

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

To: RAB Members, Interested Parties
 From: Adriane James, U.S. Army Corps Government Co-Chair
 Sandra Chaloux, CEC, Inc., RAB Facilitator
 Re: December 4, 2003 RAB Meeting Summary

<p>RAB Members Present: Fred Copeland Russ Dudley Tim Fink Adriane James Bruce Johnson Debbie Miller Marian “Bea” Rogers David Saunders Rob Thomson Cherie Walton David Wigle</p> <p>RAB Facilitator Present: Sandra Chaloux</p> <p>RAB Members Absent: Thomas O’Grady Carl Serrette</p>	<p>Affiliation: GE VDOT TCC USACE, Gov’t. Co-Chair Respass Beach VDEQ Community Co-Chair Bennett’s Creek EPA Reactives Management Corporation USACE FNOD Project Manager</p> <p>CEC, Inc.</p> <p>City of Suffolk Burbage Grant</p>
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7:05 p.m. **Introduction and Welcome/Call to Order**

(Sandra Chaloux – CEC, Inc.)

The meeting was called to order. Adriane introduced the new Colonel for the Norfolk District, Colonel Yvonne Prettyman-Beck. Colonel Yvonne Prettyman-Beck told the RAB that this RAB is considered one of the best throughout the Corps and throughout the country in terms of teamwork and working together. She thanked the RAB members for their commitment, involvement, cooperation, and support. Adriane also introduced the new FNOD project manager, David Wigle. Adriane will be continuing on as the government co-chair of the RAB. Adriane disseminated a bio for David to the RAB members prior to the meeting.

David said he was pleased to be here. Prior to joining the Norfolk District, David served as an environmental project engineer for the Seattle District of the Corps of Engineers for the last 10 years. He has worked on a number of formerly used defense sites and is working hard to get up to speed on the FNOD project.

RAB members and guests then introduced themselves.

7:15 p.m. **ATSDR Public Health Assessment Report (Jill Dyken & Barbara Cooper-ATSDR)**

The Agency for Toxic Substances and Disease Registry presented their findings on the public health assessment that they conducted for the FNOD site. ATSDR is a federal public health agency that is a part of the Department of Health and Human Services. ATSDR was established when Superfund was set up. The agency’s mandate is to prevent or reduce the harmful effects of exposure to hazardous substances on human health and the quality of life. ATSDR is mandated by Congress to perform a public health assessment when a site is proposed to the National Priorities List (Superfund).

Summary of ATSDR's Public Health Assessment Process

ATSDR reviews environmental data and other data that's available on the site provided by the Corps, EPA, other agencies, the community, and any health effects data that is available when determining what contaminants people might be exposed to at a site. The agency also looks at how people might come into contact with the chemicals on the site and from that, they determine whether any health effects might be likely from the exposures taking place. Jill said that ATSDR likes to interact with the community to understand health concerns and how people use the site to do their evaluations. ATSDR then screens the data and uses health-based comparison values to do the assessment and then makes recommendations on what needs to be done to protect public health. For the FNOD site, ATSDR took the maximum values that were found for soil, groundwater, surface water, and all the different media that people might be exposed to; and used that to do the first level of screening. ATSDR used the maximum values and evaluated past, present, and possible future exposures. For evaluating past exposures, ATSDR used the soil sampling data that was available before removals were completed.

Once ATSDR determines the contaminants of concern at a site, they do an evaluation of what exposure dose people might have gotten. Then they make dose calculations using assumptions about how people are using the land and how they may come into contact with chemicals that were there. They also consider the frequency and how long people have been exposed, the age of the person (because body weight affects dose response) and they evaluate all the different exposure scenarios on the site.

For the first level screening, ATSDR uses the maximum values and compares them with their health guidelines to further screen the contaminants. This narrows down the number of contaminants and then ATSDR reviews the toxicological effect levels that are known about the different contaminants to determine health effects.

