

**RESTORATION ADVISORY BOARD
MEETING NOTES
FORMER NAVAL AIR STATION BRUNSWICK, MAINE
THURSDAY, SEPTEMBER 17, 2015
FAIRFIELD INN, BRUNSWICK, MAINE**

MEETING ATTENDEES

Paul Burgio	U.S. Navy, BRAC PMO/RAB Co-Chair
Robert Leclerc	U.S. Navy
Tom Brubaker	Midcoast Regional Redevelopment Authority
Suzanne Johnson	Brunswick Representative to RAB/RAB Co-Chair
Mike Daly	U.S. Environmental Protection Agency Region I
Chris Evans	Maine Department of Environmental Protection
Iver McLeod	Maine Department of Environmental Protection
Gail Kezer	Office of Senator Angus King
Ralph Tuclar	State Rep HD50
Doug Heely	Environmental Strategies & Mgt.
David Chipman	Town of Harpswell Representative to RAB
Scott Libby	Town of Topsham Representative to RAB
Catherine Ferdinand	Bowdoin College
Anna Breinich	Town of Brunswick
Jeff Orient	Tetra Tech
David Page	Brunswick/BACSE
Carol White	BACSE Technical Advisor
Carol Warren	BACSE
Julie Colby	BACSE
Antoinette Mercadante	BACSE
David Page	BACSE
Joshua Katz	BACSE
Kristin Start	Resident

1. Introductions

Suzanne Johnson, Restoration Advisory Board (RAB) Co-Chair opened the meeting at 4:30 p.m. She reviewed the purpose of the RAB process and she discussed the structure of the citizen's group Brunswick Area Citizens for a Safe Environment (BACSE). This group receives funding from EPA so that they can have their own paid consultant reviewing contamination issues at the base. She said the RAB meets several times a year and is represented by all of the stakeholders. The RAB has been coming together for more than a decade to discuss the various issues at the former base.

She introduced Paul Burgio (U.S. Navy Base Realignment and Closure (BRAC) Coordinator for NAS Brunswick) as the other RAB Co-chair. Paul reviewed the agenda for this afternoon's meeting.

Old Business

David Chipman said that he is still waiting to see the revised operations and maintenance manual for the groundwater extraction and treatment system (GWETS) and he asked if it will be ready by the next meeting. Paul Burgio said that they are planning on conducting additional pilot tests to evaluate treatment alternatives for perfluorinated compounds (PFCs). Since the existing carbon system has not been effective, they are looking at using other types of carbon. This will be an 8 month pilot test specific to treatment for PFCs. Paul said that they are delaying revisions to the operations and maintenance manual until this test is complete. There are many years' worth of data regarding treatment for VOCs and 1,4 Dioxane, however PFCs are emerging contaminants and represent a new condition.

Suzanne Johnson asked Paul to define the acronym GWETS and to give an overview of the system. Paul said that the current system pumps groundwater from a number of locations in the Eastern Plume, and that water is treated using oxidation techniques (HiPOx) and carbon. Treated water is discharged to the infiltration system.

New Business

No new business was discussed.

2. Recent Activities Update (Paul Burgio)

- 2015-1 and 2015-2 FOSTs

Finding of Suitability to Transfer (FOST) is the process the Navy uses to transfer land. FOST 2015-1 was planned for this month. However, some complicating issues have come up relative to land use controls and characterization of PFCs, and the EPA did not agree that this FOST was appropriate at this time.

FOST 2015-2 is for the transfer Buildings 250/Hanger 4, 29, 201, 226, and 221 (EDC-43A, B, C and D). The transfers do not include any land around the buildings but may include the land directly under the buildings. Carol White will have comments on the draft FOST on behalf of BACSE. She said the draft FOST is not clear on whether land directly beneath the buildings is included or not. Paul said that this issue is still under consideration. There is a concern as to whether this area has been impacted by Site 9, although Paul thought that the outline of Site 9 is conservative. Paul also said that the Navy will be responsible for contamination under the buildings regardless of transfer. Tenants/owners will not own the land around the buildings, but that land could be leased for parking. This FOST will include land use controls (LUCs) to regulate soil excavation. The transfer documents will not contain a lot of information relative to Site 9; that information is very extensive and is found in the Administrative Record. BACSE would prefer that the Navy not transfer any land at this time, and would rather it be leased.

BACSE representatives asked that they receive a list of what documents are coming and what the deadlines are for comments. Paul will provide them with this list.

