

N61165.PF.002902  
CNC CHARLESTON  
5090.3b

MINUTES FROM RESTORATION ADVISORY BOARD MEETING DATED 9 SEPTEMBER  
2003 CNC CHARLESTON SC (PUBLIC DOCUMENT)  
9/9/2003  
RESTORATION ADVISORY BOARD

CHARLESTON NAVAL COMPLEX  
RESTORATION ADVISORY BOARD MEETING  
September 9, 2003, 5:30 p.m.  
The Olde North Charleston Meeting Place  
1077 East Montague Avenue  
North Charleston, SC

Web site for meeting minutes, fact sheets and other  
Restoration Advisory Board documents and information:  
<http://www.efdsouth.navfac.navy.mil/environmental/rab/chas>

RAB MEMBERS

|                         |                      |
|-------------------------|----------------------|
| Jeff Meyers             | Acting Navy Co-Chair |
| Arthur Pinckney         | Community member     |
| Wannetta Mallette Pratt | Community member     |
| Dann Spariosu           | U.S. EPA             |
| Jerry Stamps            | S.C. DHEC            |
| Bob Veronee             | Community member     |

VISITORS

|                 |   |
|-----------------|---|
| Mansour Malik   | S.C. DHEC   |
| Gil Rennhack    | S.C. DHEC   |
| Charlie Black   | Southern Division, Naval Facilities Engineering Command |
| Rick Davis      | Southern Division, Naval Facilities Engineering Command |
| Gary Foster     | CH2M-Jones  |
| Dean Williamson | CH2M-Jones  |
| Gary Benfield   | EnSafe  |
| Keith Johns     | EnSafe  |
| Charlie Vernoy  | EnSafe  |

Introduction and Administrative Remarks

Jeff Meyers began the meeting by introducing himself, noting that Tony Hunt could not make the meeting and asked him to act as Navy Co-Chair for this meeting. Mr. Meyers then asked RAB members and visitors to introduce themselves. There were no comments or questions on the minutes of July 8, 2003 RAB meeting. Mr. Meyers encouraged both visitors and RAB members to ask questions at anytime.

Subcommittee Reports

This month there were no subcommittee meetings held.

Environmental Cleanup Progress Report

*Status of EDC Phase 4 Finding of Suitability for Early Transfer (FOSET)*

Mr. Meyers stated that the EDC Phase 4 Finding of Suitability for Early Transfer (FOSET) was sent by the Assistant Secretary of the Navy to Governor Sanford last week. The next step is for the Governor to sign a letter approving the early transfer. Once the Navy receives this letter, then a Finding of Suitability to Transfer (FOST) will be done for the same area, except for the Chicora Tank Farm. A draft FOST for this area was sent to EPA and DHEC yesterday. The expectation is that Redevelopment Authority will shepherd this FOSET through the Governor's office to get it signed within the next few weeks.

July's minutes reflected that the Chicora Tank Farm would be transferred within 45 days. Mr. Meyers will check on the status.

*[Editor's note: This topic was clarified at the November 12, 2003 meeting. Briefly, the Finding of Suitability to Transfer for the Chicora Tank Farm was recently revised to reflect additional soil removal completed as a result of additional petroleum contamination discovered in early 2003. The Navy expects the General Services Administration to take ownership of the property by mid-2004.]*

### *Remediation and Transfer Progress*

Gary Foster (CH2M-Jones) presented overview handouts to members and visitors. The handout included a list of definitions. Land use restrictions protect human health with the use of specific restrictions on particular parcels of land, consistent with the Base reuse plan. DHEC and EPA approve these land use controls.

Mr. Foster presented a map showing different sites with the different land use restrictions (such as industrial only, dig restrictions or soil disturbance restrictions, engineering controls such as fencing, groundwater restrictions for consumption). Land use controls are written into the deeds and Brownfield agreements so the new property owners will have to abide by them. Tenants will submit a verification form to DHEC on a yearly basis stating they have not violated the land use restrictions.

By taking over the property, the new owners legally agree through a quitclaim deed that they will abide by the land use restrictions. The Navy is responsible to make sure that they do not violate those restrictions. Ultimately, the Navy is responsible because of its Resource Conservation and Recovery Act (RCRA) operating permit for the entire property. The City will not have code enforcement officers to check on these sites every day. Therefore, DHEC will occasionally monitor land use controls. Also, CH2M-Jones and other subcontractors pass through these land use restriction sites periodically to monitor the cleanup process.

