

MEETING SUMMARY
**RESTORATION ADVISORY BOARD (RAB) FOR THE ENVIRONMENTAL
RESTORATION AND MUNITIONS RESPONSE PROGRAM**

VIEQUES ISLAND, PUERTO RICO

MEETING NUMBER 21 – AUGUST 11, 2009

LOCATION: LIGHTHOUSE, ISABEL II, VIEQUES

Note: This meeting summary is based on informal notes taken at the meeting. The notes are not intended as a verbatim transcript and everything that was discussed may not have been captured. If comments or additional notes are provided within 30 days of distribution of these minutes, those will be added as an attachment to this summary.

I. Call To Order and Welcoming Remarks

Kevin Cloe/Navy Co-Chair opened the meeting at 18:25, welcoming RAB members and members of the public, and reviewed the meeting agenda. The meeting was attended by 5 RAB members and 10 members of the general public (see Attachment 1, Attendance).

RAB Administrative Issues –Susana Struve/CH2M HILL

RAB Status Reports: Susana Struve/CH2M HILL discussed RAB membership and a possible format change to the Status Report. Susana asked if the RAB still want to receive the report in the current format. Hector Julian Camacho (RAB member) answered that the report should remain as is. Lirio Marquez (RAB member) concurred. There were no comments; the status report will continue to be distributed to RAB members “as is”.

Flyers: Susana asked the public attending the meeting “Are you getting the flyers? Are they found at accessible locations? Are there better locations or suggestions for places to put them so the most people can have access to them?” A visitor suggested using Caribe Kayaks in Esperanza, since he has not seen many flyers on that side of the island.

RAB Co-chair: Susana asked: Have you given more thought about not electing a Community Co-chair? Members of the RAB nodded.

II. Environmental Restoration Program Update – Kevin Cloe /Navy

Sites on West Vieques

Area of Concern (AOC) E and AOC I

The Navy is getting ready to perform a pilot study to treat the groundwater contamination at these sites. It will include an *in-situ* process to adjust the aquifer conditions to promote contaminant remediation. The Draft Work Plan is currently under regulatory review and will reach the RAB members in late calendar year 2009. The Navy expects to begin implementing the pilot study in early calendar year 2010 and that it will take approximately 2 years of operation to evaluate its performance.

AOC R

The interim removal of debris piles and contaminated soil was completed in June 2009. Post-removal confirmatory samples will be evaluated with Remedial Investigation (RI) data to determine the current site conditions. The Navy plans to complete RI fieldwork in late calendar year 2009, including the groundwater sampling. The Draft RI Report will be submitted for regulatory review in early calendar year 2010.

Solid Waste Management Unit (SWMU) 4

The Navy is currently in the process of preparing the Draft RI Report, which is expected to reach the regulatory agencies in August 2009.

AOC J, SWMU 6, SWMU 7

The Navy completed the interim removal of the debris piles and contaminated soil in June 2009. Post-removal confirmatory data is being evaluated to determine the current site conditions and appropriate path forward. Based data evaluation, it will be determined whether or not the sites are ready for a No Further Action decision, or if additional investigation is needed.

Sites on East Vieques

The fieldwork for 26 sites under the Site Investigation/Expanded Site Investigation (SI/ESI) was completed in June 2009. The data is currently being evaluated. The Draft SI/ESI Report will be submitted for regulatory review in late calendar year 2009

Kevin showed photos of the removal of waste, debris and drums at Potential AOC (PAOC) X, PAOC P, and Photo-identified Area (PI) 7.

Discussion

- Stacie Notine (RAB member)—what did you sample for at PI 7? Tar?
Kevin—the data collected from the soil that was left behind after the removal was analyzed for the full suite of chemicals. Initially, data was collected for disposal purposes; we confirmed that there was tar.
- Katty Gannett (visitor)—Requested that the sites we were discussing be pointed out on a map. A member of the public asked for more information on the site location in reference to the beaches on the refuge.
Kevin and Felix Lopez/Fish & Wildlife Service (FWS) showed the map and explained where the site was in reference to the wildlife refuge.
- Lirio Marquez (RAB member)—When is the data due back for the samples taken on the lagoon site (where several mangroves were re-planted)? Will it be back before the end of the year?
Kevin—the data should be back in a few months. It will be available to the RAB after the regulatory review, hopefully by the end of the year.

