

**MEETING SUMMARY
FORMER NANSEMOND ORDNANCE DEPOT (FNOD)
RESTORATION ADVISORY BOARD (RAB)**

To: RAB Members, Interested Parties
From: Adriane James, U.S. Army Corps FNOD RAB Government Co-Chair
Patsy Hosner, FNOD RAB Support Contractor
Re: September 4, 2008 FNOD RAB Meeting Summary

RAB Members Present	Affiliation
Adriane James	U.S. Army Corps of Engineers (USACE), Government Co-Chair
Marian "Bea" Rogers	Community Co-Chair
Frank Dunn	TCC, VP of Administration
Bruce Johnson	Respass Beach
Katie Moore	Burbage Grant
Stephen Milhalko	VDEQ
Dave Saunders	Bennett's Creek
Bob Shriver	Lockheed Martin
Bob Williams	Dominion Power
David Wilson	VDOT
Suresh Kikkeri	USACE, Baltimore District, Project Manager
RAB Members Absent	Affiliation
John Bucklin	General Electric
Victor D'Ortona	Ashley Capital
Rob Thomson	EPA
Cherie Walton	Reactives Management
Others Present	Affiliation
George Mears	USACE, Norfolk District, Design Team Leader
Jeff Zoeckler	USACE, Norfolk District, Project Engineer
Patsy Hosner	RAB Support (The Wardlaw Group)
Butch Wardlaw	RAB Facilitator (The Wardlaw Group)
Bill Hudson	USEPA, Region III, Outreach Coordinator
Hamid Rafiee	USACE, Baltimore District
Andrea King	USACE, Norfolk District
Travis Davidson	USACE, Norfolk District
Rick Whitten	USACE, Baltimore District
Todd Liebig	Weston Solutions
Marty Holmes	Weston Solutions

Introduction and Welcome

Call to Order – Butch Wardlaw (The Wardlaw Group), Facilitator

Butch called the meeting to order at 6:15 p.m. The attendees introduced themselves. Butch reviewed the handouts. Bea Rogers (Community Co-Chair) stated that Patrick Roberts will be taking the place of Thomas O'Grady, as the RAB member from the City of Suffolk. Patrick is the Deputy City Manager for the City. Bea provided Patrick's contact information to Patsy Hosner (RAB Meeting Support Contractor).

The RAB reviewed the meeting minutes from the June 5th, 2008 meeting and provided changes. The RAB approved the June Meeting Summary with the changes as noted. Some RAB members asked the Corps to distribute the draft meeting minutes further in advance of scheduled meetings to allow sufficient time for a thorough review. George Mears (U.S. Army Corps of Engineers Norfolk District, FNOD Design Team Lead) said the RAB would get them earlier from now on.

George said there was no *Update* provided to the RAB between the June 2008 and September 2008 meetings due to scheduling conflicts this summer. There was a discussion about the need for the *Update*. Bea reminded RAB members that the *Update* was created when the frequency of RAB meetings changed from bi-monthly to quarterly. She emphasized the increased importance of the *Update* since the RAB meets less frequently. Adriane James (U.S. Army Corps of Engineers, Government Co-Chair) and Suresh Kikkeri (U.S. Army Corps of Engineers, Project Manager) stated that the Corps will work to establish deadlines and will ensure *Updates* are provided to RAB members between scheduled meetings per the original agreement.

RAB Business

Government and Community Co-Chair Comments – Adriane James (Government Co-Chair) and (Bea Rogers, Community Co-Chair)

Bea stated that she had made her comments during the opening of the meeting.

Adriane said that the Corps is performing its yearly fiscal close-out. She believes the money will continue to come in to fund all current projects.

Landowner Updates – Butch asked the landowner representatives for updates.

VDOT – David Wilson had no update.

Tidewater Community College (TCC) – Frank Dunn mentioned that TCC's right-of-entry agreement has been completed.

Dominion – Bob Williams reported that Dominion's right-of-entry agreement has also been completed.

