA Seal Beach website and available for information only.

ADJOURNMENT

P. Tamashiro adjourned the meeting at approximately 7:30 p.m.

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