



Vieques Investigation and Cleanup

Navy Facilities Engineering Command (NAVFAC) Atlantic

RESTORATION ADVISORY BOARD (RAB)

Meeting Number 35

6:30 p.m. - 8:00 p.m. - November 8, 2012 – Ice House, Vieques

DRAFT MEETING MINUTES

Attendees:

Mike Barandiarán (USFWS)	Stacie Notine (RAB member)
Anita Braddock (community member)	Daniel Rodríguez (EPA)
Gerald Braddock (USAE)	Mayra Rodríguez (visitor)
Brett Doerr (CH2M HILL)	Wilmarie Rivera (EQB)
Jorge Fernández Porto (RAB member)	Pedro Ruiz (Navy)
Brenda Figueroa (visitor)	Lionel Sanchez (RAB member)
Mike Green (Navy)	Donald Shaw (USA Environmental)
Daniel Hood (Navy)	Susan Silander (USFWS)
Félix López (USFWS)	Susana Struve (CH2M HILL)
Colleen McNamara (RAB member)	Dan Waddill (Navy)
Lirio Márquez (RAB member)	

1. Welcome and Introductions – Dan Waddill/Navy

The meeting began at 6:30 PM. Dan Waddill welcomed participants and described the agenda for the meeting.

2. Action Items – Dan Waddill/Navy

- **Status of Solid Waste Management Unit (SWMU) 4 Response to Comments.**

Dan Waddill gave a brief summary of the SWMU 4 public hearing and that the Navy received public comments from 32 people. The Navy and the regulatory agencies are reviewing the comments and drafting responses. He noted that the proposed remedy and associated public comment period stimulated interest from representatives from the Navy and Congressman Pierluisi. The Navy and the regulatory agencies (EPA, EQB, and USFWS) had a technical meeting in New York the week before Hurricane Sandy to discuss the comments received. Following the CERCLA process, a Responsiveness Summary will be prepared.

Discussion Points:

- Stacie Notine (RAB member): How are the funding restrictions related to the ultimate cleanup of this site?
 - o Dan Waddill: Although funding was a topic of discussion with the agencies, cost is only one of nine factors that must be considered during remedy selection. The agencies will continue discussions; more details can be provided at the next RAB meeting. The next

step is a draft Record of Decision (ROD), which is anticipated to be submitted to the regulatory agencies for review in June 2013. This will provide the time necessary to consider all the comments, reach consensus with the agencies on the path forward, and develop the Responsiveness Summary.

- Stacie Notine: Does the Navy need approval from the Puerto Rico Environmental Quality Board to finalize the ROD and implement the selected remedy?
 - o Dan Waddill: As you know we have been working under a Federal Facility Agreement (FFA) with the four agencies (Navy, EPA, EQB and USFWS). The FFA describes the decision making process. The goal is to get all the agencies to concur on the final remedy for this site.
- Jorge Fernández Porto (RAB member): After the discussions from the public hearing and the site visit with members of the community, we want to make sure the agencies understand we want full consideration given on how, where, how much, and which species of vegetation will be cut; we don't want to have the same issue we had with the dwarf forest on the Eastern Conservation Area. We already agreed on this methodology, which will allow investigating the presence of MEC at the same time protecting ecologically sensitive areas.
 - o Dan Waddill: Alternative M5, as presented in the Feasibility Study, would require all the vegetation to be removed in order to conduct both surface and subsurface munitions removal. While a different alternative could be considered that may require less vegetation to be removed, this will be part of the discussion the Navy will be having with the regulatory agencies prior to issuing the ROD.

- **Status of SWMU 1.**

Dan Waddill: The remedy implementation began recently, but more waste was found on the surface than originally expected. Therefore, while the soil covering remedy will be implemented, a thorough evaluation of the area where debris is located will be conducted to ensure the remedy meets the objectives stated in the ROD. We will keep the RAB posted as the activities on SWMU 1 continue.

Discussion Points:

- Stacie Notine: How would this affect the monitoring plan, will it continue?
 - o Dan Waddill: The long term monitoring for the site will continue as planned and documented in the long-term monitoring work plan; long-term monitoring will begin as soon as the remedy implementation is complete.
- Stacie Notine: Where is the additional cover soil coming from?
 - o Dan Waddill: We are in the process of gathering more information; our first option is to find soil from the island. We will give you an update at the next RAB meeting.