III. Munitions Response Program (MRP) Update (Tim Garretson/CH2M HILL)

A total of 1,268 acres have been surfaced cleared of munitions in the former Live Impact Area, Eastern Conservation Area, and Surface Impact Area. Over 19,300 munitions items

have been removed and destroyed. Significantly fewer items were recovered in the Surface Impact Area than in the Live Impact Area. Over 14 million pounds of metal debris have been collected, 9 million pounds of which have been processed and shipped to recyclers.

Subsurface Removal at Bahia Icacos

Over 6000 magnetic anomalies were identified in the turtle nesting areas along the beach. Of the 1700 items investigated so far, about 150 confirmed or suspected munitions and explosives of concern were removed. Tim explained the process used to locate, map, excavate, and remove all metallic items and the quality control measures that are used to evaluate the effectiveness of the removal. The shallow depth to water on the beach makes some anomalies unsafe to remove. This is a very slow process. When unauthorized boaters enter the area, work has to stop for their safety.

Discussion

- A member of the public asked about MRP Progress map coloring.
Tim—the brown areas show the submunition areas that have not been cleared.
The visitor—Why aren't the areas on the map that haven't been cleared due to water colored brown as well?
Tim—the blue areas show incomplete areas due to water and the brown areas show incomplete areas due to sub munitions.
- Member of the public—when you say beach, do you mean the high water line? Do you go into the water?
Tim—No subsurface removal is being conducted in the water. The work starts at the low tide mark. The teams try to dig to depth but, if water is encountered, the item is marked as not found due to water intrusion.
- Lirio—how deep are you digging on the beaches?
Tim—Teams are digging to 4 feet except where water is encountered.
- Stacie—Describe the procedures to dig the “blob” areas [*referring to polygons that are too dense to identify individual magnetic anomalies*].
Tim—In the process of “Mag & Dig”, teams walk lanes 3-5 feet wide using a handheld instrument. When they detect concentrations of metal, they dig to reduce the amount of metal debris. After this procedure has been completed in the polygon, the area is re-surveyed by digital geophysical mapping (DGM) and then individual magnetic anomalies [*metallic objects*] can be picked out and can be worked with the normal procedures.
- Stacie—in that situation [*Mag & Dig*], we are talking digging to 4 feet?
Tim—if we get down to 4 feet and don't see anything, the work is stopped.
- Stacie—how is wind, storms, and erosion handled?
Tim—after the interim action is completed, Long Term Monitoring [*periodically checking for munitions that resurface due to storms and erosion*] will likely (but not definitely) be a final remedy. The area may have to be re-mapped. The final remedy is not known at this time.

- Stacie—Is the Navy is using a “hurricane book” as a resource? Navy and other RAB members are not familiar with this book.
- Danny Rodriguez/EPA—the work plan calls for digging to 4 feet. When an item is not found, it is documented that it was searched for but not found.
- Stacie commented about the erosion issue. *[munitions left in place could be exposed by erosion]*
 Danny—The detection depth doesn’t stop at 4 feet, but if the item is not found by 4 feet, then the teams are permitted to stop *[indicating the item is deeper than 4 feet]*.
- Member of the public—Until the final remedy, for how long does the Navy plan to keep people out [using barricades]?
 Dan Hood/Navy- The work currently going on at the beaches in an interim action, a final remedy timeline is unknown (5, 10, 20 or more years).
- Member of the public—Can the EM-61 machine tell how large an anomaly you have in the ground? Can it tell you how much deeper the anomaly is? (if they have reached 4 feet).
 Tim — It depends on the orientation of the item and how close it is to the surface. The reading is not going to tell you anything definite, except that there is or isn’t an anomaly present. For example, you can have a small piece of railroad tie that makes the machine scream as loudly as if it were a 2000 lb bomb. A dense piece of metal (iron/hot rock) sounds just like a munitions item even though it’s a rock.
- Lirio—If the anomaly is below 4 feet, do teams use the handheld magnetometer?
 Tim—Yes, handheld is used.
- Felix—Were the 150 munitions and explosives of concern items found so far removed by blow-in-place on the beach? Tim—Most were practice bombs, either with a spotting charge or without it *[which don’t need to be blown in place]*. The live articles (20mm practice rounds), a few rockets and a few large bombs that we found were destroyed.
- Kathy—Is this the first subsurface removal area? Is this part of the Live Impact Area? What are the black areas on the map?
 Tim – Yes; only the areas in color have been mapped.
 Dan Hood/Navy—The work for this *[subsurface]* part of the investigation only involves the roads and beaches (including the turtle nesting zone), to allow FWS to do their job with the turtles and to minimize the risk for trespassers, future land use, and safety
- Stacie—What other areas will be next?
 Dan—All FWS roads and all beaches will be investigated.
- Stacie—Will you work on more beaches than those currently selected?
 Dan—This is the very first beach investigation; we have ahead of us many years of work on sandy beaches.

