

# **RAB Minutes**

## **NAS North Island Restoration Advisory Board February 22, 2001, Meeting Minutes**

### **INTRODUCTION**

The sixty-ninth Restoration Advisory Board (RAB) meeting for Naval Air Station (NAS) North Island/Naval Amphibious Base (NAB) Coronado was held on Thursday, February 22, 2001, at the Coronado Public Library from 6:40 p.m. to 8:30 p.m. Ms. Fargo called the meeting to order at 6:40 p.m.

### **RAB ATTENDANCE**

Bill Collins, Daniel Cordero, Carla Fargo, John Locke Foster Marshall, Art Van Rooy

### **PUBLIC/NAVY ATTENDANCE**

Mark Bonsavage, Robert Campbell, Anita Craig, Marilyn Field, Jim French, Nancy Lee, Richard Wong

### **APPROVAL OF NOVEMBER 16, 2000, MEETING MINUTES**

The RAB members approved the November 16, 2000, meeting minutes.

### **MEETING TOPICS**

The February 22, 2001, meeting topics were the Site 9 Soil Vapor Extraction; Site 9 RI Addendum 2 Update; Site 5 Time Critical Removal Action, Pilot Study Results; and Site 10 Non-Time Critical Removal Action, Liquefaction Study.

### **PRESENTATIONS**

#### ***Update on Site 9 Soil Vapor Extraction with Steam Injection Free Product Recovery - Bill Collins, SWDIV RPM***

The pilot study to remove jet fuel from the ground was successful. It lasted 7 or 8 months and recovered almost 30,000 pounds of material. Currently, 17 or 18 wells are recovering free product from the ground. Approximately 4,900 gallons of JP-5 fuel with chlorinated hydrocarbons have been recovered.

A new \$ 3 million contract has been awarded, which provides for 18 months of operation and the purchase of water treatment equipment. In June or July, the system will be activated to mobilize and capture more fuel along with more volatile organic compounds (VOCs), gases, and chlorinated fumes. It is expected to take up to 2 years to remove the fuel from the ground.

#### ***Site 9 RI Addendum 2 Update and DTSC Comments - Jim French, Bechtel***

Site 9 is located on the western side of the island adjoining the San Diego Bay on the west. Investigations at Site 9 began 18 years ago. A Remedial Investigation (RI) was submitted in 1995, and two additional investigations were performed to address agency comments on the original work. Both investigations focused on quantifying and identifying the contaminants that may be entering the bay. The Navy wants to move to the next phase, including the Feasibility Study (FS), to address the contamination and clean it up.

The RI Addendum No. 2, which was submitted to the agencies in June 2000, is a follow-on to the initial investigation. It studied the groundwater near the shoreline of the bay, porewater and water coming from the groundwater into the bay, and chlorinated VOCs. Addendum No. 2 further characterizes and quantifies the flow of the VOCs into the bay, addresses specific regulatory agency comments from the previous phases of the work, and presents several conclusions.

One conclusion is that the groundwater contamination extended from Areas 1 and 8 and migrated to the

shoreline at Site 9, where the contaminants were discharged into the bay. The VOC analytes in the porewater and the benthic flux sometimes exceed water quality criteria established for the bay. The addendum also concluded that the outstanding contaminant delineation issues identified in the previous work were adequately resolved and the project should move to the subsequent phases of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) process.

A Technical Memorandum was produced and provided to the agencies in August 2000. The memorandum included some groundwater, porewater (sampled for metals), and semi-volatile organic compounds (SVOCs) data. The memorandum and Addendum No. 2 concluded that groundwater VOC contamination was discharging into the bay. There were low levels of SVOCs in shoreline wells and porewater, with isolated occurrences of metals. Both documents called for further evaluation of this issue in the Feasibility Study (FS).

Department of Toxic Substances Control (State of California) (DTSC) and Technical Outreach Services for Communities (TOSC) comments on Addendum No. 2 and DTSC comments on the Technical Memorandum have been received and are being evaluated.

To revise Addendum No. 2 and finalize the remedial investigation, it will be combined with the Technical Memorandum, producing one addendum for easier review. Comments common to each document will be addressed in one place. Detailed responses have been provided to DTSC regarding regulatory agency comments. An item-by-item response to the TOSC comments is being prepared, and should be available in March 2001.

The significant comments are being addressed with proposed resolutions. For example, reviewers questioned the extent of the contamination at Site 9, and the completion of the delineation of the lateral and vertical extent of the contamination. The proposed response: It is too hazardous to divers to go farther into the bay, this is a busy ship channel, and it is too costly. It is hypothesized that the contaminants went downward from the source area, migrated laterally to the B clay, and migrated along it under the bay. It is not necessary to perform an investigation under the B clay as the 1995 RI concluded there are no human or environmental receptors. The objectives in studying cleanup solutions are to clean up the shore and prevent contamination from continuing to migrate toward the bay. These points will be enumerated in the response.

The FS will focus on controlling the flow of contamination remaining on land to prevent migration toward the shore. Several alternatives will be proposed. These include building a wall down to the B clay layer to contain the material; drilling wells and pumping the material out, creating a hydraulic barrier; and attacking the contamination in situ, permanently reducing it before it can migrate to the bay. The disposition of the VOCs also must be determined. Additional discussion and graphics will be provided to evaluate constituents that may be in the groundwater.

Additional graphics will be provided for all aspects of the document per the requests of reviewers. The graphics will concentrate on supporting the data presented, including diagrams that show trends over time to demonstrate whether contamination is increasing or decreasing.

