



# Vieques Investigation and Cleanup NAVFAC Atlantic

## Restoration Advisory Board (RAB)

Meeting #25  
Tuesday, May 18, 2010  
Vieques Ice House - Vieques

### Attendees:

Chris Penny –Navy  
Kevin Cloe – Navy  
Dan Hood– Navy  
Stacin Martin – Navy  
Rich Henry – FWS  
Mike Barandiaran – FWS  
Daniel Rodríguez – EPA  
Wilmarie Rivera - EQB  
Wanda Bermúdez – RAB member  
Michael Díaz – RAB member  
Colleen MacNamara – RAB member  
Lirio Márquez – RAB member  
Jorge Fernández Porto – RAB member  
Lionel Sánchez – RAB member  
Stacie Notine – RAB member  
Cristina Corrada – RAB member  
Edgardo Belardo -DNER  
John Tomik – CH2M HILL  
Brett Doerr – CH2M HILL  
Susana Struve – CH2M HILL  
Lorraine Jameson – CH2M HILL

### 1. Welcome and Introductions

Meeting began at 6:15 PM. Kevin Cloe (Navy Co-chair) welcomed everyone.

### 2. RAB Administrative Issues

- **Membership Applications:** We need to have a due date for receipt of the applications so that we can move on to the Charter Update.
- **Charter Update.** Once the membership is re-established (RAB members who sign the RAB renewal application). RAB members, Navy and regulatory agencies will work together to enhance the communication process and review and update the charter (which originally states that it needs reviewed every two years).

The next RAB meeting will be held in August 2010.

### 3. Environmental Program Progress

Brett Doerr (CH2M HILL) discussed Pilot Studies for Area of Concern (AOC) E and AOC I.

AOC E is a former underground storage tank used for storing waste oil from vehicle maintenance. The tank leaked, contaminating a small area of soil and groundwater with waste oil. The pilot study will involve injecting calcium nitrate into the soil to stimulate naturally occurring bacteria to break down contaminants that could otherwise leach to the groundwater. Sodium persulfate, in conjunction with an oxygen releasing compound (ORC), will be injected into the groundwater. This action also will stimulate naturally occurring bacteria to break down contaminants. The AOC E pilot study will answer four questions:

- 1) Will the pilot study be effective on free product?
- 2) Can we reduce already low concentrations of contaminants in groundwater to acceptable levels?
- 3) Can we shorten the time it takes for groundwater contaminant levels to reach acceptable levels?
- 4) Can we reduce soil contaminant concentrations to levels that are not likely to leach to groundwater and re-contaminate it?

AOC I is a former asphalt mixing facility that operated from the 1960s through 1988. The pilot study for AOC I involves the sodium persulfate and ORC processed described for AOC E. The AOC I pilot study will answer four questions:

- 1) Can we reduce already low concentrations of contaminants in groundwater to acceptable levels?
- 2) Can we shorten the time it takes for groundwater contaminant levels to reach acceptable levels?

In response to a question from Jorge Fernández Porto, Brett explained that levels of contamination found after removal of free product in 2008 were not much higher than Maximum Contaminant Levels (MCLs). He said that the goal is to reach MCLs or even lower. The AOC E and I injection work took place in February and March 2010. Cristina Corrada asked the depth of the injection points – 15 to 20 feet.

Jorge Fernández Porto mentioned that he has seen stained soils and equipment at the quarry. Could this impact groundwater? Brett said that that Navy has no control over the quarry. That's the responsibility of the Municipality of Vieques. The property has been transferred to MOV who has been operating the site for the last three years.

Lionel Sanchez - requested information on using sodium perchlorate to assist natural attenuation in the reduction of chemicals in groundwater. Brett will get the information.

Stacie Notine suggested that there should be signage identifying work areas and letting the community know what's going on. Brett said that it could also be advantageous to not put up signage because it could invite trespassing.

In response to questions from Lionel (could the injections alter the groundwater's pH), Brett said that the pH of the groundwater could change as a result of the injection (it is

being measured as part of the pilot study); but that it should ultimately return to its original state after the injected material (and contaminants) degrade. The same is likely true for any precipitate that occurs.

#### **4. Munitions Response Program Progress**

Dan Hood (Navy) discussed munitions response topics. Highlights of his presentation included:

- Surface Impact Area (SIA) Removal Action – 548 out of 1182 acres have been surface cleared. Selected roads and beaches within the SIA will have a sub-surface removal conducted.
- Solid Waste Management Unit (SWMU) 4, VW – The Sub-surface Removal at SWMU 4 has been completed. Approximately 10,000 anomalies have been excavated. Of these approximately 250 MEC/MPPEH items were recovered. Most were 20 mm projectiles.
- Playa La Plata Area Investigation – An investigation of 214 anomalies. No munitions-related anomalies were found. All beaches were reopened before the start of Holy Week.
- Summary of All Removal Actions – Sub-surface removal has been completed on 1,523 acres. Sub-surface removal for beaches and roads at SWMU 4, VW is complete. 33,736 munitions and explosives of concern have been recovered and destroyed. Items recovered are declining as the removal moves westward. 15.5 million pounds of metal debris have been recovered from removal areas, of those 12.6 million pounds has been processed and shipped to recyclers.
- Eastern Conservation Area (ECA) Munitions Items Found – The surface removal is complete in the ECA. Sub-surface removal for roads is complete, except a small portion in the westernmost area. 1,312 MEC/MPPEH items were recovered during the surface removal; 2 MEC/MPPEH during the sub-surface removal.

