

**RESTORATION ADVISORY BOARD
MEETING NOTES
FORMER NAVAL AIR STATION BRUNSWICK, MAINE
THURSDAY, JUNE 19, 2014
BRUNSWICK TOWN HALL, BRUNSWICK, MAINE**

MEETING ATTENDEES

Paul Burgio	U.S. Navy, BRAC PMO/RAB Co-Chair
Robert Leclerc	U.S. Navy
Tom Brubaker	MRRA
Suzanne Johnson	RAB Community Co-Chair
David Wright	Maine Department of Environmental Protection
Chris Evans	Maine Department of Environmental Protection
Iver McLeod	Maine Department of Environmental Protection
Mike Daly	U.S. Environmental Protection Agency
Doug Heely	Environmental Strategies & Mgt.
David Chipman	Town of Harpswell, Maine Representative to RAB
Catherine Ferdinand	Bowdoin College
Anna Breinick	Town of Brunswick
Jeff Orient	Tetra Tech
Carol White	BACSE Technical Advisor
Carol Warren	BACSE
Antoinette Mercadante	BACSE
Ed Benedikt	BACSE
Juris Apse	BACSE

1. Introductions

Suzanne Johnson, Restoration Advisory Board (RAB) Co-Chair opened the meeting at 4:00 p.m. She introduced Paul Burgio (U.S. Navy Base Realignment and Closure (BRAC) Coordinator for NAS Brunswick) as the other RAB Co-chair. Suzanne gave an overview of the RAB process and explained that the quarterly meetings are intended to keep the public informed of the environmental work that is ongoing at the former base. She also discussed the role of Brunswick Area Citizens for a Safe Environment (BACSE) in the RAB process. The RAB members seated around the head table introduced themselves.

Paul Burgio reviewed the agenda for this afternoon's meeting.

2. Status Updates

- Picnic Pond Investigation (Paul Burgio, U.S. Navy)

Paul gave an overview of the stormwater retention system at the former base. The system consists of three natural drainage zones that include a network of ditches, drains and impoundment ponds that were altered to capture stormwater. The Picnic Pond system is the largest of the three

systems, and captures stormwater from about 600 acres, including stormwater from most of the industrial areas of the base. The objective of the investigation is to determine the nature and extent of impacts to the system, which received runoff from the industrial areas for many years. The investigation data will be compared to background data sets, and will also be evaluated to estimate potential risks to human and environmental receptors.

The work will include collection of surface water, sediment and pore water samples throughout the stormwater system, and is scheduled to begin this summer. The sampling locations were recently reviewed with DEP and EPA, who will be assisting with the background evaluation. Before the work can begin, the Navy needs signed access agreements for any land they traverse.

Suzanne Johnson asked what parameters they will be analyzing the samples for. Paul said testing would include the normal constituents that they expect to find such as metals, polyaromatic hydrocarbons and petroleum. He said that sediments samples receive the most comprehensive testing, and that testing of pore water and groundwater will be a subset of that. Water samples will also be tested for 1,4 dioxane. The Navy is still working on the sampling and analysis plan that will provide further details.

Carol White asked if the work can commence without completion of all of the access agreements. Paul said that they are planning on having all access agreements completed before they start the work.

- Site 12 (Jeff Orient, Tetra Tech)
 - Remedial Investigation Status

Jeff provided a brief background summary of Site 12, where expired munitions were detonated or burned within bermed areas. Site 12 is located in the central portion of the base. A draft Munitions Constituents Remedial Investigation report was submitted last summer. This initial work included a fracture trace analysis, well installation, and sampling of soil, sediment, surface water and groundwater. In addition, a risk assessment was completed to estimate risk to human and environmental receptors. Additional work was completed between last fall and May 2014 to verify some of the initial results and collect additional data.

Jeff explained the Decision Units and how they were determined. Six Decision Units were initially delineated around the Site, and a seventh Decision Unit was recently added to include the western wetlands area.

The recent sampling confirmed that impacts to soil and groundwater are minimal and that risk levels are within acceptable ranges. The metals data show that chromium (where present) is in the less toxic, trivalent state. Groundwater levels were relatively high this spring and indicated a component of flow towards the pond (west), which was different compared to last year. Samples collected from the wetland area are still in data validation but preliminarily do not appear to indicate any concerns.

The path forward for the Remedial Investigation includes submission of a revised draft RI report in June or July that will include all of the recent data as well as responses to regulatory comments from the first draft report. A feasibility study is under way and a Record of Decision is expected to be issued later this year.

- Pond Munitions Work

The goal of this study is to remove munitions from the pond, if present, and to gather data for a feasibility study. Last year a pond habitat study was completed and no special or unique plant or animal species were identified. Surveys of the pond reveal that it is about four feet deep with one foot of sediment. Some metallic anomalies were found along with stumps and trees. Sampling of sediments did not find any significant impact. The Navy is planning a removal action to drain the pond and remove any metallic anomalies. A draft work plan was completed last month and the Navy anticipates completing the work this field season.