- **Land Use Controls (LUCs) RAB Workshop**

Dan Waddill: The agencies are working on developing the workshop for early 2013. The idea is that Navy, EPA, USFWS and EQB will work together to develop the workshop, but we need more time to get it ready. We will consult with the RAB to finalize a date.

3. Additional Safety Precautions during Demolition Events. Pedro Ruiz/Navy

Pedro stated that safety is a priority for the Navy and that some additional measures are to be implemented during demolition events as an added level of precaution for the workers and any other personnel in the area. Pedro described the standard precautions taken by the Navy during demolition events, which include: NOTAMs (Notice to Airmen/ Mariners), check the demolition area for trespassers, road guards, boat patrol, call to Federal Aviation Administration (FAA) to close air space, and an observer from OP1. The Navy is considering implementing the following additional measures for 2013: posting a red flag which will be raised during demolition days on top of Cerro del Muerto near the roads where trespassers are most often seen; sounding a warning bell before each detonation, a warning bell right before the detonation, and then an all-clear bell after the detonation to alert the workers when it is safe to approach or leave the demolition area. The Navy plans to communicate this effort to the community using monthly informational fliers targeting trespassers seen at the former range. If you have additional suggestions on how we can communicate these measures to the community, please let us know.

- Gerald Braddock (USAE): Another measure we are taking is to use sand bags during demolition events so we can contain the explosion and reduce the risk.

Discussion Points:

- Stacie Notine: During your work, are you finding cluster bombs?
 - o Daniel Hood (Navy): No, we have not found any cluster bombs on the sites we are currently working on.
- Stacie Notine: Do you send formal communications to EPA on when the detonations events will take place?
 - o Daniel Rodríguez (EPA): We have not received any information about the detonations in a long time.
 - o Daniel Hood (Navy): We have not done any detonations in several months, but EPA is informed prior to detonations.
- Stacie Notine: I think it is very important that the Navy makes an extra effort to communicate the risk to the community since the detonations are taking place so close to the community. In the past, during the Navy training exercises there was a lot of communication and announcements sent to the community. You should consider posting an announcement at the Post Office when the detonations will take place to alert the community.

4. Proposed Remedial Action Plan Area of Concern E (AOC E) –Brett Doerr/CH2M HILL

Brett presented the results of the pilot study performed at AOC E and subsequent feasibility study, which formed the basis for the Proposed Remedial Action Plan (PRAP):

- AOC E is located within Municipality of Vieques public works area. It was the former location of a 500-gallon waste oil underground storage tank (UST). From 1970-1996, vehicle maintenance activities were performed at AOC E. The UST and surrounding soil were removed in 1996.
- The Navy initiated a pilot study to remove free product in 2002 and a pilot study to treat the petroleum contaminated groundwater by injecting sodium persulfate in 2010 and 2011.

- The objective of the remedial action is to prevent exposure to Contaminants of Concern (COCs) in groundwater at concentrations above drinking water standards or acceptable risk levels. Data collected during the pilot study indicate the persulfate injections were successful at reducing the COC levels, but elevated persulfate levels have persisted longer than expected. It is anticipated that the levels of persulfate will decline to normal within the next two years. However, continued monitoring will be proposed as part of the remedial action to evaluate that assumption and to ensure COC concentrations do not rebound above acceptable levels.
- The PRAP will propose: 1) groundwater monitoring with institutional controls and contingency plans while persulfate levels decline; 2) groundwater sampling after persulfate concentrations decline to confirm that contaminants do not rebound above remedial goals; and 3) establishing institutional controls to ensure the groundwater is not used as a source of drinking water until it is confirmed contaminants have not rebounded above remedial goals.
- The Draft PRAP will go for regulatory agency review in early 2013. The public comment period for the Proposed Plan is tentatively scheduled for mid-2013, and the Record of Decision is expected to be finalized in 2014.