Bea asked George if the Corps had sent the City of Suffolk an updated right-of-entry agreement. George said that this has not been done but that it would probably be a good idea even though the Pesticide Drum project was complete and this was the only site on Suffolk property. The Corps will still need limited access to close out groundwater at all locations.

Lockheed Martin – Bob Shriver was introduced as Lockheed Martin's new representative on the RAB.

There were no other landowner updates.

Other Business

Butch asked the RAB members to think about when they would like to participate in an FNOD site visit. He said a date and time would be selected at the end of the meeting. George provided additional details regarding how the site visit would be conducted. He explained that the group will meet at the contractor's trailer at FNOD and the site tour would last about two hours. He suggested that RAB members consider dates after November 15, such as November 21, December 5, or December 12. The media and members of the public will be invited.

Butch stated that the RAB Contact List had been updated and asked each RAB member to review the list and provide changes to Patsy as needed. George asked the RAB to decide the type of contact information they want to have posted on the FNOD web site. Butch asked RAB members to make a decision regarding contact information before the meeting adjourned.

FNOD Technical Update

Army Corps Update – George Mears (U.S. Army Corps, Design Team Lead)

George reviewed the order of the FNOD Technical Updates and the handouts. At the last meeting, the RAB asked for updates on the James River Beachfront (JRB) and the TNT area. Because most of the current work is being performed at the Nansemond River Beach (NRB), it would be covered first. George also said that, shortly before the meeting, he received a letter from the Environmental Protection Agency (EPA) with their responses to the Corps' comments on the Main Burning Ground Supplemental Characterization Work Plan. He clarified that the Work Plan had already been approved and EPA's comments provided backup information. Field work will begin September 15.

Munitions Update – Rick Whitten (U.S. Army Corps) and Marty Holmes (Weston)

Rick said the Corps is currently working on the NRB area. He pointed out the areas on the NRB status map where Military Munitions Response Program (MMRP) actions have taken place and explained which areas have been cleared and which areas are currently being worked on. The Contractor, Weston Solutions, has been screening and removing TNT, DMM (Discarded Military Munitions), MPPEH (Material Potentially Presenting an Explosive Hazard), MD (Munitions Debris), and Cultural debris (scrap).

Rick went on to explain that when something is found, they extend their search a minimum distance beyond that point to make sure everything is cleared. After clearing the designated grid areas, the project will be complete. Bea asked Rick to show where the building footprint is located and he did so. Bob Williams asked about a small area of green on the left hand side of the map. Rick explained that this was an area they had planned to clear, but after further evaluation, determined the area was pretty clean with only dirt, concrete, and rebar identified there. Based on their findings, the area did not need to be investigated further. Rick and Marty explained the only area that has not been cleared is the one near the Horseshoe Pond area (near the shore area).

Rick and Marty discussed the process of loading the screen table and screening the soil. They said that although it is a slow process, it is the safest way to clear the area.

Bea asked if they are using the automatic sifter anymore and Marty said no. The sifter would rip the TNT apart. They used the automatic sifter in the Main Burning ground because there was no TNT.

Rick explained that the items they find are not in pristine shape. He discussed the items shown on the slides in detail, explaining each item and what it was used for. Bea asked if the items are buried and the answer was yes. Bob asked if the items are only casings or if they contain energetic material. Rick said that some contain some material but the amounts vary greatly from round to round. Some do not have a fuse on them. He showed blocks of TNT found at the site. Most of the TNT is in smaller blocks. The larger blocks are comparable to the TNT found near the entrance to TCC. Bruce Johnson asked if it was comparable to what was found before. Marty said it is similar. The Corps discussed the theory that there is a process going on within the soil that causes the TNT to collect in clumps. They showed an example of days' worth of explosives. They are storing some of the items until they are finished with the excavation. Marty said they inspect it, separate munitions debris and hazardous materials, and blow it up, which is the safest method of destroying it. All of the items shown have been picked up since August 11.

Bea asked Rick and Marty if there is any problem with people bothering the site and they answered yes. People removed sandbags and tarp along the beach front on one occasion but did no damage or digging at the site so no harm resulted. The Corps secures all items found at the end of each day. TNT and DMM are destroyed daily and the MPPEH is secured.

