

**RESTORATION ADVISORY BOARD MEETING
NAVAL AIR STATION BRUNSWICK, MAINE
PARKWOOD INN
DECEMBER 12, 2007
MEETING NOTES**

MEETING ATTENDEES

Lonnie Monaco	U.S. Navy, BRAC PMO
Amy VanDercook	U.S. Navy, NAVFAC Atlantic
Gregory Preston	U.S. Navy, BRAC PMO
Commander Barry Miller	NAS Brunswick, Executive Office
John James	NAS Brunswick, Public Affairs
Lisa Joy	NAS Brunswick, Environmental Department
Mike Fagan	NAS Brunswick, Environmental Department
Claudia Sait	Maine Department of Environmental Protection
Ted Wolfe	Maine Department of Environmental Protection
Mike Daly	U.S. Environmental Protection Agency
Carolyn Lepage	BACSE Technical Advisor
Al Easterday	ECC
Gina Calderone	ECC
Jackson Kiker	ECC
Doug Heely	Environmental Strategies & Mgt.
Dan Coyne	Representative of Congressman Tom Allen's office
Carol Warren	Brunswick Local Redevelopment Authority
Robert Rocheleau	Brunswick Local Redevelopment Authority
Vicky Boundy	Brunswick Local Redevelopment Authority
Seth Koenig	Times Record
Josh Katz	Brunswick Resident
Representative Charles Priest	State of Maine Legislator representing District 63
Chuck Prant	Brunswick Resident
Laura Schneider	MPBN
Suzanne Johnson	Brunswick Representative to RAB
Ed Benedikt	Brunswick Area Citizens for a Safe Environment
David Chipman	Town of Harpswell, Maine RAB Member
Peter Lee	Town of Harpswell resident
Arnie Ostrofsky	Tetra Tech NUS
Linda Klink	Tetra Tech NUS

1. INTRODUCTIONS AND ADMINISTRATIVE ITEMS

Lonnie Monaco, U.S. Navy NAVFAC MidAtlantic, opened the meeting and introduced the Navy's consultants, the State and EPA regulators, and other Navy personnel, including Commander Barry

Miller from Brunswick NAS, and Greg Preston representing the Navy's BRAC PMO office in Philadelphia.

Commander Miller gave additional opening remarks. He spoke with Capt Womack, and reiterated the Navy's message that they do pay attention to what is going on. The Navy will do whatever needs to be done relative to clean up for transfer of the base.

Greg Preston also addressed the group. He works at the BRAC PMO office in Philadelphia. Dawn Kincaid has accepted another job to be closer to home. Greg is here on Dawn's behalf, and extends her goodbyes. Greg knows there has been concern over how the Navy will transition the base, since Lonnie will also be leaving. Lonnie's replacement has been identified and will be here next meeting. Dawn's replacement will also be on board in February. The government has acted very quickly to fill these two positions. (Attachment 2)

2. STIPULATED PENALTIES

The Navy and EPA are working through a dispute resolution process. There is no answer yet, but all sides are working towards a solution. The issue has been elevated up to the next level. Greg Preston presented the stipulated penalties update.

Suzanne Johnson asked what the next level is. The first level is here at the base, and the parties were unable to resolve the dispute. The next level includes EPA's regional administrator, DEP's commissioner, and one of the Navy's Deputy Secretaries.

Suzanne asked what the timing is for resolution. Work calendars are full, especially with the holidays. This is still a priority with the Navy, although this is not an emergency-type situation.

Ed Benedikt asked for someone to talk about budget and how much money is going to be spent for clean up. Greg Preston explained that when the base went to the BRAC group, there was a change in funding streams. This caused some delays. Since that happened though, a budget of \$3 to \$4M was found for 2006 and 07, and actual spending was closer to \$6 to \$7M. There has never been any issue getting projects done, although budgeting is a process.

Ed also asked what is the cost of clean up at the base. There is no definite number at this time, the budgets are still being put together. These numbers are constantly changing as new issues are found. The Navy is making sure they comply with all laws.

Ted Wolf of Maine DEP asked about a recent article in the local paper, discussing GAO cost saving measures - how with this impact long term work, 4 years from now? Greg said Navy has and always will comply with applicable laws, and they will do what needs to be done.

Ed Benedikt mentioned that Brunswick expects to use the facility for community projects, and they need to know when projects will be completed. He expressed concern that funding requests have long lead times. Greg Preston said he has been in BRAC for 15 years, and their #1 marching order is to make sure properties are cleaned up and transitioned to the community. The Navy is

working with BLRA on many issues. This is still an active base, and the Navy does need to fulfill their mission.