Ed Benedikt asked about the purpose of the plant and animal survey. Jeff said that it was part of the CERCLA process. If special or unique plants or animals had been found, they would need to be accounted for during remediation.

Jeff said that munitions clearance work was initially completed but was recently expanded. There is evidence of filling around the west side of the pond but this is mostly construction debris. Munitions fragments found around the east boundary are safe. Minimal debris was found in the subsurface outside of former berm areas. The only item found of environmental concern was a pipe wrapped with asbestos.

The scope of work for the pond removal action includes clearing the area, removal of previously identified anomalies, and re-surveying to confirm that all anomalies were removed. It is not anticipated that anything will be found other than small metallic items. The goal is to remove metallic items greater than 20 mm in size and to restore the area. Trees and stumps may be left in the pond to provide cover for aquatic biota. The Navy's goal is to complete this work in August.

Suzanne asked about the ROD for Site 12 and what it will look like after this removal action is complete. Jeff said that the ROD will reflect the status of the site at the time it is issued. He further explained the process to complete a ROD. For a CERCLA site, a remedial investigation is first completed. The results of that are used to make decisions for the cleanup. A feasibility study is then conducted to evaluate remedial alternatives. This process includes consideration of nine criteria to evaluate possible alternatives. After an alternative is selected, a remedial action plan is proposed, which is open for public comment during a 30 day review period. Suzanne said that all documents open for public review are available at the Curtis Library. Paul said that these documents are also on the FTP website and the Navy's BRAC website. Records of Decision are also advertised in the local newspaper.

Ed Benedikt asked if the review period could be extended to 45 days. Paul said that BACSE should request this in writing, and that the Navy would work with them on this issue.

All of the deeds for land that has been transferred are on a CD at the library. Paul said that additional copies can be provided. Suzanne Johnson asked for a map showing the locations of the deeds. Currently there is a map showing the FOSTs and FOSLs, but each of these could include multiple deeds. Paul said that a map of the various deeds is not currently available. Carol Warren said that in order to search deed information at the Registry of Deed, one must know the date it was recorded. Paul said he will prepare additional deed CDs, including one for Ed Benedikt.

- Site 7 ESD (Paul Burgio)

Paul Burgio explained that the Explanation of Significant Difference (ESD) for Site 7 is required to document the removal of cadmium-impacted soil and placement of that soil under a cap at Sites 1 and 3. Under the original ROD, Land Use Controls and long-term monitoring were expected to be the final remedy for this site. Paul said that investigations in 2011 and 2012 were conducted to look for additional source areas to explain why levels of cadmium in groundwater had not attenuated. The additional investigations found two areas where cadmium in soil were elevated. These areas will be excavated and that soil will be moved to Sites 1/3, which is already capped. The cap will be extended to cover this new soil from Site 7. The draft ESD is being reviewed by the Navy and will be out for stakeholder review shortly. Paul expects to submit the final version in August.

Suzanne asked where the cadmium came from. Paul said that Site 7 was a DRMO/disposal pit, which could have received various airplane parts or other debris that may have been coated with cadmium-based paint.

Carol Warren expressed some concern that the boundaries of Site 7 have not been more precisely defined. Paul said that all CERCLA boundaries are approximate, and in this case the boundaries of Site 7 are fairly well established. The Navy is comfortable with the excavation plan and the site boundaries. The land use controls will include sufficient buffer zone to be inclusive of any area that may be impacted by cadmium.

Suzanne referred to the Site 7 soil excavation map and asked about the difference between the red outlined areas and the yellow areas. The red areas designate the proposed excavation areas, and the yellow area shows the old acid/caustic pit.

3. Upcoming Field Work

- Remedial Construction Activities (Paul Burgio)
 - Sites 1/3 Building Demolition and Capping

The capping of Sites 1/3 is planned for this summer or fall, after the excavation of Site 7 is complete and soil is relocated to Sites 1/3. The surface of the landfill will be screened for radiological materials before filling. Buildings 642 and 643 must be demolished before the cap can be constructed because they are in the way. Both buildings have been through the RCRA closure process. The demolition work is scheduled for mid-July.

- Site 7 Soil Removal

Paul said that soil excavated from Site 7 will also be screened for radiological materials before it is transported to Sites 1/3. Carol Warren asked if there was a particular concern with radiological material at Site 7. Paul said that the radiological assessment determined that all landfills warranted screening. He said that dials, gauges, airplane parts, etc. that could be buried at these landfills have the potential to contain low levels of radiological material. There are no concerns that radiological material from weapons are buried anywhere on the base.

- Site 2 Landfill Cap

Site 2 was about two acres in size and was a former solid waste incinerator. It was closed in 1955 with a soil cap, and is now covered with trees. Investigations were conducted in 2011 to determine the extent of landfill waste to the north, and to evaluate impacts to groundwater. The recommended path forward is to cap the uncovered debris area with 18 inches of low permeable soil, overlain by six inches of top soil and vegetation. The uncovered debris area will be screened for radiological materials before the cap is constructed.