Bruce asked if they are finding anything new or different than they've found before. The incendiary round and some World War I items were the only examples of such items found to date at FNOD so some new discoveries are being made at this location. Bea asked if they have found any kick-out from the area and George stated there have been none. The items may have been pushed around by construction activities over the years, but for the most part everything is like it was when FNOD was closed in 1960. There is a possibility that some items have been moved from other FNOD locations and that's why the Corps is going to do a systematic evaluation. Suresh said the Corps is going to systematically do a comprehensive site study in Fiscal Year 2009. George noted that the study will not address sites that have already been studied.

Bruce asked how deep the Corps is digging in the excavation. Marty said most things were found at the surface or down a couple of feet. In some areas they are digging from the surface to about five feet deep and are still finding TNT. The red dots on the grid map showed where they've found items. For the most part, the Corps only digs as far as the freeze line but will chase munitions constituents like TNT until it is all removed since this is a hazardous waste. If new construction is performed at some time in the future in an area where munitions have been previously identified, the Corps' munitions experts will still need to be called in to provide munitions avoidance services. These areas will be shown on a GIS map that both the City and the Corps will have once the project is completed.

Bea asked how close the Corps is working with the City of Suffolk Planning Department. George said they have worked with the City but it is more concerned with the coastline than the munitions footprint. In addition, Jeff Zoekler has briefed the City of Suffolk. Katie Moore asked if it was possible to get a copy of the existing land use controls in effect. Jeff said yes. Right now the Corps has interim land use controls and they will get the RAB a copy. When the Corps has finished at the site, they will develop permanent land use controls. Suresh added that once the investigation is completed, they will incorporate the land use controls into the final Record of Decision (ROD), which is a legal document. The interim document may be on the web site, but it's also in the document repository.

Because TCC is relocating in the fall of 2009, Bea suggested that the Corps contact the city to find a different location for the document repository. She suggested that they look into using Suffolk's new library.

Marty and George talked briefly about preparations for the anticipated hurricane in the area.

Rick continued the presentation and explained that Step 2 in the process is to load sifted soil into covered roll-offs. This process saves time, because the soil can later be sampled to determine any TNT contaminant levels. Anything that is found goes to a hazardous waste landfill.

Step 3 involves maintaining erosion and sedimentation (E&S) controls. The Corps keeps the excavation covered after daily work to ensure proper runoff. Rick showed photos of the current controls.

In Step 4, Rick discussed daily operations. He said that explosive operations require notifications to local authorities including police and rescue, VDOT, and TCC. All demolition tools are inspected and tested and a safety briefing is conducted. The area is secured and the demolition is set up, including protective works (sandbags). Before the shot, they sound a warning alarm prior to the items being destroyed. All debris is cleaned up and secured.

Rick discussed Munitions and Explosives of Concern (MEC) items found as of August 28 from the NRB TNT area. Rick noted that MEC included DMM, MPPEH, and TNT.

- Out of a total of 26 DMM items, there were:
 - Eleven 75mm incendiaries, unfuzed;
 - Eight 37mm w/ Base detonating fuze;
 - One 75mm Shrapnel round, fuzed;
 - One 75mm high energy (HE) with partial filler;

- Three, point-detonating fuzes with boosters;
- One, French VB rifle grenade; and
- One fuze adapter with booster.
- There were also 569 pounds of MPPEH, mostly consisting of PD fuzes. All MPPEH will be inspected upon completion of the excavation to determine if it contains an explosive hazard.
- 63 pounds of TNT have been recovered and destroyed by detonation.

Bob asked how deep they are digging and Marty said they are digging from three feet to five feet. They may dig further for TNT to prevent it from getting into the ground water. We've found that TNT tends to migrate and congeal to itself in the ground. The team is currently working close to the deteriorated NRB coastal retention wall that was built in the 1960s.