3. SITE 9 UPDATE

Lonnie Monaco gave an update of the on-going excavation program (Attachment 2). The Navy's contractor has taken out 18,000 tons of ash, and another 840 tons of ash that has been classified as hazardous. Presently there are 7 ash piles waiting for sampling results and disposal. One of these piles was recently classified hazardous due to lead. John James asked what makes soil hazardous? Soil is deemed hazardous if it fails TCLP leaching tests. Confirmatory sampling begun last week, the initial results are due next week. There will be more excavation if confirmatory results indicate clean up goals are not met. The Navy plans on being done with the excavation by the end of this month.

Recently, excavation work uncovered a few items identified as munitions. Three metal objects were uncovered, but found to be inert. That same day, Lonnie received a hand written letter in the mail from Warren, Ohio. The letter was from a person who was stationed here in the 1970's as a radar technician. When he learned the base was closing, he decided to write. He said that back in the 70's his job was to dispose of vacuum tubes, some of which contained radioactive material. He thought the disposal area was south of Site 9 (south of Neptune Drive). The Navy has researched maps and photos, and they don't think the disposal area was where he says. They are not questioning what was disposed, just where. The Navy is assembling maps to send to him to refresh his memory (this happened over 30 years ago). Lonnie spoke with him on the phone, and he admitted his memory may not be that good. He is willing to come here, and Navy will pay for his travel. Since it is not the best time of year to fly to Maine, they will send him maps and have him out in March or April to determine where the disposal could have been. The area south of Neptune Drive is where ECC's direct push work is to be done. Will need to wait on this work if radioactive material is possibly present.

David Chipman asked what radio isotopes are involved in vacuum tubes. Lisa Joy mentioned a college study that indicated very low levels of radioactive material is present in vacuum tubes. The Navy will look into possible burial locations, and what type of tubes are involved. There is no indication yet of how many tubes were buried. The Navy had a disposal ban in 1975, when they recognized that tubes should not be mixed with other debris.

ECC is under contract to do the direct push work south of Neptune Drive. This is an early phase of remedial investigation (RI). TtNUS will do follow up with more sampling to define the nature and extent of ash, which may lead into remedial action. The plan is to finish the CERCLA process in this area, including completion of a ROD.

4. DQO OVERVIEW (TtNUS)

Arnie Ostrofsky of TtNUS presented an overview of the Data Quality Objectives process (Attachment 3). The process includes a team of contractors, regulators, and Navy – around 15 people. The purpose of the process is to design a proper study, and takes about 3 days. There are

lots of details to go over, to answer the question of why we are doing the work. The process allows for the collection of the right data to make defensible decisions. It is a scientific process, but also helps to achieve efficiency to conserve resources. The process helps to determine when to stop sampling to define the extent. This process was done for 3 study areas at the base - Site 2 in August, Site 17 last month, and a background study.

Arnie reviewed the 7 step DQO process, using Site 17 as an example. See attached hand out for details on what questions are asked throughout the process.

Suzanne Johnson asked whether this DQO process involved the regulators? Yes, the process involves many people, including contractors, regulators, and Navy. Lots of involvement from various technical people, such as chemists, risk assessors, hydrogeologists, etc.

An audience member also asked what IAS stands for – initial assessment study. This is part of the preliminary assessment, and is used to identify chemicals that may have been used or processed.

5. SAMPLING AND ANALYSIS PLAN FOR SUPPLEMENTAL REMEDIAL INVESTIGATION OF 1,4 DIOXANE (TtNUS)

Linda Klink of TtNUS gave a presentation on the SAP for 1,4 dioxane in the Eastern Plume area (Attachment 4). The work is in the planning stage now, the objective is to do more field work and to find the extent of a hot spot of 1,4 dioxane in groundwater that was previously found. The presentation included a map showing the area of the eastern plume. The area in question is a subset of the eastern plume. The boundary of 1,4 dioxane is dashed to the north and south, because the extent is not defined. ECC recently completed work to the north of the hot spot area, and their results will be a factor in the TtNUS study.

Al Easterday of ECC described their Mere Brook study, which included a direct push and soil boring program. Direct push wells were installed in the flood plain when the ground was frozen last winter. Work was done at 16 locations, mostly focused near the confluence of Mere Brook and Merriconeaug Stream. Groundwater samples were collected from discrete intervals, and analyzed with a mobile lab. The direct push wells included three screen intervals at each location. Last summer, ECC installed monitoring well clusters that also included three screen intervals each. This study was prompted by pore water sampling results that indicated the eastern plume may have migrated to this area. ECC just got groundwater data from the fall sampling event. They will issue a draft report by the end of January 2008. Their results will be incorporated into TtNUS' work plan. ECC will discuss the report at the March 2008 RAB meeting.