FNOD Public Health Assessment - ATSDR split the FNOD site up into four tracts of land including: Dominion Lands, GE Lands, TCC properties, and VDOT/the Hampton Roads Sanitation District property. For Dominion Lands property, ATSDR averaged data from the Impregnite Kit area and the Horseshoe Pond area. ATSDR did not evaluate the VDOT area due to the limited access to the site, and a lack of data indicating that there was any possible high levels there that people would have been exposed to in any frequency.

Dominion Lands Public Health Assessment Findings – ATSDR evaluated exposures from occasional use by trespassers or workers to contaminants in the soil and sediment. ATSDR found that exposure to the contaminants in the soil and sediment was too low to result in any health effects. However, they did find some levels of lead in the soil that were above EPA's residential screening level. So if the site was developed for residential use, some children might be at risk if they were exposed to those highest levels. Groundwater from the shallow aquifer is not suitable for residential drinking due to high levels of metals and some contaminants. Jill concluded that if someone wanted to use the groundwater, they would have to further characterize it and treat it.

GE Lands Public Health Assessment Findings – ATSDR found that the past and present exposure to contaminants in the soil and sediment was too low to result in any health effects, and that the information that they obtained suggested that the future use of the property would be similar to the past use (light industrial and occasional use only). Therefore the future exposure would be too low to result in health effects as well. Jill said that there was limited groundwater data available for their review. Assuming that only workers who were occasionally on site and drinking the water – ATSDR's evaluation showed that there was no cause for concern. Jill went on to say that she would recommend that any groundwater on the site that would be used for drinking water be further characterized to make sure it is safe.

TCC Property Public Health Assessment Findings – Jill said that ATSDR evaluated exposure to the TNT burial site. She said that regular past exposure to the highest levels of TNT, ADNT, which is a breakdown product of TNT, and lead in the soil could have resulted in health effects. TNT and ADNT have been reported to result in liver effects or skin irritation when people are regularly exposed to it. Lead is known to cause some neurological effects in small children. Occasional exposures to TNT doesn't stay in the body for a long time and therefore the health effects would probably have been transitory. ATSDR also concluded that some of the lead levels that are still remaining at the TNT burial site are high enough to pose a risk to children in a residential setting. ATSDR evaluated TCC drinking water data from the late '80s to early '90s and determined that the contaminant concentrations were too low to have resulted in any health effects. ATSDR evaluated the surface water and fish data that came from TCC Lake and J Lake and found that no health effects were likely from those exposures. ATSDR also evaluated soil data from the James River Beachfront area. Jill said that ATSDR concluded that the data indicates that past levels of lead could have led to some neurological effects in children who were occasionally on that site. ATSDR assumed a 10-year-old child in their evaluation. She said that although the lead levels have been reduced by some of the cleanup, some of the highest levels that remain could still pose a risk in a residential setting. ATSDR did not find any other contaminants of concern in other areas of the TCC property. Rick Aiken asked where the maximum lead level was found at the beachfront. Jill said they reviewed data from the actual beach area, the bluff area, and where the tide goes out. She did not remember where the very maximum level of lead was found. She said that ATSDR recommended further characterization if there was going to be any kind of residential development there.

Respass Beach Residential Wells – ATSDR also evaluated the recent data and prior residential well sampling data that was collected from the Respass Beach residential wells and found that none of the contaminants were high enough to result in health effects from drinking that water.

Physical Hazards – ATSDR said that they had identified the World War II pier (which is no longer there due to Hurricane Isabel in September 2003) as a physical hazard, along with several unfilled brick vaults, and debris that might still be surfacing on the beaches. Jill said that even though the Corps had cleaned up a huge amount of ordnance and explosives from the site, one can't say with a hundred percent certainty that the risk is gone. Therefore land use controls are necessary.

Summary of ATSDR Recommendations – 1) Continue cleanup at the TNT burial site. 2) If residential areas are to be developed, test soil for lead and clean up if necessary. 3) Do not use site groundwater for drinking water without characterization and treatment. 4) Address physical hazards. 5) Follow O&E clearance procedures; set up land use controls; educate potential occupants.