- Stacie—Have Red Beach and Blue Beach had subsurface work completed?
Danny Rodriguez/EPA—Red Beach and Blue Beach were a different type of work at a different level. Red Beach and Blue Beach were not suspected to have been bombarded. People have found artifacts on these beaches, but the investigation level for these two beaches was less complex than the work currently being conducted on the Live Impact Area beaches.

Discussion of Subsurface Removal Process

- Member of the public—I understand the Navy has posted warning signs, so if the Navy knows or suspects that there are bombs in the water, wouldn't some of those signs need to be pushed to shore? Why are no water investigations being conducted? The danger still exists even though the Navy is drawing an imaginary line of where to stop working.
Dan Hood—We will investigate the water and we want to, but the technology is not available yet. Divers can't go in and pick up stuff; for now, we want to deal with the interim action as much as we can, following the CERCLA process, and eventually we will address the water.
- Member of the public - I believe that too few beaches are closed. If someone goes there, they expose themselves to the dangers and risks. We have seen flyers and other publications alerting about these dangerous areas. It is the responsibility of the individual to obey the signs.
Tim—We have not had an accident (yet), but it's possible. We don't want anyone to get hurt, even if they are trespassing. Most people do the right thing and stay out of these areas.
- Madeline Rivera/Navy—Warnings are published in bulletins, flyers, regatta newsletters, and sailing club publications. Marine buoys have been installed as a method to alert of the dangers. The message is out there, but large boats still trespass into these areas.
- Member of the public —Most of the trespassers on boats are from the main island of Puerto Rico and the Virgin Islands.
Dan Hood—The Live Impact Area beaches will stay restricted until the investigation has been completed. In the future we will work to open and turn them over for public use, but we need time and a lot of money.
- Felix — On Culebra, the US Army Corps of Engineers is restricted from working on the actual range and are only allowed working in high water to 250 feet offshore. They work in the water because they can't work on the land.
Lirio - What are they doing on Culebra?
- Felix — Just looking for bombs underwater.
- Stacie— Requested clarification on the sub munitions area proposed for open burning; the brown area on the map looks larger than 75 acres. Fires are not accidental.
Tim—Anything that has burned has not been intentional and the burns that did accidentally occur were not in the sub munitions area. It happened in areas where the

work had already been completed, so the accidental burns were not beneficial to the work on the sub munitions area.