CH2M-Jones summary of their work:

- There were 127 RCRA sites included in their contract, some of which contain multiple SWMUs and AOCs.
- Of those, 81 have no further action status.
- 17 have approved land use restrictions.
- 8 have been submitted for no further action or land use controls.
- 21 sites have long-term groundwater monitoring. 3 of these sites have regulatory concurrence. 7 sites will have natural attenuation monitoring as a remedy. The remaining 11 sites will have additional injections and dissolved product recovery or biosparging.
- These figures include sites added following contract award

Mr. Foster showed a color-coded map identifying ten sites within the industrial zone that are still in the cleanup process. A long-term cleanup site is SWMU 39 with site contamination mixing with contaminants from Hess Oil. The majority of the parcels on this map are going to the City of North Charleston with unrestricted use.

Mr. Foster then described the underground storage tank (UST) program.

- Originally, there were 82 UST sites.
- 65 have received no further action status.
- 4 have been submitted to DHEC for closure.
- 8 sites are being monitored for progress of natural attenuation.
- 5 sites are sites where active remediation, such as product recovery or biosparging, is taking place.

Approximately 10 UST sites will remain active at the end of this year. CH2M-Jones is monitoring these sites. These sites have been or will be identified in the Phase III and Phase IV FOST Memorandums of Agreement.

CH2M-Jones has expended 150,000 man-hours between April 2000 and August 2003 on this project. Subcontractors have expended 80,000 hours. To date, there have been zero lost time accidents and only one first aid incident. CH2M-Jones attributes their safety record to an in-house program where all subcontractors have to prequalify before they even

bid on a project. Each field activity requires an AHA, Activity Hazard Analysis, where they detail, step-by-step, everything they're going to do from the point of picking up a shovel to working with electricity.

Gary Foster showed a list of local and state subcontractors. A lot of these subcontractors have a local office in Charleston or somewhere in South Carolina. IGL is a local minority firm. Mr. Pinckney would like a list of local minority firms.

#### Zone J Ecological Risk Update

Gary Benfield (EnSafe Inc.) provided a summary of his report on the Zone J Ecological Risk Assessment, which consists of Cooper River, Shipyard Creek and Noisette Creek.

Water and sediment samples from these three water bodies were taken back in 1996. A report on this - called the Zone J Part One Report - was presented to DHEC and EPA. In reviewing that report, questions arose about the contaminants on land going to these water bodies. The team decided to do more work to answer those questions.

Mr. Benfield commented that the Zone J Part One Report followed EPA rules for conducting ecological risk assessments. Ecological risk assessments are different from human health risk assessments. He noted that they do not evaluate what effect contaminants in the environment (including plants and fish) have on people. He only focuses on fish, birds, animals or plants. EPA has an eight-step process for evaluating ecological risk assessments. EnSafe is in Step 2 right now. EnSafe hopes to complete the data and submit it to DHEC and EPA in the near future. This report will be reviewed, and EPA and DHEC will decide if they have enough information to make a decision on the water bodies or if the process needs to be done in further detail. That would mean the process would continue on with Steps 3 through 8, which involves more water sampling or possibly collecting animals and analyzing them.

Mr. Benfield reminded the group that EnSafe presented an animated review of Dr. Ivan Chou's work to the RAB in January of 2003. That report showed where contaminants end up when released into these water bodies.

Noisette Creek. Dr. Chou's report said that material washes in and out of Noisette Creek in one tidal cycle. Every time the tide leaves, it takes everything that was deposited there and washes it out into the Cooper River and downstream.

Cooper River. Material in the Cooper River, depending on the tide, goes upstream a little ways and then, as the tide shifts, it goes further downstream toward the harbor. The overall movement is towards the harbor.

Shipyard Creek. Shipyard Creek has low energy. Anything that is deposited there, whether it came in with the tide from the Cooper River or from the Naval Base or another off-site source, gets trapped in there and stays there.

Mr. Benfield explained that the next thing to do in the ecological risk assessment is to find out the sources for contamination for these water bodies. There are a lot of sources that deposit material into Shipyard Creek, Noisette Creek and the Cooper River. EnSafe is also looking at who else has done investigations in these areas. Other information could be anything from dredging reports to the Charleston Harbor Study. EnSafe will then analyze the information to determine whether there's a way for the contaminants to move from land to these water bodies.

There are three primary sources for contaminants moving from land to water bodies. Some sites are tied into the storm water/sewer system on the base. When it rains, that rainwater drains into the storm water/sewer system and goes to the outfall, which empties into one of these three water bodies.

Some solid waste management units (SWMUs) have runoff that goes directly to the creeks or rivers. When it rains, rainwater running over the ground picks up a little contaminated soil and continues moving to one of these water bodies. The contaminated soil is deposited when the rainwater hits the larger water body (river or creek) and slows down. Other sites have groundwater with contaminants that stay dissolved. This groundwater can discharge into the creeks and rivers. These are the primary ways that contaminants could get from land to these water bodies.

