

**Former Badger Army Ammunition Plant (AAP)
Restoration Advisory Board Meeting
George Culver Community Library
July 18, 2024**

Time: 6:00 pm, July 18, 2024

Place: Conducted in-person at George Culver Community Library, 615 Phillips Blvd., Sauk City, Wisconsin 53583, and virtually using Microsoft Teams

Attendees: Approximately 30 people attended the meeting, including eight Restoration Advisory Board (RAB) members who attended in person, and four who joined on line. Attendees are included in the attachment.

Welcome and Opening Remarks:

Ms. Laura Powell, U.S. Army Environmental Command (USAEC) Environmental Restoration Manager and Army Co-chair for the former Badger Army Ammunition Plant, provided the agenda and plans for the evening followed by roll call. Ms. Michele Hopp, Badger RAB Community Co-chair also welcomed the attendees and thanked them for their time.

Review/Approve Minutes of Last Meeting

There were no additional comments on the meeting minutes from the 21 March 2024 RAB meeting. The RAB adopted the minutes as final.

Spring 2024 Groundwater Sampling Results (Joel Jannsen, Spec Pro Services)

Off-site and on-site concentrations have generally decreased across the installation. There is a wide path of DNT underground that the Army will address following the proposed plan – the DNT exists in shallow and deeper zones within the groundwater.

There was Ethyl Ether on Badger property in the well on County Z. However, ethyl ether was not found near the plant boundary.

Q: Why do you think the DNT has decreased over the last year, since the water table has been dropping.

A: (SPS) The exact reason is unknown. However, it's thought the previously high water table was causing elevated contaminant levels. Therefore, now that the water table has fallen it makes sense the DNT levels have decreased.

At the Deterrent Burning Ground, we are seeing decreasing trends continuing throughout the plume. The highest well reading (DBM 8201) is 1.3µg/l, and that is located right next to the source. The readings at this well were 3 and 5µg/l in the past. Downgradient (ELN-1003B), we are seeing lower concentrations than we expected. It is now below the enforcement standard after being above for many years. We have found no DNT in new well nest to the east. There has been no plume migration to the northern part of Wiegand's Bay. One well had very small increase (DBM 8202). We don't have any specific reasons for decrease.

Q: Were there any VOCs detected in new wells?

A: (SPS) No.

Q: Would the differences in rainfall over the last two years have a dilution impact?

A: The water table this year has only increased less than a half foot. Therefore, we do not believe the rainfall has had an impact.

Site-wide Groundwater Proposed Plan (Laura Powell, USAEC)

Since the March meeting, the Army finalized the reevaluation of the groundwater risks using the more up-to-date groundwater monitoring data from 2019-2023 and submitted the documentation to WDNR earlier this month. The updated information will be included in the proposed plan submitted to the public for review and comment. The updated risk calculations did not change the overall conclusions of the report and did not change the proposed remedies.

Q: What is the estimated timeline for having the Proposed Plan out to the public for comment?

A: Generally, we expect a 60-day review time for WDNR. WDNR said the goal is 60 days and it is a priority review. September is reasonable to expect it back to the Army from WDNR.

Q: Can you share the June and July submittals [of the proposed plan] with the RAB?

A1: Laura Powell said this is still a regulatory review and is not ready for public review yet.

A2: Quang Nguyen said he felt that now we have submitted a copy to the WDNR, the RAB members can review concurrently and provide any comments within 30 days. Quang said he would get back to the RAB with more info. (NOTE: The Army submitted the revised Proposed Plan to the Wisconsin Department of Natural Resources on 16 July 2024. While the WDNR reviews from a technical standpoint, as requested by a RAB member, the Army is providing all RAB members an opportunity to review in advance of the public comment period. What was sent to the WDNR is attached. We do not yet know if this will be the same document that goes for public review as it is still in draft form. The Army is waiting for feedback from WDNR. Please send your questions now to laura.z.powell2.civ@army.mil, but wait to provide your concerns and/or issues during the 60-day public comment period. The Army will send an email out to all RAB members and all those on our Dear Neighbors list once the public comment period officially begins. You will have 60 days to review and provide feedback. Please encourage your friends, family members, and neighbors in the community affected by this action to comment during the public comment period. Thank you for your support and interest in the Badger Restoration Advisory Board.)