- Dan Hood—The initial request for open burning was for 500 acres, but, after long, hard, and slow, work, the sub munitions area has been reduced to 75 acres that are simply too dangerous to send workers into.
- Tim Garretson—We are now asking for a waiver to burn these 75 acres only.
- Lirio—What is the status of the proposal of the proposed burn?
Wilmarie Rivera/Puerto Rico Environmental Quality Board (EQB)—The Burn Plan is currently under EQB's review. Additional conditions were placed on what the Navy was originally proposing. The report with these additional conditions is available on EQB's webpage and includes all comments received at the public hearing. We hope that within a week or two, EQB can send the report to EPA Region 2 for final approval.
- Kathy Gannett inquired about an unintentional detonation that occurred on the range few days prior.
Tim confirmed that there was an unintentional detonation and explained the hypothesis of what caused this explosive reaction. No teams were near the detonation and all proper evacuation procedures were followed (meeting place, roll call). The senior technicians determined that the bomb that went off was a 105mm artillery projectile used during the Second World War; the item was too rusted and not strong. Tim would not speculate how close someone would have to be to have gotten hurt during the incident. It is common to have these detonations, but surprisingly, this is the first in the history of the Vieques cleanup project.
- Stacie inquired about safety distances.
Tim explained the safety distances for the public and team separation.
Dan Hood—The unintentional detonation shows a very good reason for starting with surface clearance of the land area, because with all of the trespassers in the past, everyone is lucky not to have been hurt.
- Member of the public—Trespassers have been lucky to not have gotten hurt, but no one knows the health effects internally due to chemical explosions. Everyone knows who put the bombs there if people are ill down the road. I understand that it is in the best interest of the Navy to clean the surface, but I am more concerned with the chemical residues left from the bombs. When you dig down 4 feet, do you do further testing?
Dan—You are one step ahead. Yes, the Navy will follow the CERCLA process [*of sampling and remediation where the data shows it is necessary*], but you need to understand that we are in the very beginning stages of the process. First we have to make these sites safe.
- Stacie—Hasn't sampling has been going on for years?
Dan – Yes, but only on the environmental sites, not the munitions sites.
- Stacie asked for more information on what cluster bombs are.
Tim explained in detail the mechanism and how dangerous they are.

IV. Environmental Quality Board Update – Wilmarie Rivera/EQB

Wilmaire stated that the controlled burning information is available on the webpage. The resolution and requirements that EQB requested from the Navy are also on the webpage. Wilmarie stated that the EQB's activities are summarized in the bimonthly flyer posted to the website.

Discussion

- Kathy—Can you tell us how many letters you have received against the controlled burn?
Wilmarie—All the letters are found as attachments in the resolution (including the Navy's presentation at the hearing). I don't know the exact number. I know that no emails were received.

V. Environmental Protection Agency Update – Danny Rodriguez/EPA

Danny listed the environmental documents currently under EPA review. EPA has participated in a lot of field work discussions with the Navy's Environmental Remedial Project Manager, Kevin Cloe. EPA provided oversight of the soil sampling at SWMU 6 and participated in two field visits in June. EPA is providing oversight of the munitions removal action on the beaches and roads.

EPA's Technical Assistance Programs

Technical Assistance Grants (TAG) provides funds for activities that help communities participate in decision-making at Superfund sites. Technical Assistance Services for Communities (TASC) provides independent technical assistance to communities living near hazardous waste sites.

Discussion

- Colleen MacNamara (RAB member)—What issues did EPA find?
Danny—Part of the observations were related to how the samples were taken.
- Lirio—After removal, was the soil disposed of as solid waste?
Danny—The initial agreement was to reduce the amount of waste going to the municipal dump, so, we did an analysis to see if the excavated soil can be used as a cover. EPA was concerned whether or not the soil could be adequately used as a fill rather than coverage.

VI. US Fish and Wildlife Service Update – Matt Connolly/FWS

Matt summarizes the road construction activities currently being done in the refuge. The work on Road 10, the main road from the gate near Camp Garcia, is expected to be finished by December, including surfacing the road with tar. Road 100 to Red Beach will be completed in late September and will be covered with tar. On Road Puente 109, the work will be completed at the end of October 2009; this road will be covered with gravel. Road 12 Punta Areas had a problem with the bridges. FWS talked with the contractor and came up with a solution to change the bridges (50-ton). We expect to finish the bridges by March of next year.

- Stacie—What beaches are open now? Matt—La Chiva, Playa Prieta, and by the end of September, Red Beach.
- Lirio—I am not sure if FWS properly analyzed their construction schedule. The beaches were closed during summer, the high tourist season, which is a tough impact on the community.
Matt—I understand your comment; however, the winter has a lot of storms and we can't do any construction work then. The roads contract is with Federal Highways; we discussed with them the schedule and the alternatives to keep most areas open. FWS knows that tourism is important and that the community needs many beaches open, but they also need the roads paved, so we are paving.

VIII. Closing – Susana Struve/CH2M HILL

Susana thanked the participants and propose to change the next RAB meeting to the first week of November, following a request from the interpreters. The Navy proposed November 4 for the next meeting.

ACTION ITEMS: None