



**Vieques Environmental Restoration Program  
Naval Facilities Engineering Command (NAVFAC) Atlantic**

**RESTORATION ADVISORY BOARD (RAB)**

**Meeting Number 54**

**6:00 p.m. – 8:40 p.m. | August 1, 2017 | Punta Mulas Lighthouse, Vieques, PR**

**MEETING MINUTES**

**Attendees:**

Dan Waddill – Ex-Officio RAB Member, NAVFAC Atlantic	James Larkins – Community RAB Member
Daniel Hood – Ex-Officio RAB Member, NAVFAC Atlantic	Stacie Notine – Community RAB Member
Kevin Cloe – Ex-Officio RAB Member, NAVFAC Atlantic	José Gómez – Community Member
Julio Vázquez – Ex-Officio RAB Member, USEPA Region 2	Andrea Malavé – Community Member
Daniel Rodríguez – Ex-Officio RAB Member, USEPA Region 2	Iván Camacho – Community Member
Mike Barandiarán – Ex-Officio RAB Member, USFWS	Josué Bermúdez – Community Member
Susan Silander – Ex-Officio RAB Member, USFWS	Juliana Ramos – Community Member
Juan Babá Peebles – Ex Officio RAB Member, PREQB	Loyda Guzmán – Community Member
Madeline Rivera – NAVFAC Atlantic	Roberto Morales – Radio Universidad de Puerto Rico
James Brantley – NAVFAC Atlantic	Elisa Sánchez – Coalición Playas Pa’l Pueblo
Efraín López – US Coast Guard	Hilda Bonilla – Servicio de Extensión Agrícola
Edgardo Belardo – DNER Vieques	Julio Rosa – Community Member
Brett Doerr – CH2M	Alanys Pimentel – Community Member
Dennis Ballam – CH2M	Hernán Morales – Community Member
Madeline Almodovar – CH2M	Mónica Morales – Community Member
Daniel G. Concepción – CH2M	June Landrum – Community Member
Don Shaw – USA Environmental	Kathy Gannett – Community Member
Luther Landrum – Community RAB Member	Héctor Olivieri – Community Member
Myrna Pagán – Community RAB Member	

*These minutes represent a summary of the meeting presentations, comments, questions, and action items and are not a verbatim transcript of the meeting.*

**Topics Discussed:****Opening and Introductions**

Madeline Almodovar  
(CH2M/Facilitator)

Meeting began at 6:00 p.m. Participants were welcomed to the 54<sup>th</sup> Vieques RAB meeting and guided through a series of posters highlighting different aspects of the Vieques Environmental Restoration Program. Representatives from the Navy, USEPA, PREQB, USFWS, and the US Coast Guard were available to answer questions.

**Dan Waddill** (Navy Program Manager)  
**Kevin Cloe** (Navy Project Manager)  
**Daniel Hood** (Navy Project Manager)  
**Madeline Rivera** (Navy Site Manager)  
**Mike Barandiarán** (USFWS Vieques Wildlife Refuge Manager)  
**Susan Silander** (USFWS Caribbean Refuges Supervisor)  
**Julio Rodriguez** (USEPA Region 2 Remedial Project Manager [RPM] – Terrestrial MR sites)  
**Daniel Rodríguez** (USEPA Region 2 RPM – Offshore [Underwater] MR site)  
**Juan Babá Peebles** (PREQB RPM)  
**Edgardo Belardo** (DNER)  
**Efraín López** (US Coast Guard Waterways Management Specialist)

Navy and regulatory agency representatives greeted the attendees, provided information, and answered questions posed by RAB and community members. Each poster was also available to the attendees as a handout. A summary of the discussions is provided below.

The US Coast Guard held an informational meeting on the Water Safety Zones within Munitions Response Site UXO 16 following the conclusion of the RAB meeting.