Army Corps Update – Jeff Zoeckler (U.S. Army Corps)

NRB Phase II Shoreline Stabilization

Jeff discussed shoreline protective measures. He pointed to an aerial photo which showed the shoreline and the NRB Area TNT trench where excavation is taking place. When they began, the Corps did not know the exact scope of the excavation. They wanted to make sure that if it turned into a large dig, there were protective measures in place. He showed the TNT trench area, the area where they are going to protect the shoreline, and the location of the existing storm sewer on the photo.

Jeff explained that the revetment upgrade has begun. He pointed out stakes in a photo of the shoreline that indicate the “mean low water” level line, which is the limit to which the reinforced revetment will reach. There were also photos of the tree removal and Jeff said some munitions were found in the roots of the trees.

Several tons of rock have been brought in to stabilize the shoreline while the munitions removal is taking place. When the removal is complete, they will bring in additional rock and grade it to the degree shown on the grading plan. At completion, it will be graded to a 5:1 slope. This part of the project is being referred to as Phase I.

Additional measures will be done in Phase II when they will address other areas along the shoreline. A slide including photos of the same shoreline in 2000 with 2007 effectively showed the need for better shoreline stabilization.

JRB Shoreline Study

Bea asked whether the JRB has been stabilized. Jeff said that this is another area the Corps is studying but that actual stabilization has to wait until the JRB Remedial Investigation is completed. He showed a slide with revetment installed in 2003 and pointed to an area to the west of this with significant erosion. The Corps will study the effect of the revetment on the existing shoreline. If our revetment contributed to the nearby erosion problem, the Corps will do something about it. George added that some small trees have taken root in the existing JRB revetment and they will have to be removed to avoid destabilizing it.

TNT Area (Source Area-1)

Jeff provided an update on the TNT Area (Source Area 1), the site of the original FNOD TNT discovery. The Corps has monitoring wells in place and will be adding more and performing more sampling in the area.

Bea asked if the TNT is gone from the area and the answer was that prior removals removed much of the bulk, but some may still remain in some surrounding soils and in the groundwater. The cover is still over the area where several tons of TNT and soil were removed. A Remedial Investigation (RI) report

has been submitted to the regulators and is under review. A Feasibility Study (FS) has been initiated. Jeff explained what an FS involves and it includes addressing any remaining data gaps identified by the RI to confirm the size of the areas of contamination. Bea questioned the degrading of TNT into another chemical and asked about that chemical. Jeff said it is DNT, which is more toxic than TNT in that it can cause cancer. Bea asked if it (TNT / DNT) is resolving itself as the plume widens. Jeff said that the actual concentrations are degrading rapidly and the TNT to DNT degradation is taking place. However, the Corps will be initiating bench-scale studies as part of the FS to determine what we need to do to bring down the levels further. If something is found, it may be implemented in a pilot study. The plume is about half-way to the river and is moving slowly. It has been there 50 years. The Corps will use models to predict when the plume will collapse. But, a cap was put over the source area to minimize contributions of TNT and lead into groundwater beneath this site. Until soil and groundwater are considered safe, land use controls will be kept in place. Part of the FS will be to determine the size of the contaminated areas and the maximum concentrations of contaminants. This will involve sampling through the soil cap. Some small removals may be needed.

Jeff explained where they are in the Superfund investigation process.

Main Burning Ground (MBG) (SA-5) Remedial Investigation

Jeff gave a brief update on the MBG. He said the munitions removal was completed in 2007. There is a potential buyer for the land who wants to develop it. As these plans include laying building foundations over areas where it is best to limit future public access, the Corps is doing what they can to fast-track the cleanup process.

Bea asked where the construction debris pile is located on the MBG. George stated that one of these is in the lower right corner and Jeff added that there are a couple of other areas that have debris. She also asked if the Corps will be on hand during future construction and the answer was yes for areas where munitions had previously been found, or on call to respond to any requests for support should anything be found at a former FNOD building site.

Jeff discussed the background of the site and explained that the Corps is now addressing any residual contaminants in the soil and/or groundwater. The Corps submitted a work plan earlier this year. It has been approved and the Corps will begin soil and ground water sampling on September 15. Once they get the data, an RI report will be completed which will include a risk assessment from a human health as well as an ecological standpoint. They plan to submit the RI in February 2009.

