

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

To: RAB Members
From: Adriane James, U.S. Army Corps Government Co-Chair
Subject: March 6, 2008 FNOD RAB Meeting Minutes

RAB Members Present: Adriane James Marian “Bea” Rogers Frank Dunn Katie Moore Rob Thomson Cherie Walton Bob Williams David Wilson Bruce Johnson	Affiliation: USACE, Govt. Co-Chair Community Co-Chair TCC, VP of Administration Burbage Grant EPA Reactivities Management Corporation Dominion VDOT Respass Beach
RAB Members Absent: David Saunders Kemp Littlefield Tom O’Grady Steve Mihalko Victor D’Ortona John Bucklin	 Bennett’s Creek Lockheed Martin City of Suffolk VDEQ Ashley Capital GE

Introductions and Call to Order

Adriane James, Government-Co-Chair and acting Facilitator, called the meeting to order at 6:15 and asked all RAB members and others in attendance to introduce themselves.

RAB Business

Government and Community Co-Chair Comments

Ms. James explained that Norfolk District’s contract for RAB support and facilitation has expired. Since the previous contract had already been extended multiple times over the past ten years, the Corps now needed to openly compete the replacement contract for this support. So the Corps is in the process of advertising a new Public Affairs coordination contract. All new contracts will include a Records Management task from now on that includes hard copy and electronic deliverables to reduce the level of effort needed to either scan documents into the Corps FUDS information retrieval system or add the files to the website. Ms. James also explained that the Corps was going to use a tape recorder this evening to generate a backup to the notes that Norfolk District’s Susan Schrader would be taking for this meeting.

Ms. James asked whether there were any needed corrections to the draft December Meeting Minutes. Ms. Katie Moore, our new RAB Member representing Burbage Grant asked that the period of time that she had lived in her neighborhood be changed from 40 years to 4 years. As there were no other corrections, the December Minutes will be finalized and distributed by email.

Community Co-Chair Bea Rogers gave Adriane two newsletters from different area home owner organizations. She asked that the Corps attempt to contact representatives of these organizations to provide them updates on FNOD activities on site and future schedules for FNOD and RAB meetings. Adriane responded that the Corps will try to get in touch with representatives of these organizations. Katie Moore (RAB Member), requested that the Corps provide her homeowners' association (Burbage Grant) with scheduling information for future RAB Meetings. Norfolk District's Gerry Rogers mentioned that he couldn't find contact persons for most of the homeowners associations. Ms. Moore provided Gerry the name of the organization's Board President, Pete Celeste. Ms. Rogers added that Tom O'Grady lives in the Harbourview area also.

Landowners:

VDOT: David Wilson thanked the Corps for providing feedback to VDOT regarding the groundwater sampling results of the deep VDOT production well located at the VDOT facility adjacent to I-664 recently. The results confirmed that the water from that well was contaminant free. Jeff Zoekler also expressed the Corps' appreciation for allowing us to sample VDOT's well because it gave us a deep groundwater sample from an area in FNOD where we had no deep wells available. Thus, this sampling worked out well for both VDOT and the Corps.

Dominion Power: No new updates but Bob Williams asked about a rumor that the Corps planned to start more investigations in an area that may impact Dominion Lands property in the vicinity of Horseshoe Pond. George Mears explained that the Draft Final version of the Remedial Investigation report was almost finished and, if this document was acceptable to EPA and the State, we shouldn't have to perform any more work in the area of Horseshoe Pond. Jeff Zoekler added that we still need to complete a near-shore and off-shore evaluation adjacent to Horseshoe Pond—but out in the Nansemond River. He said that this work should not impact any Dominion property but might involve some investigation work in adjacent river areas.

No other Landowner Updates.

Army Corps Update (George Mears, U.S. Army Corps)

George explained that updated FNOD Site Summary spreadsheets were available to anyone who wanted a copy but that some of the contents were already determined to be dated following some of the earlier discussions and decisions made during today's Project Delivery Team meetings. In the future, however, he stated that these spreadsheets won't be distributed at RAB meetings but will remain available to anyone who asks for one. While the spreadsheet helps project personnel keep up with the latest site status, we've seen little evidence over the past couple of years that anyone else is actually reading or using these spreadsheets. The spreadsheet contents may simply be too cryptic and condensed for non-project folks to read and readily understand.

George explained that the Corps was still attempting to award a new contract to evaluate the nature of a list of contaminants that have been detected during most FNOD Site Investigations at levels that exceed screening values. Since the contaminants are not related to explosives or other suspected process contaminants that we might have expected to find at these sites, there is some

speculation that these contaminants may not be associated with environmental spills or dumping that result in source areas that can be cleaned up. Given the common occurrence throughout FNOD, project regulators are in agreement that several completed Site Screening Process Report recommendations will be put on hold until a formal study of these common contaminants can be completed.