Discussion Points:

- Jorge Fernández Porto: It seems to me that the second injection was not necessary if, according to the graph you showed us, the persulfate concentrations were already declining. Why do a second injection?
 - o Brett Doerr: It is only in hindsight that we can see the second injection was not necessary. It is important to keep in mind that the dosages included in the pilot study design were based on estimates and models assuming contaminant concentrations, groundwater flow rates, bacteria levels, and other chemical conditions. So, it is probable that the second injection was not needed, but we could not know that until we actually conducted the pilot study. As a side note, the persistence of the persulfate can be considered a good thing because as long as it is there, it can continue to degrade contaminants that might be present.
- Jorge Fernández Porto: I am glad the pilot study worked and the concentrations are declining. Can you use the lessons learned from this site and apply them to other sites so we don't do unnecessary injections of other chemicals?
 - o Brett Doerr: Yes, and in fact, we can do that for this same site should future injections become necessary if we see contaminant rebound. In that case, we'll be able to use the data we collected during the pilot study to optimize the injection.
- Stacie Notine: So you did the second injection because you did not have enough field data to determine that one injection was enough?
 - o Brett Doerr: Based on the data that had been collected over the years of investigations conducted at the site, we believed two injections were necessary.
- Stacie Notine: Will you continue to monitor the site?
 - o Brett Doerr: Yes, continued monitoring is part of the remedial action being proposed for this site.

5. UXO 15 Update – Daniel Hood/Navy.

Daniel gave a summary of the findings at UXO 15, including a brief description of the site.

- UXO 15 is located along the road going to the lighthouse and has two areas that may have contained munitions: PI 9 which may have been used as munitions storage and disposal, and PI 13 which may have been a firing point for munitions fired towards the bombing range. However, no evidence of this use has been observed during site visits and the investigation. Empty munitions casings and five debris piles were previously identified on-site.
- The subsurface investigations will be done using uniformly spaced transects at PI 9. The Navy performed a biological avoidance evaluation to identify the areas of important habitats. A bedrock survey identified areas where no subsurface munitions would be found because the bedrock is at or within several inches of the ground surface. These activities reduced the areas for vegetation clearance by over 90%. The archaeological survey completed in September 2012 found nothing of archaeological significance.
- Five debris piles will be removed from the site and samples will be collected beneath the debris piles. If other debris piles of comparable size are found, soil samples will be collected from beneath the debris.
- The vegetation clearing activities along the transects were completed in August 2012; areas with standing water (mangroves area) were deemed unsafe and transects were not cleared through them. Any metal debris found on the ground surface was removed to minimize the obstructions during the geophysical survey.
- The visual and geophysical survey was completed in September 2012. The survey identified 451 subsurface metallic anomalies, which were subsequently excavated by hand, 92 surface locations with metal debris, one surficial munitions item potentially exhibiting an explosive safety hazard (MPPEH), and non-munitions debris.
- The Navy is currently compiling/evaluating all visual, geophysical, and excavation data. Based on the data, the Navy will assess if any modifications to the Sampling and Analysis Plan are needed, and, if so, will submit the revision for regulatory review.

6. Status Update for Non-Time Critical (NTCRA) Removal Action at UXO-13 – Daniel Hood/Navy.

Daniel summarized historical data from UXO 13, described the NTCRA findings, and the path forward for this site:

- Past investigations identified 48 munitions items and 363 munitions related scrap metal items at the site. 116 acres were investigated using transects, only one MPPEH item (a flare) was identified west of Range 7 (with relatively low hazard). The remainder of MPPEH was found either within or east of Range 7 (620 acres). UXO 13 was identified as one of the highest priority sites based on the DoD Prioritization Protocol.
- The Engineering Evaluation/Cost Analysis (EE/CA) completed in October 2012 considered three interim remedial alternatives: 1) No Action: leave the site as it is; 2) Establish engineering controls for a selected area where explosive safety hazards were identified; and 3) Removal of

Surface Munitions and Explosives of Concern (MEC) from a selected area where explosive safety hazards were identified.

- The NTCRA Work Plan for implementing the EE/CA was completed in February 2012. The field work began with clearance of the munitions found on the surface of the access roads. Through October 2012, 55 acres of the 620 NTCRA acres have been surface cleared of munitions. A total of 6,895 munitions-related items (MEC, scrap metal) have been removed. A total of 75 MPPEH have been removed.
- The Navy will continue to surface clear munitions from the rest of the 620-acre area.
- The Navy will conduct a Remedial Investigation/Feasibility Study (RI/FS) by delineating the nature and extent of MEC and munitions constituents. The RI/FS also will evaluate explosive safety risk and the risk to human health and the environment posed by munitions constituent contamination and will evaluate alternatives to propose as the final remedy.