In response to a question on what munitions are made of, Dan provided information on the composition of the munitions themselves and the materials they are composed of. He stressed that munitions removal activities have found no depleted uranium. He suggested Wilmarie Rivera and Jim Pastorik, both of EQB, could further discuss this matter with RAB members.

Dan shared the following actions taken in response to community concerns about the potential for washing project vehicles in the community to spread contamination:

- A wash area has been designated on site and project vehicles are washed there;
- Mud and dirt from the washed vehicles was collected and placed in drums and a composite sample was taken from different depths in the drum. Results of the sample did not find contaminants of concern.

Christina Corrada (RAB members) asked if workers may be carrying contamination into the community on their clothing. Dan replied that the sampling of dirt from workers' vehicles found no contamination. In addition, workers are provided with appropriate personal protective equipment and have been trained in proper hygiene. Showers are provided and most workers change clothes before leaving work. Dan said the Navy will explore additional solutions to this issue.

Lionel Sanchez said that cadmium and mercury in soil was not mentioned in the presentation. Dan responded that contents of munitions are mostly organic compounds. Metals are present in the actual casing, but not cadmium.

Stacie Notine (RAB member) said that young people on the island ride horseback into the restricted areas to catch crabs. They've been told the crabs are contaminated.

## **Agencies Update**

**Fish and Wildlife Service.** Rich Henry introduced himself and provided attendees an overview of his responsibilities within FWS organization and other agencies. He also explained the roles and responsibilities with the Vieques cleanup project and introduced Mike Barandiaran. He told the group that FWS is not a regulatory agency; FWS is the manager of the land. The cleanup must meet the goals and requirements of the land use plan. He is exploring better ways to remove vegetation that is sensitive to the environment.

He has requested funding for a dedicated, Vieques-based staff position to work with the Navy on cleanup issues. He is pursuing partnerships with Caribbean-based academic resources, such as the University of Puerto Rico, to supply technical expertise.

Mike Barandiaran discussed the draft map showing the sensitive areas in the refuge. This map was requested by some of the RAB members during an earlier meeting with FWS. He stressed that community input is important. The map will be available at the FWS office until June 16, 2010. Input from community members will be provided to NAVFAC.

Mike explained that this map is a working tool and is dynamic and additional information can be added as available in the future.

Jorge Fernández Porto suggested putting the map on the internet and including sensitive areas that may be important to the community, but may not be endangered. As an example, he mentioned that bay rum trees had been planted many years ago to support operations of a rubbing alcohol factory. These trees still exist, have historical value, and should be included on the map.

Mike also discussed efforts underway, including purchase of greenhouses, to establish nurseries to provide plants for future restoration efforts. Dan Hood reiterated that it has always been, and continues to be, the Navy's intention to restore clean up areas, and the Navy will work with FWS to achieve that goal.

**Environmental Quality Board.** Wilmarie Rivera gave a summary of the oversight work done by EQB, including document review and site visits (Municipality of Vieques, the Puerto Rico Senate, House of Representatives, and Resident Commissioners Office, and EPA's Regional Administrator for Region 2).

The Prescribed burn documents were reviewed by EQB's air quality area; they were submitted to EPA for final approval. I understand EPA will take into account the latest comments sent by the Municipality of Vieques

**U.S. EPA.** Daniel Rodriguez gave a summary of the oversight work done by EPA, including document review and meetings and site visits mentioned above..

He described an MEC incident on February 1, 2010. EPA observed MEC items in a local museum fish tank. Authorities were alerted and the items were removed and destroyed at the VNTR.

He also mentioned that the Administrative Record was not up to date and had been transferred to a new location, Casa Juventud. The Navy will follow up on this issue.

#### **4. Meeting Closing (Susana Struve/CH2M HILL)**

The next meeting is scheduled for August 18, 2010. More information will be distributed before the meeting and a conference call will be scheduled to get the RAB input on the agenda for the next meeting.

Also, Kevin Cloe announced that a RAB Workshop to explain the “Master Standard Operating Procedures, Protocols, and Plans” document, as requested by members of the RAB, was being planned. The date and time for this workshop will be scheduled with the RAB. It was suggested that the workshop would be held during the week of the next RAB meeting.