The public health assessment report can be reviewed at:

- www.atsdr.cdc.gov
- TCC Portsmouth Campus Library
- U.S. Army Corps of Engineers Office (Norfolk District)

Copies of the report can be requested from Jill Dyken (phone: 888-422-8737) or Jdyken@cdc.gov. RAB members were mailed a copy of the report. ATSDR's public comment period closes January 20, 2004. Comments should be sent to: Chief, Program Evaluation, Records and Information Services Branch, ATSDR, 1600 Clifton Road, NE (MS E-60) Atlanta, GA 30333. A summary of the comments received, ATSDR's responses, and the final release are expected in the Spring 2004.

Rick Aiken asked if ATSDR's analysis of the James River Beachfront considered the latest soil data after the removal took place? Dr. Dyken said that they did review some post-removal confirmatory samples for future exposure analysis. Dr. Dyken said she would review where the lead hit was found at the James River Beachfront and get back to Rick about that. Rick also asked where the lead hit was found on Dominion Lands. Dr. Dyken said that the highest levels they found were around 500-600 ppm range, and EPA's residential screening level is 400 ppm. So it is likely that the average level is much lower, which would mean that there's less of a chance for kids to be exposed to a level high enough to raise their lead levels, but we really feel that it would be prudent to characterize the soil around there just to make sure that "you're protecting the kids". Rick asked Dr. Dyken to explain what a comparative value is. Comparative values are based on published toxicological studies with safety factors built in and are considered safe values for concentrations found in soil, etc. If a level is below the comparison value, ATSDR is pretty sure there's never going to be any kind of health effects. If it's above the comparison value, it doesn't mean there are going to be health effects, but it does mean that ATSDR needs to evaluate how much of that chemical people really might be getting and further analyze that.

Dave Saunders asked if ATSDR evaluated exposure to a resident if a homeowner had a shallow well that they used to water their lawn or to fill a kid's wading pool. Could this cause a problem for children or animals? Dr. Dyken indicated that ATSDR did not evaluate that. Dr. Dyken suggested that Mr. Saunders put it in a comment so they could take some time to look at that in more depth.

7:30 p.m.

Corps Update (*David Wigle & Cheryl Fromme-USACE*)

David Wigle began the update by showing an FNOD site map illustrating the Areas of Concern. This map was prepared from an aerial photo that was taken in 2000. Another aerial photo of the site was taken in October 2003. David said he was hoping to have the new FNOD site map available at the next RAB meeting.

Site Status

NPL Designated Source Areas (6 total) – Work Completed

- **Impregnite Kit Area** – removal has been completed, and the site soils have been delisted from the NPL but we still have some groundwater issues that we need to be investigated further
- **James River Beachfront** – OE/Debris removed, revetment wall installed, soil sampling completed in 2001, groundwater sampling conducted 2002-2003
- **TNT Area** – OE removal efforts completed in July 2003 – 500 lbs TNT removed and soil sampling completed
- **Main Burning Ground** – OE removal efforts –14,600 lbs of OE scrap removed.
- **Horseshoe Pond** – Geophysical survey, soil sampling
- **Tire Pile & Paint Can Area** – Tires removed and soils sampled

Areas of Concern (28 total)– Work Completed

- **Offshore Area** – geophysical survey, Human Health Risk Assessment, Ecological Risk Assessment, Proposed Plan of No Further Action
- **GE Pond** – soil sampling, geophysical survey
- **TCC Lake & J Lake** – geophysical survey
- **Nearshore Area** – geophysical survey
- **Nansemond River Beachfront** – debris removal

FY 04 Budget (As of 3 Dec 2003)

- OE Efforts - \$2,440,000.
- HTRW (Environmental) - \$ 1,809,500.
- Total Project Funding: \$ 4,249,500.