Environmental Updates (Jeff Zoekler, P.E., Norfolk District FNOD Project Engineer)

Update on the TCC Brush Fires of February 10, 2008

Jeff showed 8 photos taken following the brush fires that occurred at TCC. He explained that the fires started in the woods adjacent to the James River northeast of the main campus facility building. A VA Department of Forestry official in charge of the investigation confirmed that the fire was not the result of a downed electrical line or other natural occurrence, but was started by some unidentified person or persons. While investigators report that a suspicious vehicle was in the area just prior to the fire, there is no way of knowing if the fire started as a result of carelessness or was deliberately set. In any case, high winds pushed the fire east along the river and through the reeds and vegetation at the river end of TCC Lake, to the west of the lake. From there it burned several acres, totally consuming the wood portions of the abandoned former magazine building that was the subject of the investigation for AOC 12 (Track J Explosive Magazine and Ground Scars). Here, the wood roof is now gone leaving only the brick walls of the building standing following the fire.

The fires never reached I-664, stopping short of the former James River Beachfront access road, but included all of AOC 12 and a portion of the property within AOC 11 (Track H & I Magazine Line). The fire is not expected to have any significant impacts on investigations in either area since the investigation field work in both areas had already been completed. Jeff Zoekler will be going out to see if any groundwater wells were damaged but there is evidence that the fire spread through the open areas of brush and woods so quickly that the wells may still be unharmed. While most of the underbrush was burned, most of the mature trees remained with little damage beyond some scorched outer bark. However, a couple of photos showed where tires had burned completely, leaving behind only the steel belted radial cords.

Renovation Plant Area (AOC 23) SSP Update

Jeff provided a review of the history of this site, showing aerial photos of the area in 1948 and 1954 with the original Renovation Building and the surrounding facilities. A more recent 2004 aerial shows that the area is now occupied chiefly by the TCC Tractor Trailer Driver Training facilities.

Jeff explained that the former Renovation Plant was used to renovate ordnance shells (cleaning, restoring, refurbishing for reissue) and the only remnant visible today include the foundation. However, the historical photos revealed some possible surface staining, at least one pit, and a suspected impoundment. Several subsurface anomalies that were also discovered during a 1999 geophysical survey which may be related to former DoD operations here. In 2000, follow-up investigations evaluated and removed some construction debris and discarded military munitions

(DMM) at six grid locations. This investigation also identified three possible underground storage tanks in this area.

The SSP investigation included soil sampling at 12 locations, 4 permanent and 4 temporary groundwater monitoring wells (3 shallow/3 deep in each category), and analysis for Volatile Organic Compounds (VOCs), Semi-volatile Organic Compounds (SVOCs), metals and explosives. The locations of all samples were shown. The soil samples revealed no detections of explosives, but levels of some SVOCs and metals which were above soil screening criteria. Only arsenic exceeded the Industrial Soil RBC screening level. Jeff pointed out that the value on the RAB Slide Handout depicted as the FNOD Surface Soil Background level (19.7 mg/kg) was in error and should have read 14.8 mg/kg. Groundwater sampling results revealed some very low levels of various explosives and metals but the levels were much lower in filtered groundwater than in unfiltered samples. This difference is expected since the levels of contamination in soil are normally much higher than what is found in the dissolved phase in groundwater. A muddy sample contains both soil and groundwater which tends to overstate the actual groundwater impact. None of the explosive constituents exceeded screening levels for drinking water. A couple of SVOCs were detected in groundwater samples but, again, none exceeded tapwater screening criteria. On the other hand, four VOC constituents and five metals did exceed either Tapwater RBCs and/or drinking water Maximum Contaminant Levels (MCLs).

The SSP investigation included preliminary Human Health and Ecological Risk Screening Assessments. None of the detected concentrations at AOC 23 posed any significant human health risks, but the soil results did pose some potential ecological risks to invertebrates, amphibians and small mammals. That being said, a determination of preliminary eco-risk is very conservative because the process is designed to highlight any potential risk.

Jeff concluded by explaining that the resulting report has remained in draft form because the intent is to roll this study into the subsequent Nansemond River Beachfront Remedial Investigation. With the discovery of the bulk TNT in the soil in 2006, in addition to the arsenic plume documented during the AOC 22 investigation, we already know that the entire NRB Area will require an RI phase evaluation. This NRB RI contract scope will be prepared once we know the results of the ongoing NBR munitions investigation.