George said the Corps will do a significant update to the Areas of Concern (AOC) and Source Area summary guide. It should be complete in a week or so. He said that if anyone wants a copy, they should let him know. The guide consists of a table which includes updated facts regarding the six FNOD Source Areas, 23 AOCs, and seven Other Areas of Interest.

Jeff opened the floor to questions. Bob Shriver asked about the Burning Ground and asked where Harbor View Boulevard was located on the map. Jeff showed these to him on the map. George stated that an updated aerial map will be available soon and he hoped to be able to provide it to the RAB at the next meeting. Bruce asked where the new subdivision is located on the map. George showed him the footprint on the map. The new aerial map will show the sub division.

Project Manager's Update – Suresh Kikkeri (U.S. Army Corps)

Suresh reviewed plans for Fiscal Year 2009 which begins on October 1. He said that, between now and next month, the Corps will determine how to address the stabilization issues in the area next to NRB. The Corps will make this determination in conjunction with the state and EPA. The priority issues at the NRB include stabilization and starting the RI. A determination on the schedule will be made between now and next month but the shore needs to be stabilized before it erodes further. The Corps will also

initiate the environmental NRB RI, which will require soil and ground water sampling to determine the nature and extent of the contamination identified during several Site Investigation efforts already completed. The RI scope should be decided toward the end of October and a new contract awarded as soon as possible following this.

In addition, the Corps will study shoreline stabilization at JRB and try to determine the rates and locations of this erosion. If there is sufficient evidence that the Corps has contributed to areas of erosion, we will try to correct and stabilize it. They will also study whether the new revetment has made erosion worse. If they determine that the erosion is naturally occurring and unrelated to former DoD or Corps activities, the Corps has no authority to stabilize it.

During the next fiscal year, the Corps will conduct FS at the TNT area. It will include a bench scale and a small pilot study.

The Corps will complete the single anomaly investigation at previously identified locations. This project is similar to the grid work Weston is already doing. They redo the mapping and check all grids to make sure the designated areas are clear.

The Corps will also begin a comprehensive site-wide munitions site investigation (SI) at FNOD. This investigation will cover those areas where studies have not already taken place. The Corps may need to work with the City of Suffolk to perform any of this work on City property. If anything is found, that area will be subject to an RI. Stephen Milhalko asked if the Corps is checking anything in the rivers. The Corps still plans to do more geophysics and sampling in several near-shore areas following completion of the adjacent land area investigations.

Suresh reviewed the total estimated costs.

- Shoreline Stabilization at NRB = \$500K
- Shoreline Stabilization Study at JRB (and additional Investigation) = \$100K
- RI at NRB = \$200K
- Comprehensive SI = \$200K
- FS, PP, ROD at JRB and NRB = \$500K
- PP, ROD, RD and RA at TNT = \$500K
- Total = \$2M

Public Comment / Q&A Period

Katie Moore asked if the Corps will be impacted by a continuing resolution in the federal budget due to the election. Suresh said he expects all of the money to be available. She also asked if the pesticide issues are being tackled and Jeff said that work has been started and this study is only about 10 percent complete. Jeff added that more sampling is needed but the site-wide reevaluation of pesticides will determine what actions are still needed to close out project areas.

New Business / Establish Action Items / Set Agenda and Date for Next RAB meeting

New Business

- The RAB set the FNOD site visit for November 21 from 11 a.m. to 1 p.m. Directions will be sent to RAB members, along with the October *Update*.
- The RAB agreed to list their contact information on the web site, but without Ms. Moore's work contact information.

Actions

Get more information on the new City representative to the RAB – *Bea*

Provide *Interim Land Use Plan* to RAB – *Jeff*

Update the site photo and provide to RAB – *Jeff, George*

Update RAB contact list – *RAB Support Contractor*

Update meeting minutes from previous meeting and post on the web site – *RAB Support Contractor to update the minutes, Norfolk District will post on the web site*

Update City of Suffolk Access Agreement --*George*

Date for next RAB Meeting: The next meeting is December 4, 2008 at 6:15 p.m. at the Suffolk Courtyard by Marriott.