FY 04 Project Priorities - Source Areas

- **TNT Area** – install cover and conduct human health and ecological risk assessments
- **Horseshoe Pond** – human health risk assessment and ecological risk assessment
- **Main Burning Ground** – continue OE removal, human health and ecological risk assessments
- **James River Beachfront** – groundwater monitoring and human health risk assessment
- **Tire Pile & Paint Can Area** – human health risk assessment

FY 04 Project Priorities-Areas of Concern

- Nearshore Area - Screening Level Ecological Risk Assessment
- TCC Lake and J-Lake – USACE Human Health Risk Assessment
- Wastewater Treatment Plant – Site Investigation
- Nansemond River beachfront – Site Investigation
- North and South Athletic Field and Renovation Plant – geophysical survey
- Pesticide Drum Area – Remedial Investigation

Offshore Area Study – This study and proposed plan was presented at a public meeting that was held in the same room from 6 p.m. until 7 p.m. prior to this RAB meeting. David provided a recap for the RAB. The study consisted of the Environmental Characterization Study, Human Health Risk Assessment, & a Baseline Ecological Risk Assessment. Findings: FNOD Contaminants of Concern were not found in offshore river sediments in concentrations that pose a threat to human health or the environment. Therefore the Corps' Proposed Plan for the site is No Further Action. The public comment period for this Proposed Plan is December 4, 2003- January 4, 2004. Comments should be submitted in writing to David Wigle at david.e.wigle@usace.army.mil.

TNT Area– The Corps' Time-Critical Removal Action memorandum has been signed. The Corps is ready to proceed with installing the interim cover for the contaminated soil along with 6-inches of topsoil at the end of December or beginning of January. The purpose of the interim cover is to prevent dermal exposure to the soil and to prevent the affected soil from being kicked up and inhaled until the final remedy has been chosen and implemented. Rob reiterated that due to the TNT removal effort that occurred over the summer, contaminated soil at the site has been mixed up (pulled up to the surface). David will be the focal point for coordinating the installation of the cover. Tim Fink requested that the Corps coordinate with TCC regarding security during the installation of the cover. Cheryl and David agreed. Cheryl said that the Corps has awarded contracts to conduct the human health and ecological risk assessments for the TNT area. Both risk assessments will go into the Remedial Investigation report for the site. The Feasibility Study will be conducted as a separate report and will review the possible long-term remedies for the site. Tim Fink requested the opportunity to review the signs that will be posted in the TNT area where the interim cover will be placed before they are posted. Cheryl agreed. A public notice announcing a public comment period for the Time-Critical Removal Action ran in the Virginian-Pilot on November 4, 2003. The public comment period for this effort ran from November 4 until December 5, 2003. Copies of the public notice that ran were available at the RAB meeting for those interested. A question came up about the size of the area that would be covered with the interim cover. Rick Aiken said that approximately one acre of the 9.8- acre site would be covered.

Nearshore Erosion from Hurricane Isabel (Greg Tracey, SAIC)- Before the hurricane, SAIC had conducted a model to evaluate beachfront erosion –they evaluated the effects of sustained winds of 60 mph and the effects of a storm surge. Hurricane Isabel produced both conditions at once. Now SAIC is reviewing the shoreline to determine exactly how things have changed due to the Hurricane. SAIC conducted a site walk review of the coastline on October 9th after the hurricane using handheld GPS instruments. Substantial bluff erosion occurred from the hurricane (approximately 30-100 feet). Greg said that all the fine sand and soil from the bluff has been washed presumably into the Nearshore area. He showed a slide illustrating the 1942, 2000, 2003 bluffline and waterline, and the current survey area. Greg also showed photos of the remnants of the fishing pier and the James River Beachfront after the hurricane. He also showed maps and photos illustrating the erosion that has occurred east of I-664. He then showed a slide illustrating where SAIC will be surveying west of the revetment in the nearshore area of the James River beachfront. He indicated that this area contains buried debris that may be related to past DoD practices from the JRB disposal area. The purpose of this investigation is to determine if there could be a significant enough storm that would actually uncover buried material in the offshore area. The project team wants to evaluate the likelihood that buried material could come to the surface or in the nearshore area based on Hurricane conditions. Cheryl pointed out that the Corps is conducting this investigation based on the RABs' questions and concerns about the effect of a Hurricane on the Corps' previous study and findings.