Discussion Points:

- Stacie Notine: Do you have a data base with all the information on when and what munitions were fired, including munitions from other countries which may be very old? How do you know what you are finding to be able to classify them as hazardous or not hazardous?
 - o Daniel Hood: We work with experienced personnel who know the munitions items very well and are able to identify/classify them.
- Stacie Notine: Have you found many live munitions?
 - o Daniel Hood: No, because live munitions are designed to explode. We are finding more inert and practice bombs because they are filled with concrete and have no explosives in them.

8. Refuge-related Activities Update - Mike Barandiarán /USFWS.

Mike: USFWS has been actively participating in the field investigations and cleanup with respect to biological avoidance discussions with the Navy. It is a long process but the agencies' comments are included in the decision making process. Some of the items raised by the RAB members are also being considered. I think Dan Waddill and his teams are doing a great job to obtain a balance with the protection of habitats and the munitions cleanup. The communication with the agencies is much better, and we are seeing results.

At the refuge we continue to develop activities to get children involved in conservation of natural resources and have developed some educational programs for them. We continue to perform law enforcement activities. We are working on designing an observation tower.

Discussion Points:

- Jorge Fernández Porto: I know the refuge struggles to have the right amount of personnel to cover all of the activities at the refuge. With what frequency do you go to the field and follow up with the work the Navy is performing?
 - o Mike: Based on the lessons learned from other sites, the Navy has incorporated a new process which includes an informal consultation with USFWS on areas that could contain habitats of ecological importance. Basically, when working on these types of areas,

USFWS is called to assess the area and provide the Navy with a biological opinion. UXO 15 was a good example of how this process is working well. USFWS personnel go to the site, evaluate the working transects (called WADs), and if we see something of concern, we request that the work stop to allow further evaluation of the species/habitat present. USFWS is in the process of hiring a biologist with funds procured by Rich Henry to provide more support and avoid delays on the multiple refuge activities that need to be done on a daily basis.

- Lirio Márquez (RAB member): Have you considered involving someone with botany expertise by asking for interagency support from other federal agencies?
 - o Mike: We are developing a threefold approach: 1) we need to hire a person who will work in the field, reviewing the planned WADs and technical documents in coordination with Felix Lopez so USFWS can provide timely comments; 2) using funds from USFWS Contaminants Section, bring a scientist from the University of Puerto Rico to increase the expertise in the field, and 3) an intra-agency agreement with Ecological Services to get more botany/ecology support.

9. Regulatory Agencies Update – Wilmarie Rivera/Environmental Quality Board (EQB)

Wilmarie stated that with the new elected government in Puerto Rico there are many uncertainties on who will be leading EQB in the future. We know there will be changes but we are not sure how and if these changes will affect the regulatory work on Vieques. We've heard that Vieques and Culebra will continue to be a priority for the Puerto Rican Government. In the meantime EQB will be providing the same level of effort to the Vieques Restoration Program until changes are announced.

Wilmarie gave a summary of the regulatory oversight provided from August to October 2012:

- The agencies participated in a technical meeting from August 27 to 29, 2012
- There have been a number of documents that have been evaluated; the agencies have provided comments to the Navy
- On September 17, 2012, representatives from the agency participated in the field visit to SWMU 4 along with members of the community.
- On October 18, 2012, the agencies participated in a field visit to SWMU 1

10. Regulatory Agencies Update – Danny Rodríguez/Environmental Protection Agency (EPA)

Wilmarie already summarized the field visits and other activities in which the regulatory agencies, including EPA, have participated. Due to changes in EPA's oversight contract, EPA is a bit behind with the document review process for several documents including: SWMU 21, PI 21 and others. Additionally, EPA in New York has been closed for over a week due to the effects of Hurricane Sandy, so that too has impacted the document review schedule, which also will impact on when the documents will be available to the RAB. We will try to expedite the reviews as much as we can. If you have questions, I am in Vieques every day of the week. You don't have to wait for the next RAB if you have a question, as I'm always available.

11. Closing – Dan Waddill/Navy

Happy Holidays to all of you. After the holidays, we will initiate a call to discuss the next RAB meeting date and the agenda. Susana Struve thanked the attendees. The meeting ended at 8:00 PM.