**Informal Question and Answer Session**

**Dan Waddill** (Navy)  
**Daniel Hood** (Navy)  
**Kevin Cloe** (Navy)  
**Madeline Rivera** (Navy)

**Community Feedback**

- Myrna Pagán (RAB community member) read a statement from Paul Walker (Green Cross International) highlighting sites where closed detonation chambers have been used to destroy old munitions. The statement urged the Navy and regulatory agencies to consider other methods for addressing unexploded ordnance (UXO) in Vieques, including the use of chambers. The statement also urged the Navy to share information about the types of UXO found, removed, and/or detonated on the island as part of the munitions removal process.
- James Larkins (RAB community member) invited the Vieques community to participate in the RAB meetings, and exhorted the attendees to get involved in the process, stating that public involvement in the review of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) documents has an effect on the methods chosen in the Vieques restoration process.
- A community member asked about the process used to remove munitions items offshore of Cayo La Chiva.
  - Daniel Hood (Navy) explained that the Navy removed the items from the water and transported them to the land where munitions have been previously taken for controlled detonation.

- Stacie Notine (RAB community member) asked about the schedule to release the After-Action Report for the removal action offshore of Cayo La Chiva.
  - Dan Waddill (Navy) stated that the After-Action Report will be forthcoming, including details of the controlled detonation event, following Navy preparation and regulatory review.
- A community member asked about the frequency and the schedule of the next controlled detonation events.
  - Madeline Rivera (Navy) stated that the frequency and schedule vary based on findings, but that the Navy notifies USEPA, USFWS and PREQB in advance of a controlled detonation event. This notification is also distributed to the local authorities, including the Vieques Mayor’s office, and the State Police Department.
- Various community members suggested that the Navy publish a notice in local business locations, the Post Office, and the Department of Transportation marine terminal so that the public can be made aware of the timing of the control detonations, as was done while the Navy was performing active military training exercises.
- They also asked who represents the Municipality on the RAB.
  - Madeline Rivera stated that Mr. Fabián Martínez was originally appointed by the Mayor as the Municipality Representative, but Fabian has communicated to her that since He Mr. Héctor Olivieri attended the meetings, he should be the Representative. Héctor stated that he was not informed of this appointment.
  - Héctor Olivieri (community member) stated that although he leads the Vieques Municipality Emergency Response Agency, he attends the RAB meetings in a personal capacity, not on behalf of the Municipality.
- Roberto Morales (Radio Universidad de Puerto Rico) stated that he would like to perform a brief interview with some of the representatives from the Navy with respect to controlled detonations.
  - Dan Waddill (Navy) responded that the Navy will be available for the interview.
- Mr. Larkins stated that he could serve as link with the community to distribute information on future controlled detonations.
- Héctor Olivieri asked about the number of accidents recorded by the program (explosive and non- explosive related), the average number of employees working in the field, and their working locations. He also asked about the quantity of any chemical and radiological weapons used in the past. He added that the community would like to receive a faster flow of information from the Navy and the regulators, which should not be limited to RAB meetings, which only occur on a quarterly basis.
  - Dan Waddill stated that there have not been any explosive-related accidents on the Vieques Restoration Program. The average number of field staff is approximately seventy-five (plus/minus twenty-five depending on the various tasks occurring); around two thirds of the force are Vieques residents. Chemical weapons were not used during the Naval training operations; therefore, none have been found in Vieques. The initial investigation of depleted uranium rounds are handled in the 1990’s by the

U.S. Nuclear Regulatory Commission. The Navy has previously shared information regarding the event where a couple hundred DU rounds were inadvertently fired in the LIA.

- Don Shaw (USAE) responded that there have been four recorded injuries related to slips, trips and falls. He added that during the second week of August they will be close to sixty employees, of which two thirds are Viequenses.
- A community member asked if there is contamination in Vieques.
  - Dan Waddill responded that as part of the CERCLA process, the Navy and regulatory agencies investigate sites to identify the nature and extent of any contamination related to past Naval training activities, including UXO. He added that once a UXO or any type of contamination is found, the Navy presents a work plan to the regulatory agencies to address the contamination so that the potential impacts can be evaluated and the hazards/unacceptable risks eliminated or controlled. He added that air quality monitors are currently used to evaluate and record air quality during the controlled burning operations in the Submunitions Area; thus far no exceedances to the National Ambient Air Quality Standards (NAAQS) have been recorded, which is consistent with historical data and modeling results.
- Elisa Sánchez (Community Member) asked whether the Navy considers the restoration activities and controlled detonations a high-risk job. Ms. Sánchez asked about the protocol and the type of field apparel used by field staff, and whether the workers have an annual health evaluation. Ms. Sánchez also asked if there have been any negative health impacts evaluated and recorded on field staff within the past five years.
  - Dan Waddill stated that the Navy works under strict safety plans and procedures that are required for all staff and contractors, including the proper training of employees. Dan added that the teams are led by experts who have decades of experience in safely finding, identifying and managing UXOs. Dan stated that numerous Viequenses have received leadership training and UXO Technicians 3 high level certification as part of the program; more than twenty field staff have received training as UXO Technicians 2 and 1, and additional local employees provide administrative support.
  - Don Shaw (USAE) stated that all of their employees undergo annual safety training and a physical evaluation as required by the Occupational Health and Safety Administration (OSHA) to monitor their health. As part of their daily activities, they perform morning safety meetings, in addition to site specific briefings to address any potential situations that may arise during the execution of the work plan. Don responded that in the nine years he has been involved in the program, he has not observed any adverse health effects related to the field work. He added that there is no confidentiality clause to restrict the employees to openly talk about the work they performed.
- A community member asked about the chemical composition of explosives found on Vieques.

