



Vieques Investigation and Cleanup

Navy Facilities Engineering Command (NAVFAC) Atlantic

RESTORATION ADVISORY BOARD (RAB)

Meeting Number 32

6:00 p.m. - 9:00 p.m., March 13, 2012 – Lighthouse, Vieques

DRAFT MEETING MINUTES

Attendees:

Mike Barandiaran (USFWS)	Lirio Marquez (RAB member)
Wanda Bermudez (RAB member)	Stacie Notine (RAB member)
Anita Braddock (community member)	Wilmarie Rivera (EQB)
Kevin Cloe (Navy)	Jorge Porto (RAB Member)
Diana Cutt (EPA)	Marie Rivera (community member)
Michael Diaz (RAB member)	Daniel Rodriguez (EPA)
Brett Doerr (CH2M HILL)	Kathi Rodriguez (community member)
Mike Green (Navy)	Donald Shaw (USA Environmental)
Bill Hanna (CH2M HILL)	Susana Struve (CH2M HILL)
Rich Henry (USFWS)	John Tomik (CH2M HILL)
Daniel Hood (Navy)	Dan Waddill (Navy)
Elena Humphrey (community member)	Dianne Wehner (NOAA)
Lorraine Jameson (CH2M HILL)	Lorraine Jameson (CH2M HILL)

1. Welcome and Introductions - Kevin Cloe/Navy Co-chair

The meeting began at 6:25 PM. Kevin Cloe (Navy) welcomed those present and proceeded to describe the agenda for the meeting.

Susana Struve informed the public that there are simultaneous translation devices at the back of the room and a list on which people can write their names and contact numbers in case they are interested in getting added to the mailing list.

2. AOC E/AOC I Pilot Tests and Path Forward

Brett Doerr updated meeting attendees on the pilot tests for AOC E and AOC I. Brett summarized pertinent site historical information, the approaches for soil and groundwater remediation pilot studies, and the study results.

Conclusion and path forward AOC E: Brett explained that although the In-situ Chemical Oxidation (ISCO) pilot study results suggest groundwater has been remediated to acceptable levels, elevated levels of persulfate (the chemical injected to treat the groundwater contaminants) warrant monitoring to ensure they return to normal and contaminant rebound above acceptable levels does not occur. While it is not known exactly why the persulfate levels have persisted longer than anticipated, it is likely because of the

site-specific chemical (natural groundwater characteristics, such as mineral types, pH, etc.) and geophysical characteristics (very tight formation with low groundwater flow). However, what is important to keep in mind is that while the elevated persulfate remains, it continues to be reactive to any contaminants present and that the monitoring has shown that the levels are dropping and they will eventually return to normal.

The Navy is preparing a Feasibility Study to evaluate continued monitoring and various remedial alternatives should contaminant concentrations rebound. A Record of Decision is anticipated by mid-2013.

Conclusion and path forward AOC I: Concentrations of contaminants of concern (COCs) showed a decline on their own prior to the pilot study. Additional decline of the two most prevalent COCs (benzene and naphthalene) continued (and was possibly accelerated) by ISCO and Enhanced In-situ Bioremediation (EISB) – the two treatment processes evaluated in the pilot study.

In the last sampling event, benzene was the only COC detected above the Preliminary Remediation Goal (PRG) of 5 µg/L. However, it was detected at only 5.3 µg/L (MW-07), which is essentially at the Maximum Contaminant Level (MCL), which is the PRG. Naphthalene was detected above the pilot study PRG of 1.4 µg/L in one well (12 µg/L in MW-07); however, this pilot study PRG was selected only to evaluate the pilot study technology; EPA's health-advisory life-time value of 100 µg/L would likely be the final Remediation Goal (RG). No other COC was detected above its PRG during the pilot study.

To evaluate whether "rebound" occurs, the Navy will perform two more rounds of groundwater sampling (around May 2012 and November 2012). If no rebound occurs, a No Further Action Proposed Plan and Record of Decision will be prepared. If rebound occurs, the Navy will prepare Feasibility Study to evaluate remedial alternatives

Questions from the Audience

Q. Were there differences in contaminant levels based on their location in relation to the tank?

A. Yes. Wells placed closer to the source had higher levels.

Q. Were defoliants used at this site?

A. There is no indication or reason that defoliants were used at the site. It was just a vehicle maintenance site.

Q. Could fluctuating water levels of contaminants be attributed to contaminants from another source?

A. There is a monitoring well upgradient of the area of contamination and it does not show any contamination migrating in from upgradient. Fluctuations in groundwater contaminant concentrations are a very normal occurrence. They are caused by such things as amount of precipitation, groundwater elevation, and the natural variability of concentrations in groundwater.

Q. Are these sites [AOC E and AOC I] part of the same aquifer? Would contaminants flow from one site to another?

A. These sites are not part of an aquifer. To be considered an aquifer, the formation must be able to yield water. In addition, there is no hydraulic connection between the two sites.

Q. Did contamination from these sites get to the ocean?

A. No. The Navy has wells downgradient of the sites, between the sites and the ocean and no site-related contamination has been identified in the downgradient wells.