- Picnic Pond Investigation

Paul reviewed the extensive investigation work that was completed by Resolution Consultants this summer. The work included collection of surface water and pore water samples in the Picnic Pond drainage system, as well as Merriconeag Stream and two ponds that are not related to the base (background locations). BACSE helped to identify the background ponds and assisted with gaining access from the owners. The analytical list was extensive and included testing for PFCs. The purpose of the background sampling is to have data from locations that have not been impacted by historical operations on the base.

Paul said that the data is still under review by the consultant and has not been released yet. Suzanne Johnson asked about the next steps in this process. Paul said that would depend on what contaminants are found and what the levels are. Mike Daly said they will go through the normal process of assessment and risk characterization unless something significant is found that might necessitate immediate actions. Suzanne asked if impacts to surface water would be more of a concern. Paul said that finding contaminants does not necessarily mean remedial actions are needed. The group discussed whether there are action levels or ecological benchmarks for PFCs in surface water or sediment. Since PFCs are emerging contaminants, there may not be any benchmarks or standards available at this time.

The group also discussed whether the extent of the sampling program was appropriate, and whether the Fall is the right time of year to do this work. The results of this program will be useful to determine what the next steps should be.

- Site 12 PRAP/ROD Update

There was a public meeting and comment period for the draft Record of Decision (ROD) this summer, and the ROD will be signed this month. It will then go to EPA for signature. Maine DEP will send a letter of concurrence. The ROD will include land use controls to prohibit intrusive activities, as well as outreach and education activities to inform the public. The Navy will remain responsible for this site. Suzanne Johnson asked how the Navy will verify that no intrusive actions occur. The Navy will conduct annual inspections, and Bob Leclerc will also conduct inspections. Once this land is transferred, the Town of Brunswick and the Navy will need to jointly conduct inspections. However, this land is not ready to transfer and the Navy will continue to own it for some time. Carol Warren asked if this land will be used for Reserve Center activities. The Navy (and likely the Town once they own it) will probably not allow any significant activities to occur on this land. It is not clear at this time whether the fence around this site will be removed, although David Chipman said that at the last RAB meeting it was stated that the gates would stay open and the fence would remain.

Both Suzanne Johnson and Carol White said there are lingering concerns over the scope of the groundwater investigations and the extent of contamination. Paul noted these concerns.

- Base-Wide LUC ESD/LUCIP

The explanation of significant differences (ESD) was signed in April 2015, and was necessary because the RODs for a number of Sites did not reflect the current status of the base (i.e., closed) and the need for land use controls. BACSE representatives stated that they have significant comments on the base-wide land use controls implementation plan (LUCIP). Paul suggested that the stakeholders have a meeting next month to discuss this further. There was formerly a Base Instruction when the base was active, which controlled land uses and activities. This LUCIP will replace the Base Instruction document. Carol Warren said that base-wide groundwater restrictions are needed. There is currently a patchwork of LUCs for groundwater, but base-wide controls are needed. The group feels that all drinking water should come from Brunswick's municipal system, and that groundwater on the base should not be used for consumptive purposes. In addition, since the Eastern Plume has apparently migrated off-base, testing of drinking water wells downgradient of the Eastern Plume is necessary. BACSE expressed a concern that the LUCIP relies on Town Zoning changes that have not been adopted.

Paul reiterated that the Navy needs to review and consider the extensive comments, a copy of which was made available for this afternoon's meeting. The group agreed that although these issues have been in discussion for some time, it is now appropriate to discuss specifics now since much of the land has been transferred.

The golf course has a drinking water well that should be tested. Maine DEP sent a notice to the golf course stating that testing not required, however, Paul said that testing for VOCs and PFCs is scheduled for next month. The testing results will be made available to everyone. Paul also said that the Navy will take action on this well if needed. Mike Daly said that it does not appear that there are any sources of contamination near this well, so it is not clear at this time whether longer-term monitoring will be needed.

The group had a lengthy discussion on Town zoning ordinances that will require review or permitting procedures to take place prior to redevelopment. These processes should allow for consideration of LUCs prior to excavation. The group also discussed how to control other, non-permitted activities that could disturb soil such as landscaping or gardening. Paul thought that these activities would be covered as appropriate in the deed or conveyance documents, and that property owners needed to understand the restrictions on their own properties. MRRA requires that an excavation permit be obtained within certain parcels, and this process triggers regulatory review. There is a need to better track and understand the extent of MRRA's land, so that restrictions can be enforced on land not owned by MRRA. Anna Breinick said that maps will be available to show property ownership and LUCs, although it will take some time to complete this task.