Mr. Benfield explained that, after evaluating the source of contamination, they look at how receptors in the marshes and water bodies are exposed to the contaminants in the water or sediment. Fish and benthic (bottom-dwelling) worms

and fiddler crabs are exposed to contaminants through the water or sediments. If larger fish, raccoons or birds eat these smaller animals, they will also be exposed to these contaminants.

After evaluating the receptors of contaminants in these water bodies, an ecological risk assessment tries to figure out whether the contaminants could hurt these animals at the levels found. The people developing the assessment will check the screening values, which are levels established by the US EPA. If the concentration of a contaminant in the water is over a certain level, then there could be a problem. If the concentration is under a certain screening value, then EPA no longer considers that contaminant a problem in that location. Screening values identify which contaminants are possible concerns, not certain concerns.

Regarding human health, DHEC and South Carolina Department of Public Health look at this information and decide if contaminants in these animals can be harmful to humans. If so, they will put a fish advisory out.

Mr. Benfield used the water that was collected during the storm water effluent report that Dr. Chou used. These samples were collected in the storm water system before it discharged into the big water bodies and diluted. Sampling this undiluted storm water shows a conservative, protective estimate of what any animal in the water body might be exposed to. They did the same thing with the sediments; they took the sediment samples collected in 1996 from Shipyard Creek and looked at the highest value. The highest concentration detected was screened against EPA's values, and that's where EnSafe is right now.

What remains to be done is incorporate the remaining data into the final draft of the Zone J Screening Level Ecological Risk Assessment. This data will be given to DHEC and EPA for their review. If more work needs to be done, EnSafe will do another work plan that outlines what kind of data to be collected and what questions they're planning to answer.

Mr. Pinckney asked for a clarification of the term "conservative" as used in this context. Mr. Benfield explained. If the level of contaminants is below a certain EPA-specified number, there is no problem. If the level is above that number, then EnSafe has to go to Step 3 and analyze ecological impacts for that contaminant. Conservative in this sense means "protective." If you're under that number, you're safe; if you're over it, then you may not be safe. Most of the data collected for these water bodies are under these conservative screening levels.

EnSafe does not know how long it will take to get to Step 8. DHEC and EPA must make a decision, based on the science, on whether there is sufficient risk to warrant digging up sediment in any of these water bodies. If EPA feels at the end of Step 3 that you have given them all the information they need to make that decision, then Step 3 becomes the end of the process. If DHEC or EPA says they need to know if a particular contaminant is causing problems, EnSafe will need to take more sediment samples. That is the kind of thing that would drive EnSafe into Steps 4-8.

Mr. Benfield noted that EnSafe has been using existing data wherever reliable data can be found. They received information from dredge permits for the Army Corps of Engineers and put that up-to-date information in the first Effluent Report. DNR also has permit information they're going to share with EnSafe, and that information will be included in the next Effluent Report.

Mr. Spariosu informed the group that anytime someone proposes to change the land use of any federal or former federal property, they have to do an Environmental Impact Statement. It reviews environmental data along with many other aspects of use, like impact of traffic and noise.

Mr. Pinckney inquired how long it might take for humans to get sick from contaminated animals. He asked if anything has been found associated with diseases or sickness. Mr. Benfield responded that the agencies responsible for determining human health impacts are the South Carolina Department of Public Health or the federal Agency for Toxic Substances and Disease Registry (ATSDR). That is not part of the remediation work.

Mr. Vernoy reported that surface water samples were taken from Shipyard Creek as part of the earlier ecological risk assessment. No levels were found exceeding human health risk at that point. Furthermore, South Carolina Department of Natural Resources will sample fish at times to see if there is a significant number of contaminated fish, shrimp or oysters. Right now, the contaminants are not at levels harmful to humans.

Mr. Pinckney questioned why the initial report, submitted in 2000, didn't pass. He noted that there must have been some significant reasons. Mr. Vernoy replied that the report was never approved because a question came up about what contaminants are in the river despite the Navy's presence. This question generated a lot more sampling. Because of this, EnSafe is starting over with a new document because there's so much more information. EnSafe needed to find out the source of the contaminants. What Mr. Benfield has done is pull some of that data out of that first report and included it in a larger report. The first report was technically shelved.

Mr. Pinckney commented that EnSafe had quite a number of years of contaminants to study, since 1907. Mr. Spariosu said, if EPA found out EnSafe's study showed a significant impact to food-type fish, oysters or shrimp, then EPA would do a human health risk assessment. EPA waits to see the results in the sediments and how it pertains to fish that are higher in the food chain.

#### Agenda for Next Meeting

The next RAB meeting is scheduled for November 11, 2003, Veteran's Day. This meeting date will probably be changed. One suggested topic is the status of EDC Phase 4.

Meeting adjourned.

Editor's Note: The next meeting has been scheduled for Wednesday, November 12, 2003 at the same time and location (5:30 p.m. at the Olde North Charleston Meeting Place).