Josh Katz asked if 1,4 dioxane was found in the study area? Yes, groundwater from both piezometers and wells showed VOCs and 1,4 dioxane.

Josh also asked about the vertical distribution of contaminants. Al stated that piezometers near the streams mostly showed shallow contamination, while impact at monitoring wells was more in the mid and deep levels. The shallow piezometers are screened in the 2 to 10 foot range.

Josh asked about water level measurements and if they are continuous – how to determine if the stream is gaining or losing. Linda Klink said readings are typically done as a point in time, not continuous. She agreed to add this question to the DQO meeting agenda, to see if there is value in continuous water level readings.

The draft TtNUS work plan was sent to the regulators, and there was originally an effort to expedite the work. Now, the work plan will go back through the DQO process for further stakeholder review. Linda believes the field work will be conducted in the spring of 2008.

6. MMRP STATUS

Linda Klink also gave this presentation (Attachment 5). There are 6 munitions areas under investigation. The first step in the process is for site inspections. Two important definitions were presented: MEC is munitions and explosives of concerns (i.e., mortars, and other physical hazards); MC is munitions constituents (chemicals related to munitions).

A Preliminary Assessment was initially done by Malcolm Pirnie, and included review of air photos and base documents, and a site walk. This was done to develop recommendations for additional work. One area is already a site (Site 12), and will go into remediation. The other 5 areas are designated as areas of concern at this time. Three sites have MC only (skeet and firing ranges). The other 3 sites have the potential for munitions. One of these is in the Topsham annex, the other 5 are on the main base.

Linda presented a graphic showing how to proceed forward. All six sites are covered under an MC or MEC work plan. TtNUS will do the MEC work first, including geophysical surveys and sweeps.

An audience member asked what geophysics are. Geophysics are similar to a metal detector, but with greater capabilities to see deeper into the subsurface.

Linda said there has been good input from the stakeholder group to develop the planning documents. TtNUS has been tasked with developing the MEC work plan. TtNUS will also take over the MC work plan that Malcolm Pirnie started.

Execution of the MEC work plan requires extreme caution. The Navy has explosives specialists that will help to ensure safety. The current schedule is to have both work plans to the stakeholder group in January, with field work commencing in the spring of 2008.

Ed Benedikt asked about the concentrations within the plume, whether contaminants are increasing or decreasing, and whether the treatment system in place is the right one. [This question refers to the eastern plume, which was the previous presentation.] He also asked about plume migration, and whether the plume is increasing in intensity. Is the DQO process for 1,4 dioxane going to address these questions, and is the extraction well system the answer? Linda stated that TtNUS will do an evaluation after the site assessment to look at different remedies. This review will look

at many options, including pumping. The existing treatment plant will not address 1,4 dioxane - this chemical will need a different type of treatment.

Ed further asked about a handout that lists the status of ongoing and future actions. [Ed was referring to the most recent newsletter, which contained a matrix of projects and their status]. Linda explained that the first step is to refine the scope for the additional investigation, then do the field work to define the nature and extent of 1,4 dioxane and VOCs. TtNUS will then evaluate remedies. Implementation is the step after that. Ed asked that the matrix in the newsletter be updated, he would like to stay on top of the various issues, since he is unable to follow the DQO process. Al Easterday reiterated that the RAB meetings will present up to date information.

Suzanne Johnson asked a combined question – what is TtNUS's experience with 1,4 dioxane remediation, and what is the funding for remediation?

Linda explained that TtNUS will do the work plan and field investigation to define the extent. After that they are tasked with a remedy evaluation. Her firm will not do the implementation, a different Navy contractor will do that. It could be a potential conflict of interest to have TtNUS recommend an expensive remedy and then implement it.

Lonnie Monaco stated that the Navy has funding to implement a ROD for this problem, and that this is a public process. After the ROD comes the design phase, to detail what ever the selected remedy is. After the design, the Navy has a separate contractor for implementation. The Navy will likely bring that other contractor into the process at an early stage.

Suzanne asked about the timing for this whole project. The schedule has been revamped due to the many changes that have come up lately. There will be a DQO meeting held in late February, and there will be an update on this at the next RAB meeting in March.

Suzanne asked about TtNUS' experience with 1,4 dioxane. Linda explained that TtNUS does have experience with this compound, and also conducts research. The existing treatment system is not particularly effective at treating 1,4 dioxane, as it is not volatile. This compound needs to be oxidized. The system does have UV oxidation capabilities, which are effective on 1,4 dioxane, but the system is 15 years old. There are a few treatment scenarios that will be looked at in the evaluation stage.