- Site 12 Berm Excavation (Jeff Orient)

Jeff said that in addition to the work at the Site 12 pond, the bermed areas at Site 12 will be remediated this summer. The process will include removal of soil that contains munitions debris, screening to remove debris, and additional geophysical survey after removal. If more debris is found, additional excavations will be conducted. A work plan for this activity will be issued soon, which will be conducted as a Time Critical Removal Action (TCRA). The work is planned for late summer or early fall.

- Investigations

- Quarry Remedial Investigation (Jeff Orient)

Investigations of the Quarry site were initiated in 2010. This initial work included clearing of munitions, and this portion of the work is ongoing. Groundwater investigations conducted in 2012 and 2013 have not found any exceedances of Maximum Contaminant Levels in groundwater, although some exceedances of other criteria have been found sporadically. A Technical Memorandum will be issued this summer to document the latest findings.

A Sampling and Analysis Plan is currently being developed and will be issued shortly for additional soil and sediment sampling. Since there are also munitions and radiological concerns at this site, the field work will require a coordinated effort between three contractors. Jeff said the soil and sediment sampling work is scheduled for late summer or early fall.

- PFC Investigation (Paul Burgio)

The initial investigation of perfluorinated compounds (PFCs) in groundwater began in 2012 at Site 11 (former fire fighting training area) and extended downgradient into the Eastern Plume area.

The PFCs are found in aqueous fire fighting foam, also known as AFFF. The sampling program included collection of samples from the groundwater extraction and treatment system (GWETS). Detections of perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) were widespread. The objective of the current sampling program is to evaluate the nature and extent of these compounds, to determine if there is one primary source or multiple sources, and to establish background levels. The sampling program has expanded to new areas beyond Site 11 and the Eastern Plume, including the airport runway.

The investigation work plan includes installation of eight new monitoring wells, and collection of groundwater samples from those wells and six existing wells. Samples will also be collected from four background locations. Paul said the Navy is hoping to do this work later this summer or early fall.

Potential source areas include locations where AFFF was used or stored, including Buildings 555 and 611 where aircraft engines were tested. The runway and apron areas could also be potential sources.

- Eastern Flightline Groundwater Investigation (Paul Burgio)

Low levels of chlorinated ethenes have been found in groundwater at several locations. Additional investigations are planned to determine if these compounds are from a single source or multiple, smaller sources. Chlorinated ethenes are solvents that are used for cleaning and degreasing, and are very common at industrial sites.

Suzanne Johnson asked what makes these compounds important in groundwater. Mike Daley said that they are recalcitrant (i.e., persistent in the environment) and may pose a risk, particularly in situations where vapors could enter a building.

Paul said that a draft work plan is still under review with the Navy. The work plan includes installation of temporary monitoring wells and collection of groundwater samples. This work is also planned for the late summer timeframe.

Suzanne asked if the areas impacted by these chlorinated ethenes could be captured and cleaned up using the GWETS. Paul said that the concentrations typically seen in this area are low, and that other remedial approaches such as in-situ treatment may be more appropriate. The current objective is to determine the source. There is a very large network of monitoring wells available, so these wells may aid in the investigation. Some of these wells are on land that has already been transferred. If contamination is found on land that has been transferred, the Navy has the right to perform additional work if necessary.

4. Questions

Suzanne Johnson asked about the waste management plan for the radiological sites. Paul said there are a number of sites that require further radiological investigation including the Sites 1, 2, and 3 landfills, Sites 6, 7, and 9, Building 9, and the DRMO site. The investigation and cleanup of radiological contaminants is part of the CERCLA program and is conducted in concert with

cleanup of other contaminants including munitions. Each of these sites has (or will have) a specific plan to address radiological concerns. Paul said the Navy is hoping to complete the radiological screening at some of the sites this year, and finish next year. At the Quarry site, radiological screening is being conducted in conjunction with munitions clearing and chemical characterization work.

Radiological screening at Site 7 will be done before soil is moved to Sites 1/3. Screening at Site 2 will also be completed this year.

Suzanne Johnson asked about the GWETS operating manual and when it may be published. Paul said that a new contract is being awarded to upgrade the GWETS controls. The upgrades will include a new computer system to consolidate monitoring of the various components, and installation of a remote access system. The control system is called supervisory controls and data acquisition (SCADA). No changes to the actual treatment system are planned at this time. Paul said that it does not make sense to issue a manual before these upgrades are operational.

David Chipman asked about the PFC sampling at the GWETS system, and said that the test results showed inconsistent removal performance. Paul said that they are researching this matter to better understand the sampling results. He said that the literature mostly indicates that hydrogen peroxide and ozone should destroy PFCs, although not all sources support that. The GWETS may therefore need to be modified. Mike Daly said that there is only one data set, and additional sampling is warranted including sampling between each treatment component (i.e., after the HiPoX system and after the carbon system).

The next RAB meeting will be in September, pending availability of Council Chambers.

Meeting adjourned at 5:30 p.m.