George Mears reiterated that the corrected Power Point slides will be made available on the FNOD website at the same time that these finalized minutes are posted.

Bruce Johnson asked Jeff to confirm what the actual correct background level for arsenic in soil was and Jeff repeated the 14.8 mg/kg value he mentioned above but he also expected that this value may rise once a reevaluation is completed due to incorporating years of additional data values since the original background level was computed. Jeff mentioned that, in the western part of the country, arsenic soil background levels at or above 50 mg/kg are common. George also passed along that VADEQ also felt that the background value for arsenic at FNOD was abnormally lower than most of SE VA where the use of arsenic containing fertilizers in the past was common. Suresh Kikkeri suggested that we really shouldn't try to make any predictions as to what the revised background number might end up being. Right now we only suspect that the

current number is too low. A review of all the data is the only way to determine what this number should be.

Bea Rogers asked if samples have shown evidence of contaminant levels rising in deeper soils due to downward migration. In a couple of locations this is evident and this can be seen at the shallow and deep groundwater well cluster near the James River, just across the road from the former Renovation Plant Area (AOC 23). Here, we had no detections in the shallow water well but found some contaminants in the deeper well. Jeff Zoeckler explained that most of the contaminants in the deeper aquifer are at low levels that will not require any remediation, but will still require some further investigation to learn where it is coming from. George also explained that the falling and rising of the river water level over time cut through the confining clay unit that normally keeps the upper and lower aquifer separated and distinct from one another. This confining unit tends to be more eroded in coastal areas over geologic time, creating a pathway for contamination to migrate from the upper to the lower aquifer in these areas. This level of hydraulic communication is not apparent further inland where the confining unit tends to be less compromised. EPA's Rob Thomson also confirmed that TNT found in shallow trenches at the TNT area has been detected in both the upper and lower aquifer groundwater. (Note: the TCC facility was put on municipal water a decade ago after some explosive chemicals were detected in the school's deep production wells).

AOC 23 Risk Screening Results: Jeff related that the concentrations of contaminants at the Renovation Plant Area are not high enough to pose any significant risk to human health from either soil or groundwater. However, the Ecological Risk Screening did indicate some potential for adverse effects to some invertebrates, amphibians and small mammals.

The summary of findings included no explosives in the soil but some detections at low levels in the lower groundwater aquifer but not in the surficial aquifer above it. Several SVOCs and metal detections were found in both soil and groundwater. Finally, some VOCs were detected in groundwater, but none in soils. While the potential risks to human health were minimal, some potential ecological impacts are present and will require further evaluation. The Corps intends to roll the draft AOC-23 investigation results into a larger scale RI for the entire Nansemond River Beachfront Area.

Main Burning Ground (Source Area -5) Supplemental Site Characterization Work Plan

The munitions work at the MBG was wrapped up after more than eight years in late December 2007 and now the field work to finish characterizing all the remaining areas of contamination can be undertaken. These sites were discovered in the summer of 2006 when the munitions team came across more burn and disposal pits that were unknown to the original HTW RI team. This new draft work plan is being designed to cover all remaining potentially Hazardous and Toxic Waste (HTW) data gaps and proposes soil and groundwater sampling locations that the Corps thinks will accomplish this. Jeff explained that the kinds of data gaps fell into five categories: (1) re-sampling of areas where so much work was done that the current conditions are no longer representative of the original conditions, (2) sampling around the recently discovered areas of contamination, (3) areas where no samples were ever collected, (4) locations of previous detections but where lateral extent or depth of contamination was never fully determined, and (5)

sampling to determine the full extent of groundwater impacts. Jeff went through several slides showing the areas included within each kind of data gap.

Once this work plan is approved and executed, the Contractor will merge the new study into the previous investigational reports to generate yet a new Draft Remedial Investigation Report for the MBG Area. We would hope to have an approved work plan by summer but Rob Thomson of EPA and Jeff both stressed that the objective is now to ensure that this report accurately captures eight years of investigations and munitions clearance work. The actual field work will not take long.

A couple of questions regarding expected areas of groundwater impact related to prior DoD munitions steam-out process areas were discussed and answered. Another question about the possibility of new areas of contamination being found within the areas currently being built on by housing developers was asked. Jeff answered that the Corps has no reason to believe that new areas of contamination will be found anywhere outside of the known boundaries where we have been working. All of the discoveries over the past several years, including the disposal pits located in 2006, were well within the areas where we expected that such discoveries were possible, making it unlikely that we could still end up with similar discoveries in areas already being developed by commercial builders. Jeff also explained that the proposed building foundation for the facility that Ashley Capital is building will be helpful in placing a barrier between any remaining subsurface munitions and future area inhabitants. Such foundations jointly serve as a permanent engineering control which removes one important exposure pathway for potential subsurface munitions or HTW hazards. It is the Corps' intent to continue our work in this area as soon as possible so that the landowner construction plans can be implemented as this is in the best interest of the landowner, the public, the municipality, and the Corps.