Settling Ponds Expanded Site Inspection (Laura Powell, USAEC)

Laura reviewed the anticipated timeline. Since the March meeting the Army completed the site Health and Safety plan and the workplan has been sent to WDNR for review/comments. Field work will begin soon after we receive the document back from WDNR and have responded to their comments/concerns.

Q: When will WDNR close their restriction on burning?

A: (from Issac Ross, WDNR) Met with WDNR on land use management, and the leadership from the WDNR Forest and the Parks Departments paused all prescribed burns for the Badger facility. They will be looking at what the alternative options are for land management. WDNR offered to have the experts speak at the next or a future RAB meeting if there is interest. There was interest so WDNR will get it scheduled. It was clarified this is only concerning WDNR-managed property.

Q: Chipping was done the last two years and the invasives are growing back. Are there any plans for this year or next to chip more?

A: WDNR will include this in their presentation at a future meeting.

Gruber's Gover Bay Data Gap Investigation (Ryan Tefft, U.S. Army Corps of Engineers (USACE - Omaha)

Finalized the Desktop Supplemental Remedial Investigation report in March 2024. [Available on the Badger website <https://aec.army.mil/baap>]. Historical records and historical data don't characterize the bay sufficiently so the Corps of Engineers can understand what they need to complete remediation. The data gap investigation or DGI will include additional sampling of surface sediment, sediment cores and surface water. The work Plan has been submitted to WDNR that identifies the number of sites and locations needed to be sampled to better understand the contamination of Grubers Grove Bay. Fieldwork is anticipated to begin in September. The Corps of Engineers is looking at other remedial alternatives than excavation/dredging, such as using a dry material that adsorbs mercury and helps with disposal. The contract was written as a five-year contract, but they are ahead of schedule.

Q: In addition to mercury, the sediment contaminants include lead, copper, arsenic, ammonia; will you be testing for those?

A (USACE): We will be using a metals analytical approach which captures a suite of metals and once the Work Plan is approved, we can better explain what other analytical methods we might be using.

Q: When will the actual work begin?

A (USACE): The field work on the data gap investigation is anticipated September or October 2024. The remediation of the Bay will be conducted under another contract and the design memorandum to implement the acquisition strategy will be determined by the outcome of the DGI and subsequent design memorandum. We don't know yet what type of remediation that will take.

Q: Won't it take a long time to get a contractor assigned to get the work done?

A (USACE): If we have bonified need (provided by the new data collected), USAEC can program money and USACE would typically take 3-6 months to issue a contract once the bonified need is established and funding is available.

Q: If additional contaminants are discovered in the data gap investigation, what standards will they be compared against?

A: (WDNR) Data for the additional contaminants that'll be collected and analyzed in the DGI and in the remedial design plan, under the CERCLA process will be compared to EPA existing standards and that begins the conversation between the Army and WDNR on incorporating state standards in cleanup goals.

PFAS Remedial Investigation (Laura Powell, USAEC)

Laura Powell briefed on the upcoming remedial investigation for per-and polyfluoroalkyl substances (PFAS) at Badger. Acquisition of the contract to complete the PFAS RI is underway and expected contract award is late 2024. Army headquarters approved the new Badger PFAS site in February 2024. Field activities are anticipated to begin Spring 2025. The purpose of the RI is to define nature and extent of PFAS and the Army plans to use the EPA's newly approved RSLs as cleanup goals. (NOTE: Laura Powell meant RSLs will

be used as screening values and during the risk assessment for PFAS at Badger AAP.)

Laura Olah responded in the chat: “The U.S. Army has identified a landfill at the former Badger Army Ammunition Plant as a likely source of PFAS contamination detected in groundwater. In the rural town of Merrimack, Landfill, 3646 received soil from the firefighting training area, where use of AFFF containing PFAS is suspected. The Army recently reported AFFF has been used for fighting liquid fuel fire since the 70s due to its highly toxic nature. ...”

“As early as 2020, groundwater samples near the landfill were analyzed for several PFAS. Soil samples were not collected. One PFAS compound (PFOA) was detected at 5.6 parts per trillion in monitoring well LAN A204A approximately 800 feet south of the landfill boundary, exceeding the new federal MCLs for drinking water,” said Laura Olah.

“By way of general information for folks who would like to test their own well for PFAS, water test kits are available through Cyclopur.com for \$79.” (NOTE: This comment was transcribed verbatim from a RAB member during the RAB.)