- Dan Waddill (Navy) described the types of explosive compounds found and how the explosive molecules react and are consumed during a controlled explosion to form high temperature expansive inert gases, which consequently results in a pressure wave or shockwave. Dan added that the vast majority of products of an explosion are water vapor, carbon dioxide, nitrogen gas and hydrogen gas. The controlled burning and detonation events are monitored with air quality monitors to ensure that no exceedances to the NAAQS occur.
- Dan added that regulatory agencies have met with the Navy to discuss the safest way to destroy UXO. Dan added that when unexploded munitions are detonated in place, it is because they are especially dangerous and sensitive to any disturbance; attempting to move them in that condition could hurt or kill a worker. A detonation chamber requires transportation of the munitions through rough roads within the Vieques project sites, moving the items into storage and then transferring them from storage into the chamber, which would expose the workers to additional hazards. This additional danger is not warranted since the controlled detonations are done in a manner that is safe for the workers and the public. The Vieques Environmental Restoration program has processed approximately 100,000 MEC items so far without an accident.
- James Larkins added that he would like the Navy to clarify if the detonation chambers are not used in Vieques solely for safety reasons.
  - Daniel Hood (Navy) stated that in order to use a detonation chamber, a number of considerations have been evaluated, and one of the most important is the safety of the workers. The chamber will take much longer to process the munitions; so far 100,000 munitions items have been safely removed using in place detonations, thus speeding the restoration process and protecting the workers and the community.
- A member of the community asked whether Vieques is a Superfund site.
  - Dan Waddill explained that Vieques is a Superfund site that was added to the National Priority List by request from the Commonwealth of Puerto Rico Governor.
- Juliana Ramos (community member) asked about how many rounds of depleted uranium were fired in the past, their location, and their removal process.
  - Dan Waddill indicated that the depleted uranium rounds used in Vieques do not contain explosives but are heavy, solid rounds that penetrate armored structures. They landed on the Live Impact Area (LIA) to the east side of Vieques. Dan added that there were approximately 200 rounds fired during one event in the 90s. The Nuclear Regulatory Commission investigated the area, and removed and disposed of the rounds that were found at that time. There is an investigation currently taking place to evaluate whether additional rounds remain in the area.

**Status of Vieques Installation Restoration Sites**

**Kevin Cloe (Navy)**  
**Dan Waddill (Navy)**

Kevin Cloe (Navy) described the work that is being performed on the environmental sites located on west and east Vieques. These sites comprise AOC E, SWMU 6, SWMU 1 and SWMU 20. The poster showed the timelines with projected timeframes for the