Sitewide Groundwater Model Update (Cheryl Fromme-USACE) – The Corps has presented its groundwater model for the site to EPA's hydrogeologist, Cathy Davis, for review. Currently the Corps only has one data set of information for the model. Ms. Davis recommended several data sets to finalize the groundwater model. Some of the gauges that the Corps had installed to gather data had been destroyed by the Hurricane. Cheryl said that the Corps plans to collect readings for winter and summer before finalizing the sitewide groundwater model. However, she said that the Corps is using the current model to determine new areas of concern, where to install monitoring wells, and to determine the areas down-gradient of the sites that are under investigation. Cheryl showed a site map with what the Corps believes to be the groundwater flow sitewide from the Columbia Aquifer (upper aquifer) based on the current groundwater model. Groundwater appears to be flowing north towards the James River. Cheryl said the Corps wants to further evaluate if the flow of the Nansemond and James Rivers affect site groundwater flow. Ultimately, the Corps wants to be able to zoom in on areas like the TNT area once the model is fully calibrated to determine how contaminants in the groundwater move and to be able to calculate contaminant concentrations at various locations. Cheryl said that the groundwater in the upper aquifer moves between 20 to 200 feet per year. Based on the model, the Corps estimates that groundwater contaminants at the TNT area would take about 40 years to reach the James River.

OE Removal Update (David Wigle – USACE) – Approximately 500 pounds of crystalline TNT were removed from the TNT area this past summer. David presented the latest sitewide OE Removal numbers.

RAB Site Tour – The RAB agreed to postpone the site tour until the morning after the February 5 RAB meeting due to bad weather. David expects that the tour will take 2.5 hours. It will be held on Feb. 6 from 10 a.m. until 12:30 p.m. Anyone interested in attending should contact Sandra Chaloux (1-800-232-7074) to reserve a spot on the Van and meet in the lobby of the Manning Building by 10 a.m. The sites that will be toured include: Nansemond River beachfront, GE Pond, Main Burning Ground, Piers, TNT area, TCC Triangle Area (Pesticide Drum area, Tire Pile/Paint Can Area), and the James River Beachfront.

RAB Business – Cheryl reported that there has been some vandalism of signs, fencing, and monitoring well locks out at the site recently. Both Tim Fink and Fred Copeland acknowledged

the problem. Cheryl is concerned that this will delay the Corps' investigations or cleanup efforts if it continues. Tim Fink said that TCC has notified the Suffolk Police Department of the problem.

Bruce Johnson asked about the difference between ATSDR's public health assessment and the Corps' Risk Assessments. Cheryl explained that ATSDR evaluates sitewide public health issues. The risk assessments are site-specific and involve a lot of the same calculations but are performed to determine what cleanup efforts are needed at each area of concern.

ATSDR/Adriane had handouts explaining the difference between the two assessments. Bruce asked Dr. Dyken if ATSDR was seeing contaminant levels dropping at the FNOD site. Dr. Dyken said that most of the contaminant levels are dropping as cleanup is occurring. Bea asked if there were any plans to put rip rap behind TCC. Tim Fink said that TCC was working with FEMA to see if they can get some federal funding for it. He wasn't sure what the final solution will be.

Landowner Updates

GE – Fred said that their potential sale of the property did not go through. Fred said he didn't think that the cleanup affected the outcome of the sale.

TCC- TCC is working with FEMA to come up with the solution to some of the shoreline erosion that occurred from Isabel. Still waiting on an outcome of that. He reiterated that TCC has been having a problem with vandalism. Tim said that they were working with GE's security person, the Suffolk Police Department, and the Corps' consultant (Zapata Engineering) to curb it.