Q: When will the Army be testing nearby wells for PFAS?

A: Laura Powell noted the Army has included additional sampling options within the new contract and if the Army and WDNR come to an agreement that a site warrants a closer look based on site history and any other factors like documented use, we can investigate those sites and if sample results are higher than the RSLs then the site can be added to the remedial investigation that is going to be happening.

Q: What is the scope and extent of the PFAS contract for field activities?

A: (USAEC) What the Army is looking to do is establish the groundwater plume for PFAS. Our goal for the remediation investigation is to figure out exactly where the PFAS is. In the PA/SI, monitoring wells were sampled and PFAS was found, but we need to know where it has gone from those wells.

Q: Is there no intent to sample residential wells for PFAS?

A: (USAEC) The Army and WDNR will collaborate and determine where any additional sampling will be needed.

A2: The Army will follow the CERCLA process and do an incremental step-out approach to sampling until we find no detections. If the samples show residential wells may be impacted, then we will sample those possibly impacted wells.

Q: Does the Army believe it has enough knowledge of how PFAS acts and reacts in this particular hydrogeologic environment to know if it will fit the same plume characteristics as exist for other contaminant plumes?

A: (USAEC) During the RI, we identify the hydrogeologic conditions and develop a conceptual site model that portrays how PFAS transports and migrates at Badger.

Q: Given the national attention on PFAS, are there studies out there that explain how PFAS discharges in a groundwater environment and that might tell you if it will act and react differently than other contaminants?

A: (USAEC) There are studies out there from SERDP/ESTCP [Strategic Environmental

Research and Development Program/ Environmental Security Technology Certification Program] and the Army will look into them during the RI, but they aren't here in Wisconsin so they just give us a general understanding of PFAS fate and transport. We will also be sharing information and learning from another Army site at Fort McCoy also in Wisconsin. The research is ongoing; conclusions haven't been made in the studies as of yet.

Q: Is part of the RI scope to look at other investigations and research that is out there?

A: (USAEC) We say the purpose of the RI so to identify nature and extent of the contamination but truly we are trying to build a better understanding of what is out there, horizontally and vertically, how it's reacting with the environment, and how it is moving. Once we have a good understanding of what is there from the RI, we take that information to develop the feasibility study of what alternatives do we have to clean this up and how will we bring the site back to unrestricted use.

Q: Since this is a fairly new problem and there hasn't been a lot of research so far, for the safety of the community, wouldn't it be smart to test everyone's wells just to make sure people aren't consuming unsafe levels of PFAS? We want to avoid waiting until it's too late and someone is getting cancer or dying. We haven't tested the residential wells in some time; it would be good for the community.

A1: (USAEC) We will take that back and look into it. Testing of all residential wells is not part of this contract, but we can go back and look at that as a possibility and we'll get back to the community.

A2: (USAEC) Remember CERCLA is risk based and we have to be authorized to use the funding based on risk. The law tells us how and when we can use funding.

Q: When did the Army decide to check for PFAS?

A1: (SPS) PFAS testing is totally separate from the current groundwater sampling program at Badger.

A2: (USAEC) We completed a preliminary assessment and looked at historical records to see if PFAS was used. And then we followed that up with a Site Inspection to sample locations to see if we found any PFAS. We did this across the Army. The results at Badger were published in a report available on the web at <https://aec.army.mil/PFAS/WI/BAAP>.

A3: (USAEC) The Army tested every installation to get an inventory of where there were PFAS issues. This was a completely separate contract. The sampling methods for PFAS are different than other contaminants, but we will look at additional testing in collaboration with WDNR.

A4: (SPS) We don't have any documentation of use of PFAS-containing AFFF at Badger.

One of the RAB members was informed that the five-year review identified that the landfill in the Town of Merrimac received soil from the Firefighting Training Area at Badger.

Q: Is that accurate? Was it included in the Preliminary Assessment?

A1: (USAEC) The preliminary assessment looks at all historical records and results of interviews with people and they did find a reason to sample, which is why the Site Inspection occurred. The areas that were sampled and detections found in the Site Inspection are where we will start to build our understanding in the Remedial Investigation.

There is concern among RAB members that there were hits, and that it is headed toward

residents at Weigand's Bay.