Jeff Brewer (Baltimore District): Munitions Update

Jeff Brewer showed slides of the Nansemond River Beachfront Area currently being worked (approximately 15 grids) behind the former GE building. Progress there has been slower than expected due to large amounts of cultural (non-munitions) debris found in a couple of grids. However, Weston is wrapping up several disposal areas here and progress should now speed up considerably. The MMRP Team has also had to be especially careful in this area because of its close proximity to suspected significant historical sites relating to both the Civil War and possible Indian and early settler areas. Work in this area has been carefully coordinated with District and State archeology officials to meet the requirements of Federal Section 106 (historical preservation) regulations.

Mr. Brewer explained that his team members first grubbed the site to gain access for the magnetometers used to locate anomalies. This clearing took a couple of weeks before investigation, marking, and intrusive activities could commence. A couple of old deteriorated buildings had to be removed during this process and the debris was removed for disposal. Following grubbing and surface clearing, the sites were surveyed and areas of potential interest were marked with wire flags. Then the team investigated these areas within the grids, often using manual screening tables to separate soil from anything else found during this process. Jeff

showed some photos of these operations. He emphasized that most of the area trees were kept in order to permit the area to retain natural defenses against destabilization and erosion.

Todd Liebig of Weston Solutions, the firm contracted to perform the FNOD munitions work, explained that the MMRP Team had established 15 grids along the NRB so far. This number could grow. A grid table diagram showed the grids that had already been grubbed colored in green. The intent is not to dig up the entire area but the team will dig parallel trenches across the area, spaced five feet apart, as part of clearing the areas. If anything significant is found, the trenching will expand all the way to the next trench to make sure nothing is missed. To control erosion, a silt screen has been installed about two feet back from the bluff above the beach. The MMRP Team intends to work all areas closer to the bluff manually with shovels to avoid having to use heavy equipment in an area where destabilization is likely. So far, none of the bulk TNT previously found in the 2007 trenches located further east along the NRB has been found in any of the NRB grids investigated to date.

Gerry Rogers asked about what is being found along the beach and Mr. Brewer answered that while burned out booster fuzes are being found fairly frequently, none of them has posed any hazard because none still contain any energetics.

George mentioned that the Corps was very pleased with the way Baltimore and Weston were minimizing impacts to fragile areas by working around trees. The low brush and grassy vegetation will recover quickly but the trees take a long time to replace once removed. The trees are very effective in helping prevent erosion.

Adrian James (Government Co-Chair): Wrap Up Comments

The next RAB Meeting will be on June 5, 2008 at 6:15 at Courtyard Marriott. This will be our new permanent RAB meeting location. When asked about potential Agenda Items for the next meeting, the following items were proposed:

- Update on the proposed new background study (Not possible since the contract has not yet been awarded. We could have the preliminary results by the September RAB.)
- An update on the Revised Draft Final Horseshoe Pond report
- An Evaluation of whether engineering controls should be considered to keep people out of the area of the Arsenic Investigation Area plume
- A discussion of where the Local Repository should go after TCC moves it's campus to Portsmouth (possibly the new Northern Suffolk Library, and if so, would CDs be acceptable?)

Jeff Zoekler asked the RAB members to let Norfolk District know if there is any document that the RAB would like to see available on the FNOD project website that is not already there. This website does not seem to be getting much usage and if we can make it more valuable by adding additional materials, let us know.

The meeting was adjourned at 7:22 PM.

Others Present:	Affiliation:
Col. Dionysios Anninos	USACE Norfolk District Commander
Jeff Zoeckler	USACE, Project Engineer
Hamid Rafiee	USACE, Baltimore District
Bill Hudson	EPA Community Involvement
Suresh Kikkeri	USACE, Baltimore
Hamid Rafiee	USACE, Baltimore
Cliff Opdyke	USACE, Louisville District
George Janek	USACE, Norfolk District
Gerry Rogers	USACE, Norfolk District
Jeff Brewer	USACE, Baltimore
Susan Schrader	USACE, Norfolk District
George Mears	USACE, Norfolk District
Todd Liebig	Weston Solutions, Inc.
Judy Hackett, P.E.	Weston Solutions, Inc.
Scott Bailey	Malcolm Pirnie