3. Solid Waste Management Unit (SWMU) 6 Biota Sampling

Kevin Cloe described a fish and crab sampling event that took place the week of January 30, 2012. Fish and crabs were collected from SWMU 6 and Laguna Arenas (to establish background). The effort collected snook, mullet and blue crab. The fish and crabs were measured, weighed, packaged, and shipped frozen to the chemistry lab. Analysis is underway.

Q. What about land crabs?

A. Only fish and blue crabs in water were identified as posing a potential exposure risk.

Q. Why were snook and mullet collected? Why not collect fish that people eat?

A. The Navy caught what lives in the area and tried to get a range of specimens.

4. Project Truck Washing Analytical Results

Dan Hood described the background and scope of the vehicle wash residue sampling effort conducted in July 2009 and April 2010. The results of the sampling showed that no explosives or perchlorate were detected in either of the residual samples. All of the detected concentrations were well below residential RSLs. Most metal concentrations detected in residue samples were within the range of metal concentrations detected in the background soils for the former VNTR. Based on the results of the sampling, the Navy recommends discontinuing collection of residue samples for analyses from the Truck Wash Area. However, because of the convenience of washing the trucks at Camp Garcia the truck washing will continue at that location.

5. Update on Munitions Response Program Removal Actions

Daniel Hood provided a comprehensive overview of the status of surface and subsurface clearance of munitions and explosives of concern from East and West Vieques. Daniel discussed the impact of storms on beaches and how it factors into the Navy's munitions removal work. Dan Waddill pointed out that the Navy monitors beaches to assess the impact of storms. The following is a summary of MEC removal during the past year:

- 206 acres have been surface cleared of munitions
- 973 munitions items have been removed and destroyed

- 1 bomb
- 514 projectiles
- 60 rockets
- 62 flares/pyrotechnics
- 10,815 metallic anomalies have been removed from the subsurface

6. Status of Munitions Underwater Investigations

Daniel Hood discussed previous underwater investigations and work planned for 2012 and 2013. Work planned for 2012 includes installation of a waterway barrier, an island-wide underwater biological assessment, site inspection of selected locations potentially containing munitions, and an explosives safety submission that identifies procedures to address potential exposure to munitions by workers. The results of work conducted in 2012 will lay the foundation for 2013 and beyond activities that will include an underwater munitions wide area assessment and site inspection of selected munitions locations.

Based on the results of 2012 and 2013 investigations, other actions under CERCLA may be implemented.

Daniel Hood stressed that work on land will not stop as the underwater investigations begin. Work on land will continue.

Q. Are you looking at the overall health of corals?

A. The goal of the Navy's underwater investigations is to evaluate impacts from past Navy activities on the underwater environment and, therefore, corals will be evaluated in that context.

Q. Is the Navy coordinating with work being done on Culebra?

A. Yes. The same regulators, contractors and other team members are working together.

Q. I heard that 30% of munitions items do not detonate because they were made cheaply to save money.

A. Failure rates vary by type of armament, and munitions were designed to function as intended when deployed, but not to function during pre-deployment handling. This was done to protect personnel, which can result in munitions failing to detonate when intended. Saving money was not an objective.

Q. Can the Navy prepare a Record of Decision for SWMU 4 before the underwater investigation is done?

A. The underwater area offshore from SWMU 4 is part of a different site (UXO 16), so a Record of Decision for SWMU 4 can be prepared before the offshore work is completed. However, because munitions items could continue to be washed ashore on SWMU 4, the remedy for the site will include inspections of the site, including areas where this could occur.

Discussion: Daniel Rodriguez asked Dianne Wehner (NOAA) to discuss a conference, the *Fourth International Dialogue on Underwater Munitions* that will be held in San Juan in October 1-3, 2012. The

conference will focus on human health and environment and including detection, handling, recovery and disposal of chemical and conventional weapons and munitions.

Q. When will the feasibility study for SWMU 4 be done?

A. The Draft Final Report will be issued to the RAB in April 2012 and the Final Report is anticipated to be issued in May 2012.

7. Regulatory Agencies Update

Wilmarie Rivera provided the following status update for EQB:

- February 1, 2012 – Inspected sampling efforts underway at SWMU 6, Vieques
- 22 to 24 February 2012 – Attended the Environmental Technical Subcommittee Meeting and on Munitions in New York.
- Documents reviewed
 - Draft Remedial Investigation Report UXO 1, Eastern Conservation Area (ECA), FVNTR
 - Draft Remedial Action Implementation, Operations and Maintenance, Land Use Control, and Long-Term Monitoring Work Plan, Solid Waste Management Unit 1 (SWMU 1), FVNTR
 - Draft Expanded Site Inspection , Sampling and Analysis Plan Addendum, UXO 15, FVNTR

Q. What is the status of the burn permit?

A. EQB is waiting for input from the Agency for Toxic Substances and Disease Registry. Comments have been received and are with staff in EQB's office.

Q. The Health and Human Services Agency has expressed an interest in the burn permit. Have they commented?

A. No

Closing

Susana Struve thanked the attendees. The meeting ended at 9:10 PM.