A2: (SPS) SPS clarified that, as an Army contractor, they did remove soil from the Badger firefighting training area. This was unrelated to PFAS, but due to other contaminants. We did soil borings, excavated the impacted soil and placed it in the landfill. The landfill is permitted by the WDNR and follows the safety requirements established by the state. Its clay lined; portions have a plastic liner. Those landfills are upgradient of one of the Badger monitoring wells that we test twice a year. We have not found the landfill to be "leaking" any contaminants. We test for a lot of different contaminants (VOCs, sulfates, nitrates, etc.). We also have dosimeters and test leachates, which is done through the solid waste program.

Another RAB member recommended that WDNR require the Army to test all 10 landfills at Badger for PFAS. She also stated private wells should be tested first; not last.

Q: When did testing for PFAS begin?

A: The Army began its PFAS program in 2017. It was across the Army and risk based so those installations where we knew AFFF was used repeatedly were a higher priority and tested first. Of those, the ones with the highest levels of contamination were given priority for investigations. At that time the lifetime health advisory was 70ppt. The new EPA standards just went into effect less than a month ago.

Q: Truax Field in Madison is dealing with PFAS now, can the Army look at evidence of their program to gain information?

A: The Army and Air Force programs mirror each other as we follow the same guidance. We can engage with the Air Force so we can both learn from each other's investigations and cleanups.

Five-Year Review

We recently finalized the five-year review. Copies are in the Admin Record, on the website, and were emailed to RAB members. The Settling Ponds/Spoils Disposal area and Gruber's Grove Bay remedies were not considered protective, but that was expected. Once the sites have completed the cleanup phase and final remedies are in place it is expected they will be protective. The Army will include the opportunity for the community to review the draft five year review in the next five year review contract.

TAPP Grant

The purpose of a TAPP Grant is to provide the community some expert guidance as they are reviewing Army documents, which we understand are highly technical. The grant is limited to \$25,000 per fiscal year and \$100,000 total. Badger has exceeded those limits, so a waiver is necessary. The Army will help with the paperwork for the waiver if the RAB is interested in pursuing a TAPP Grant. Five RAB members expressed interest in pursuing a TAPP Grant to better understand Gruber's Grove Bay documentation. Laura Olah volunteered to assist with getting TAPP funding.

Future Meetings

One RAB member requested we use a different meeting room that works better

technically. The Army normally has contract support that reserves the location and ensures the technology works for the meetings. The contract has lapsed, and the Army had to coordinate this remotely from Texas. The Army apologized for the technical difficulties. Mark Fry (Sauk-Prairie Indy) volunteered his time to document the meeting and it will be available on YouTube. We thought we would not have the MS Teams or YouTube recording.

Another RAB member asked if any of these dates were flexible. October 10 is better for the Town of Merrimac. USDA could not do October 10. The Army will send out a request for preference to all RAB members and go with the majority. As of now, future meeting dates are as follows:

October 19, 2023

January 18, 2024

April 18, 2024

July 18, 2024

Questions and Closing Remarks

Laura Powell, Army Co-chair, thanked everyone for coming and participating in the RAB meeting. We appreciate your patience and flexibility with the technical challenges. And appreciate your support and continued interest the former Badger AAP cleanup program. The meeting was adjourned.

ATTENDEES

RAB Members

1.	Laura Powell	Army Co-chair
2.	Michele Hopp	Community Co-chair
3.	Luke Lampo	WDNR
4.	Curtis Hedman	WDHS
5.	Dennis Hancock	US Dairy Forage Center (online)
6.	Laura Olah	Citizens for Safe Water Around Badger (CSWAB) (online)
7.	Randy Poelma	Ho-Chunk Nation (online)
8.	Valerie McAuliffe	Sauk County Board (online)
9.	Chris Hanson	Town of Merrimac
10.	Adam Weiss	Town of Prairie du Sac
11.	William Stehling	Village of Sauk City
12.	Mike Gleason	Lake Wisconsin Alliance

Army and Army Contractors

1.	Joel Janssen	SpecPro Services (SPS)
2.	Ryan Tefft	U.S. Army Corps of Engineers-Omaha
3.	Issac Ross	WDNR
4.	Quang Nguyen	USAEC
5.	Cathy Kropp	USAEC
6.	Paul	SPS

Visitors: Seven citizens attended in person and three citizens joined online. Joe Block from Star News also joined online.