Suzanne asked about the system's discharge – does it go to a recharge gallery or to the sewer system? Lonnie confirmed that the system recharges on site with sewer back up.

7. SITE 7 REVIEW

Al Easterday gave an update on Site 7 activities (Attachment 6). This site formerly had an acid/caustic waste pit. A ROD was issued in 2002 that specified long term monitoring and institutional controls as the remedy. The LTM program was intended to monitor the natural degradation of cadmium in groundwater. The site has been in the LTM program since 2002. As part of the ROD, three new overburden wells were recently installed. One well was installed in the

source area, and two wells installed outside. The purple circle on the map shows where Cd exceeds the applicable groundwater standard. Groundwater flow is to the south east, towards a drainage ditch that occasionally does have water in it. Shallow groundwater discharges into the ditch during certain times of the year. The new wells that were installed were sampled in the fall of 2007. Cadmium was detected above standards down gradient of the source area. ECC is continuing to monitor groundwater at this Site. The Navy is looking to evaluate how to enhance the remedy, and is also looking at the leaching potential of metals in soil. The Navy knows that this is high priority site for redevelopment.

8. BEDROCK WELL 308 SAMPLING

During the recent LTM activities, VOCs were detected in groundwater samples from well 308 (Attachment 2). ECC then notified DEP and EPA. Additional samples were collected from well 308 and three other bedrock wells in the area, plus samples were collected from a nearby residential well. No VOCs or 1,4 dioxane were detected in the residential well, but low concentrations were detected in wells 309 A and B. It is noted that contamination at monitoring well MW-308 was first detected during the Spring 2006 monitoring event. These wells will be included in the future LTM program. The Navy has established a Technical Evaluation Group (TEG) to review this situation and to recommend the next steps to further assess bedrock. The TEG is made up of technical people such as hydrogeologists and chemists.

NOTE: The latest sampling results for monitoring wells MW-309A and MW-309B indicate there are non-detects for volatile organic compounds (VOCs) in both bedrock wells.

There were several questions from the audience:

What are the depths of these wells? ECC believes the depth to rock is about 40 feet, and that most wells are completed only a few feet into rock. Some wells are open hole, some are screened within a defined interval. Additional details on well construction will be in future LTM reports.

How many eastern plume wells are bedrock wells? There are 13 bedrock wells associated with the eastern plume.

What kind of contaminants were found? The compounds that were detected are chlorinated solvents that are "sinkers".

Have VOCs been detected in bedrock before? No

How old is well 308? This well was installed during the RI process in the early 1990's. There has never been VOCs detected in this well before.

9. UPCOMING FIELD SCHEDULE

Lonnie Monaco gave a brief overview of the 2008 field schedule (Attachment 2). It will be a very busy schedule in 2008. The main work focus includes the following activities:

- Site 9 direct push investigation - currently delayed due to allegations that vacuum tubes may be buried in this area.
- Site 9 ash removal – work is on going.
- Installation of extraction well EW-5B – the well is now installed, it will be hooked up to the treatment system this spring.
- 1,4 dioxane investigation
- Site 12 and munitions investigation
- Site 17 RI
- Old navy fuel farm – on going sampling
- LTM at IRP sites
- Monthly GWETS' sampling
- Background study
- Site 2 RI field investigation

Additional questions from the audience on other activities:

Is there a base wide groundwater model in progress? Yes, although no field work is needed for this.

What is the status of the NEX site? The Navy is continuing to monitor groundwater in this area. TtNUS did complete the 4th round of sampling after the dinitrification study was implemented. The Navy was prepared to go full scale with clean up, but discovered that the process does not work. This site will continue to be monitored for now. The Navy and the regulators are discussing the need to remove soil from the source area, but the station is still active at this time.

10. QUESTIONS

The RAB meeting dates for 2008 were announced:

March 19, June 11, October 8 and December 3.

All meetings will be held at the Parkwood Inn.

Carol Warren asked about the schedule for additional newsletters. The Navy will see a draft of the next newsletter within the next two weeks. What is the plan for future newsletters – the original plan was for quarterly publications? Lonnie responded that the next newsletter is in progress, and schedule may be behind as there are many activities to report. In the future, the website will contain all of this information. The newsletter is planned to be issued in January 2008.

Ed Benedikt asked about the site management plan. The SMP is being updated with current information, and is now back on schedule.

Ed also asked about future site visits. He said that two years ago he and a few others visited the base with the director of EPA. Ed asked if that could happen again in 2008 after the snow melts. Lonnie said that could happen again, provided that security measures are followed.