Dominion Lands – Rick pointed out that while Dominion Lands has sold most of its FNOD property, it still owns the Horseshoe Pond area. The rest of the Dominion Lands property was sold to Continental Bridgeway LLC, which is a part of East West Partners. East West Partners are the ones that are requesting to rezone some of Dominion Lands former property including the former Impregnite Kit area (the north, northwestern two-thirds of the former Dominion Lands property) into residential right up to the Horseshoe Pond. Rick pointed out that the Horseshoe Pond is a wetland and not really developable. Jim Bennett no longer works for Dominion Lands. Rick and Sandra are trying to identify a new representative for Dominion Lands to serve on the RAB.

Bea requested that the RAB extend urgent invitations to the new property owners to join the RAB. Sandra sent invitations to the four that were identified in June. She said that she spoke with Henry White (rep from Suffolk Towers) the day before this meeting and he said that he did not believe his property was within the FNOD boundary. Sandra encouraged him to attend the RAB meeting anyway to be sure and he said he would. The weather must have kept him from coming. Rick said that the Suffolk Towers property was within the original FNOD footprint but doesn't have any Areas of concern or Source Areas on it.

Bea asked about the Corps' agreement with the City regarding institutional controls – particularly for the area where residential is proposed. Rick said that the Memorandum of Agreement with the City has not been signed yet. Rick said that the Corps had to update the site maps to reflect the new landowners and the agreement accordingly. He said that he hoped to follow through on this agreement with the City before Christmas. Rick went on to say that the agreement establishes with the City those properties that the Corps believes are incompatible with residential use based on the known ordnance and explosive sites. He said that every place where the Corps has removed ordnance and explosives is considered by the Corps to be incompatible with residential use. Bea asked about the sites that are high with Lead. Rick pointed out that those sites have not gone through the entire cleanup process yet to determine whether they are suitable for residential use. Rick took a note to look into these two lead

citations by ATSDR. Rick said that the Memorandum of Agreement states that the City will not rezone any former FNOD property without letting the Corps make comment. He went on to say that he felt it was extremely unlikely that residential use will take place on property that the Corps makes formal comment on to the contrary. Cheryl said that the Corps will update the RAB on the Lead issue (how many hits were found, where the hits were, and when the samples were taken) and the Land Use control issues at the next meeting. Bea asked the RAB members if there were any corrections to the meeting summary from the last RAB meeting. No corrections were noted. Bea thanked Colonel Prettyman-Beck for attending.

8:55 p.m.

Public Comment Period / Q&A

none

Establish Action Items/Set Agenda and Date for Next RAB Meeting

The next RAB meeting was set for February 5, 2004. The meeting will be held at the Bon Secours Health Center at Harbour View at 7:00 p.m. The meeting room is on the second floor.

Agenda items for the next RAB meeting:

- ATSDR update/Lead issue
- New Site Map showing current landowners
- Memorandum of Agreement (Land Use Controls) with the City
- TNT Area update
- OE Removal update
- GE Report on their site screening process (Lisa Hamilton from Montgomery Watson)

Action items:

- Corps to bring new FNOD Site Map to next meeting
- Corps to follow-up on lead issue
- Sandra to coordinate with GE presenter for next RAB meeting

9:00 p.m.

Meeting Adjourned

<p>Others Present: Colonel Prettyman-Beck Diana Bailey Gerald Rogers Rick Aiken Cheryl Fromme Harry Wheeler, Jr. Barbara Cooper Jill Dyken Pat McMurray Greg Tracey Bill Hudson Pat Genzler Kevin Madden Cliff Walden Paul McManus Susan McKenes</p>	<p>Affiliation: USACE, Norfolk District USACE PAO, Norfolk District USACE Public Affairs, Norfolk District J.M. Waller & Associates USACE-Norfolk District Tech Law, Inc. ATSDR ATSDR VDEQ SAIC EPA, Community Involvement Coordinator Virginia Community College System Suffolk Resident Zapata Engineering USACE, Huntsville Zapata Engineering</p>
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