	<p>completion of each CERCLA step for each site. A map with an aerial image of Vieques showed the site locations and photographs showed the work performed on each site.</p>
<b>Community Feedback</b>	<ul style="list-style-type: none"> <li>• A community member asked about the progress of the investigation on the SWMU 6 lagoon. <ul style="list-style-type: none"> <li>○ Kevin Cloe explained that the ecology of the lagoon has recovered since the soil removal and restoration activities were performed; the positive changes have been documented on a video and a photograph showing an aerial view of the vegetation around the lagoon was included in the poster and a no further action Record of Decision is currently being prepared for the site.</li> </ul> </li> </ul>
<b>Underwater and Beaches Investigation Status Update</b>	
<b>Kevin Cloe (Navy)</b> <b>Dan Waddill (Navy)</b>	<p>Kevin Cloe (Navy) provided information on the status of the underwater investigations, as well as the status of the Beach Dynamics Study. The investigations update included the UXO 16 Wide Area Assessment and Remedial Investigation offshore of SWMU 4.</p> <p>A map of Vieques showed the location where underwater investigations are taking place. Several pictures showed the underwater and Beach Dynamics investigations.</p>
<b>Community Feedback</b>	<ul style="list-style-type: none"> <li>• James Larkins asked whether there are signs to warn recreational vessels of the potential hazards and dangers of underwater UXOs at the beaches in which the investigation is ongoing. <ul style="list-style-type: none"> <li>○ Dan Waddill stated that the Navy issues notices to mariners, has placed warning signs, and an underwater barrier and buoys warning boaters not to anchor or enter those beaches, and is working with the Coast Guard to implement safety zones in order to keep the boaters in the area safe.</li> </ul> </li> <li>• A community member asked whether there is information of the removal of underwater UXO from other areas in the United States. How many years of experience and what processes have been used in other places? <ul style="list-style-type: none"> <li>○ Dan Waddill stated that there is limited experience from the military performing underwater UXO removal. The Army Corps of Engineers is performing some work in Culebra. It is important that the Navy and federal and state regulators carefully select how to safely and properly address underwater UXO. Dan stated that as part of the CERCLA process, the Navy just completed the underwater Wide Area Assessment, which is part of the Remedial Investigation, to identify magnetic anomalies on and beneath the seafloor. In addition, the Navy is preparing to conduct a Removal Action to start addressing UXO in the nearshore areas. The information gathered from these activities will help determine the path forward to address the underwater site. All of this work will be done as a collaborative effort with the regulatory agencies, with community input.</li> </ul> </li> <li>• A community member asked for a description of the items that were removed offshore of Cayo La Chiva. <ul style="list-style-type: none"> <li>○ Daniel Hood described the scope of work for the removal and the controlled detonation of items found off the coast of Cayo La Chiva. Daniel stated that the items included five M-54 rockets and that it was the first underwater removal action under CERCLA, thus marking a milestone for the Vieques Environmental Restoration Program.</li> </ul> </li> </ul>
<b>Status of Vieques Munitions Response Sites</b>	

<b>Brett Doerr (CH2M)</b>	<p>Brett Doerr (CH2M) presented a summary of the Munitions Response Program (MRP) investigations including the planned and upcoming work. The poster focused on information about the work performed on the Eastern Maneuver Area (EMA), Live Impact Area (LIA), Surface Impact Area (SIA), and Eastern Conservation Area (ECA).</p> <p>The poster presented pictures showing sampling and restoration activities with a written description of each site location. A Vieques map showed the relative location of the sites, approximate areas, and site status.</p>
<b>Key Areas Where Accelerated Cleanup is Taking Place to Foster Public Access</b>	
<b>Madeline Rivera (Navy)</b>	<p>The poster included a flowchart of the process and described each type of documentation generated by the Navy for review by the regulatory agencies and the public. The poster included detailed timelines for SWMU 4, Peninsula Carenero and UXO 18 Cayo La Chiva. Madeline explained how the Vieques Restoration Program is making significant progress in focused efforts at beaches and public roads within the sites.</p>
<b>Community Feedback</b>	<ul style="list-style-type: none"> <li>• Julio Rosa (community member) asked why the Navy is focusing on working in the most eastern part of the island. <ul style="list-style-type: none"> <li>○ Daniel Hood stated that the work on the eastern part of the island is complex and represents some of the most dangerous areas, but that the Navy is also working on beaches and peninsulas such as Cayo La Chiva and Peninsula Carenero and expects to complete the field work soon, so USFWS can implement their land use plan, which in some places includes public access.</li> </ul> </li> </ul>
<b>Adjournment</b>	
<b>Madeline Almodovar (CH2M)</b>	<p>All participants and presenters were thanked for attending the meeting, which was adjourned at approximately 8:40 p.m. The next RAB meeting is scheduled to occur on November 8, 2017. This meeting was subsequently canceled due to the impacts of Hurricanes Irma and Maria.</p>