A reviewer requested information related to seismic activity at the site. This subject was raised in the original RI and further discussed in Addendum No. 2. A re-evaluation of the original seismic data was done recently, and that information will be provided in the next addendum.

All reviewers wanted a more in-depth comparison of the data to the regulatory standards and water quality criteria for the San Diego Bay and saltwater. This information will be provided.

If the proposed approach for finalizing the report is approved, the final RI report will be issued in May 2000. The FS to develop cleanup solutions and the treatability tests will continue.

***Site 5 - Unit 2 Time Critical Removal Action, Pilot Study Results - Mark Bonsavage, SWDIV RPM , and Richard Wong, IT Corporation (formerly OHM) Project Manager***

Unit 2 consists of two disposal pits next to the landfill. The site is close to Coronado and the Pacific Ocean. The waste pits contain solvents, petroleum products, fuels, and other hazardous wastes dumped between the 1940s and the 1960s. There is a VOC plume in the area. A monitored natural attenuation study was performed to observe the natural degradation over time. The study used a computer model to determine that the chlorinated solvents will degrade due to the existing water chemistry. However, they might migrate to the nearby slough before degradation is complete. The slough could carry contaminants to the ocean and birds and humans frequent the area. To reduce the risk or reduce the chemicals on the site, chemical oxidation via multiple injection wells will be performed to reduce the chemical levels. Then, natural attenuation will be the final remedy.

A bench test produced nearly a 100 percent reduction. The pilot (field) test was performed to determine if chemical oxidation would work in the field. An injection well was established in the middle of the plume where the concentration is approximately 50,000 micrograms per liter of total VOCs. Chemicals were injected, and the observation wells around the injection well were monitored for concentration levels of the contaminants. The test resulted in reduced concentrations (50 to 90 percent) out to 30 feet. When the chemical injection stops, the contamination returns. The contamination might be released from the soil or vadose zone, or possibly due to a concentration gradient.

The analytical data was converted to an animation that shows 3 months of data in a few minutes. The animation shows the effects of the injections and how the aquifer responds to them. On this site, the contaminant groundwater is defined on the bottom by a shallow clay layer, which causes a shallow groundwater situation.

The original work plan was sent for review last year. The revised work plan was sent to review on February 7, 2001. The revised plan includes more information about the technology, per the request of the DTSC.

Pre-treatment continues at the site from which more information is collected about the extent of the groundwater plume and possible soil contamination. Pre-treatment concludes February 2001. DTSC will review the revised work plan and return comments by April 11. The plan will be final by May 1, 2001. The 30-day public review will be completed by June 6. California Environmental Quality Act (CEQA) documentation is being prepared and will go out along with the work plan for 30-day public review. Full-scale treatments will begin by early July and continue for approximately 2 months, finishing at the end of September.

***Site 10 Non-Time Critical Removal Action, Liquefaction Study - Richard Wong, IT Corporation Project Manager***

This site has been filled with an estimated 1,000 cubic yards of slag ash, some exposed at the surface, some under fill. The removal action must take these conditions into account. The area is sandy, poorly compacted, with shallow groundwater conditions in a seismically active area. Severe ground shaking is to be expected.

The objective of the removal action is to minimize the release of the slag ash to environmental and human receptors. A rock revetment and impermeable liner with an earthen cap will be constructed. Due to the seismic activity in the area, liquefaction is a concern that must be addressed in the solution. Liquefaction occurs when an earthquake occurs on a regional fault. Seismic waves travel through the ground, shaking it. This causes the pressure in the water in the soil to increase significantly. With enough pressure, the soil behaves as a liquid, which can result in lateral and vertical movements of the soil. If liquefaction is severe enough, buildings can fall over or lateral spreading can push underlying soil to the surface.

The study used design earthquakes to evaluate the proposed construction. Level 1 is the most probable

earthquake (50 percent chance in 50 years). Level 2 is a 6.7 or 7.0 earthquake, infrequent but possible (once in 72 years). Level 3 is a 7.5 or 8.0 quake and takes into account the physical nature of the quake (once every 2,500 years). Existing maps and data were reviewed and a cone penetrometer study was conducted to determine the strength of the subsurface materials. The study determined that, at Level 1, minor liquefaction may occur. At Level 2, liquefaction occurs in the subsurface. At Level 3, liquefaction is significant at the site. The containment structure will be designed to tolerate Level 1 or Level 2, depending on the results of consultation with DTSC.

#### **PUBLIC QUESTIONS AND COMMENTS**

RAB received tentative approval for a booth at the Coronado Flower Show. The presentation must be educational and informational. The discussion determined who would be responsible for gathering materials, attending to various details, and manning the booth. Ms. Fargo will contact middle and high school teachers again to gain interest in learning about the RAB mission.

It was announced that Holly Kress has left DTSC, leaving the Public Participation position vacant. However, DTSC wants to continue RAB participation.

RAB elections were held, and, although absent, Bob Geilenfeldt was elected to the position of Community Co-Chair. He has expressed interest in the position.

Ms. Fargo reiterated that she will attend one more meeting. The RAB committee expressed appreciation for her contributions.

Ms. Field mentioned that Mr. Geilenfeldt attended the quarterly meeting with the contractors and requested that discussion of the methane gas underground field be added to the next agenda.

#### **UPCOMING AGENDA ITEMS**

Site 5 Methane Gas Monitoring  
Site 5 Removal Action Update  
Site 11 Feasibility Study Update  
Flower Show Booth Recap

#### **RAB UPCOMING MEETINGS, YEAR 2001**

May 17th.

#### **MEETING ADJOURNED**

Ms. Fargo concluded the meeting, and the meeting adjourned at 8:30 p.m.