Paul said that the former Charleston base has a good notification process for excavation. This process triggers regulatory review, and ultimately the Navy signs off on any excavation permits. This process has been developed over 20 years.

BACSE would support a permit process for excavation, which is not in the current draft. The Navy is considering alternatives on the most effective way to accomplish this, but he believes the

Charleston facility may provide a good example. The property owners need to be involved in this process. The Town of Brunswick, Bowdoin College and MRRRA are main property owners.

- CERCLA Five Year Review

Paul said that many comments were received on the Five Year Review, and that most were related to the LUCIP. The Navy will go ahead and sign the document because it is an administrative requirement. The remedies have not been changed and are still protective. Site 12 will be included in the next review. There is active work ongoing at all of these ROD sites. Most are considered to have potential radiological impacts except the Eastern Plume.

Carol Warren asked if the GWETS changes were included in this review. Paul did not think that was the case. Even though the system is not treating PFCs, it is still protective since groundwater is not being used for consumption.

Paul will sign the review next week and forward it to EPA. BACSE will provide comments on this document.

Carol White said that BACSE would like to see the golf course drinking water well be included in this Five Year Review. She also said that long term trends on water quality should be included as a means to demonstrate that the remedy for the Eastern Plume is effective. Paul said that the remedies are still ongoing and are being modified as needed.

The group discussed the stormwater system as a whole and whether some portion of base stormwater flows into the sanitary sewer system. There are a few locations where stormwater discharges under Bath Road and into the Androscoggin River, but most stormwater flows through the Picnic Pond drainage system. There are no hard pipe connections to the sanitary sewer system. Paul said the group will discuss the Picnic Pond sampling results once the data is available.

The group also discussed the fate and transport of PFCs in stormwater and whether PFCs could affect the municipal water supply and/or aquatic receptors. The Town routinely tests the municipal water system for a variety of contaminants. PFCs are present within the Eastern Plume, and it does not appear that the GWETS fully captures all impacted groundwater that is discharging into Merriconeag Stream. Pore water sampling along the stream for PFCs has not been done but will be in the future. Since PFCs can bioaccumulate, there may be a potential exposure pathway through fish. The compounds PFOA and PFOS have long half-lives based on recent testing. If PFCs are in stormwater, additional testing could be needed to determine possible affects to the ecosystem. Firefighting foam that was used on the base may have already washed through the stormwater system, but the discharge of groundwater from the Eastern Plume is a separate issue.

Manufacturing of PFCs ceased in 2002, but it is still found in some firefighting foams. It is very expensive; therefore it is used only to extinguish petroleum fires and not typically used for structural fires. The Navy kept good records of PFC use since it is very expensive. There is still PFC-containing foam in Hangers 4, 5 and 6. The current airport does not have crash response capabilities.

3. Remedial Action Update (Jeff Orient, Tetra Tech)

- Site 2 Landfill Cap Extension

Jeff Orient reviewed recent test pit information from Site 2. The test pits indicated additional landfill debris west of the existing cap. The material appears to be general construction debris. A radiological survey was completed in this area and no concerns were identified. A design for the cap extension was recently submitted and the Navy is awaiting comments. The redesigned cap extension will include vegetative cover to allow for some infiltration of precipitation. The existing fence will be moved out to the west. The Navy hopes to start construction of the extension this fall.

- Sites 1 and 3 Landfill Cap Extension

Sites 1 and 3 are co-located hazardous waste landfills. A portion of the area was previously not accessible for capping because it extended into the former weapons compound (now removed). A surface radiological survey was completed and elevated readings were found around some drainage pipes in the existing cap that was constructed more than 20 years ago. Consequently, all further activities were suspended until the Navy can conduct further investigations to understand where the radioactive material could be coming from. Paul said that their working hypothesis is that contaminated fill material was used during cap construction. The elevated readings were confined to within 20' of some of the drainage pipes. These pipes are not currently discharging; they are clogged with sediment. The fill is on top of the impermeable cap, not beneath it. It does not appear that there are radiological concerns on the cap surface. The Navy is investigating where this contaminated fill material may have come from.

Jeff said that the cap extension work will be completed next year, after soil from several other sites is excavated and relocated to this area for placement under the cap.

- Site 7 Soil Removal

The Navy is planning on excavating cadmium-impacted soil from Site 7 and placing that soil under the Sites 1 and 3 cap extension. During recent work, a few munitions items were found and a breaker with radiological paint on it was also found. The excavation work was suspended so that munitions clearance work could be completed. The Navy expects to complete the excavation work next year.

The Navy's munitions contractor will mobilize next week to complete a munitions survey of the area. They will likely find many targets since this is a former DRMO area. Munitions items will need to be separated from other debris.

- Fitch Avenue Skeet Range, Site 9 and OSSR Soil Removals

Fitch Avenue Skeet Range – Lead-impacted soil was excavated in 2013, and confirmatory samples indicated a few elevated spots remain in the southern area adjacent to the soil excavation area. Additional sampling was completed this year to determine the extent of these hot spots using field

XRF equipment and verified by laboratory testing. Maine DEP also requested sampling for SVOCs, pesticides and PCBs. The sampling results show that the extent of lead has been delineated and that no other contaminants were found at levels of concern. The Navy wants to conduct additional excavation work to meet ecological and residential standards so that the land is available for unrestricted use. Paul Burgio said that the Navy plans on removing all soil with lead levels above the criteria, even though they are not required to go to this level.

The excavation will take place in 2016, and this soil will be taken to Sites 1 and 3 and placed under the cap extension.

Site 9 – The Navy plans to excavate PAH-impacted surface soil, and to place that soil under the Sites 1 and 3 cap extension. Once the soil from two hot spots is removed, risk-based cleanup levels will be achieved. Jeff explained that the criteria for PAHs is benzo(a)pyrene (BAP) equivalents, which are based on ratios of BAP to other PAHs. This excavation will also commence in 2016.

Orion Street Skeet Range (OSSR) Soil Removal – Lead impacted soil was previously removed, however post-excavation samples indicated that unacceptable levels of PAHs remained in surface soil. The Navy has proposed an additional removal action, although the actual volume of soil to be removed has not been determined. This soil will also be relocated to Sites 1 and 3 next year.

- RAD Program Update (Paul Burgio)

The radiological survey program included the scanning of all landfill and debris areas. At Site 2, no items were found during the recent test pits in the cap extension area. A Radiological Final Status Survey Report will be issued in 2016.

Site 6 was a rubble disposal area that initially was not included in the radiological survey. Following Maine DEP's request, a geophysical survey was completed which found debris. A work plan for a radiological survey and test pits was recently approved. Radiological impact is not expected in this area.

At Site 7, excavation of 1200 cubic yards of soil impacted by cadmium began in August 2015. Excavation work was halted when two munitions items were found. Navy munitions contractors are currently investigating these items.

Radiological surveys were completed in Buildings 9 and 584 earlier this year. A very small area of rad contamination was found in both buildings on the concrete floors. These areas were recently remediated. A Radiological Final Status Survey Report will be issued for both buildings in 2016 to document the removal actions.

At Site 9, a radiological surface scan and test pits are planned for this fall. Once complete, additional sampling for PAHs is planned.

4. Questions

Mike Daly spoke about the occurrence of PFCs at the former Pease Air Base. He said that while Pease and Brunswick share some similarities, the exposure scenarios at the two sites are very different and it is inappropriate to draw parallels to the two from an exposure standpoint. There are a number of drinking water wells at Pease, but there is no impact to drinking water at Brunswick. Paul said there are also exposure issues at the base in Philadelphia.

Suzanne Johnson said that the citizens group is requesting testing of private wells because of issues at these other sites. The group then discussed the adequacy of the conceptual site model as it pertains to groundwater flow, particularly around the Eastern Plume. The group also discussed whether it was appropriate to move forward with additional testing for PFCs prior to reviewing the Picnic Pond data. Paul said that they are hoping to complete additional testing sooner rather than later, but if more time is needed for review the Navy could accommodate.

The group also discussed a preliminary PFC LTM monitoring plan which apparently was emailed out by Resolution Consultants the afternoon of the RAB. Carol felt that the Picnic Pond investigation data would be needed to review the plan. Paul could not comment on the plan or the Picnic Pond investigation results since he has not seen them. Jeff pointed out that the plan was focused on obtaining more data for groundwater, not surface water.

Paul suggested that the upcoming meeting about the LUCIP should also include a discussion of PFCs. He will arrange for a conference call or meeting in a few weeks.

The next RAB meeting will likely be in January, although no date has been set.

Meeting adjourned at 6:50 p.m.