

**Draft Meeting Minutes
Former Badger Army Ammunition Plant (AAP)
Restoration Advisory Board Meeting at
Prairie Du Sac, Wisconsin
March 20, 2019**

Time/Place: 6:00 pm, March 20, 2019 – Sauk City River Arts Center, 105 9th St, Prairie Du Sac, WI 53578

Attendees: Approximately 30 people attended the meeting including eight Restoration Advisory Board (RAB) members, six representatives from the Army Environmental Command (AEC), two representatives from Wisconsin Department of Natural Resources (WDNR), one representative from Wisconsin Department of Health Services (WDHS), U.S. Representative Considine, a staff member representing U.S. Congressman Pocan, a journalist, and seven community members. A list of attendees is attached. Any attendees that are not already on the electronic mailing list will be added if they provided an email or street address.

Agenda: Attached

Introduction: Mr. Lee Carroll facilitated the meeting. He provided a brief introduction, including administrative information and plans for the evening and explained that questions would be possible at the end of each presentation. Mr. Carroll introduced representatives from WDNR and WDHS and explained that they would be available to answer questions throughout the evening.

Ms. Cathy Kropp (AEC) took the floor for a brief announcement and explained that Mike Sitton retired from government service on February 28, 2019. His role as the Army's co-chair for the RAB will be assumed by Mr. Randy Cerar (AEC).

Mr. Cerar thanked everyone for attending and recognized Mike Sitton for his efforts in supporting the community and the Army. Mr. Cerar explained that the Army would like to take the time to assess the RAB and determine how it can be improved.

Presentations:

Groundwater Well Sampling Update and Residential Well Sampling Update, Joel Janssen, Spec Pro Services

Between October and December 2018, 113 residential wells were sampled. One old farm well had 2,4-DNT detected above the WDNR 140 enforcement standard (ES) for groundwater quality. The exceedance is considered an anomaly as it was unexpected and was not repeated upon subsequent testing. The well continues to be monitored and to date multiple samples have been analyzed without further detection.

Three monitoring wells tested above the NR 140 preventative action limit (PAL) for chloroform. The presence of chloroform is inconsistent with Badger AAP contaminant sources; none has been found in upgradient monitoring wells.

There were other contaminants found in other residential wells, but they were not above a PAL or an ES. Future sampling in 2019 will occur in Dam Heights, Gruber's Grove Bay, Inspiration Drive and Weigand's Bay. The intent is to complete residential well sampling by June 2019.

There was one well in the Water's Edge subdivision (Central Plume) that had 2,6-DNT above the ES in multiple samples taken in November, so the Army replaced the well. The old well, which was screened in a sand layer, was abandoned. A new well was drilled into bedrock. It was sealed above the bedrock to ensure any contaminated groundwater above the bedrock cannot enter the well. Numerous samples have been collected and no contamination has been identified. The new well will continue to be sampled annually along with the rest of the Water's Edge subdivisions' wells.

Groundwater sampling in November 2018 included a small round of sampling for the Central Plumes' monitoring wells in the Water's Edge area (nine in total). 2,6-DNT exceeded ES in two monitoring wells but this was expected for the location. The entire plume will be sampled in June 2019. The Deterrent Burning Ground (DBG) Plume was also sampled in November 2018 and included five monitoring wells (quarterly sampling) and one residential well. No DNT was detected in the residential wells that were sampled. DNT continues to increase off-site at the ELN-1003B/C nested well location located just at the leading edge of the plume. The well just outside the plume has not shown DNT detections in the last three years.

Gruber's Grove Bay Update, Linda Albrecht (AEC)

The Army has been working on finalizing the sampling report from 2018 and anticipates it will be issued as a final document within a month. The Army is developing a scope of work for a treatability study at Gruber's Grove Bay. The Army has met with WDNR and is working through some of the permitting and access issues. The Army expects to have a contract awarded by the end of the fiscal year (September). The contractor's work plans will be available for review following submission to the Admin Record. Mrs. Albrecht explained that they would not be able to get permits, site access and contractor work plans approved in time to begin work in the summer of 2019. The intent will be to begin dredging in the next season (summer of 2020) and activities would continue into the next calendar year.

Human Health Risk Assessment, Bryan Lynch (AEC)

The Human Health Risk Assessment (HHRA) was conducted to evaluate if any of the groundwater contaminants from the former Badger AAP are a risk to human health. The Army had not completed an HHRA when the 2010 remedial investigation (RI)/feasibility study (FS) was published. This new assessment will address each plume individually to

tailor solutions appropriately. Mr. Lynch explained that a significant deviation in groundwater data from previous trends caused a delay in the assessment. Concentrations of DNT in groundwater at the Propellant Burning Grounds were detected in excess of 400 ug/L. The Army wanted to ensure that the most recent trends were reflected in the HHRA and RI/FS. As part of the HHRA, hazards are identified, exposure and toxicity (effects) are assessed, and risk is then characterized for each situation. The HHRA is based on water quality data collected from 2015 to November 2018. The most up-to-date US Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Residential Tap Water are used in the assessment (November 2018).

The Army conducted risk characterization within the former Badger AAP boundary (on-site) and off-site. On-site, the Army has land use controls and restrictions that impact water use and provide more control. Since off-site use is residential and the Army does not have control over who can install a well and what they can do with it, the Army was more conservative with calculations and used a more protective cumulative cancer risk criterion for the off-site evaluation. The maximum concentrations of contaminants in wells associated with each plume were used to estimate risk. The Propellant Burning Ground Plume and the Deterrent Burning Ground Plume have elevated on-site and off-site cumulative cancer risk and Hazard Indexes (HI) that exceed the Army's risk management criteria. The Central Plume's off-site cumulative cancer risk is above the Army's risk management criterion. The Nitrocellulose Plume did not exceed the Army's risk management criteria.

The Army will be evaluating remedial alternatives to protect the community based on the current risk summaries and developing solutions for the most reasonably anticipated land use. The data used to complete the HHRA will be included in the RI. Remedial alternatives will be documented in the FS. The Army anticipates that the RI/FS will be near completion in fall 2019.

PFAS, Joseph Quinnan and Kimberly Schrupp (Arcadis)

Joseph Quinnan provided an overview of Poly- and per-fluoroalkyl substances (PFAS) history, sources and special sampling considerations. He explained that advanced methods and technologies are needed to analyze PFAS. In February, the USEPA released a report called the PFAS Action Plan which formalized their strategy going forward. The key issues for the USEPA PFAS Action Plan include the development of new laboratory methods for soil and non-potable water. USEPA has also started to evaluate if there should be federal standards for perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA). PFOS and PFOA will also be evaluated to determine whether they should be listed as hazardous substances under the Comprehensive Environmental Resource, Compensation and Liability Act (CERCLA). USEPA is working to develop interim cleanup recommendations for PFOS and PFOA and anticipate they will be finalized by the end of 2019. USEPA is also working to finalize toxicity assessments and to develop draft toxicity values for other PFAS. Mr. Quinnan explained special methods and approaches required for sampling for PFAS.

Ms. Schrupp provided an overview of the Army's PFAS Program, including preliminary assessment (PA) information. Arcadis has been contracted by AEC to perform a CERCLA approved PA and site inspection (SI) at more than 85 installations throughout the U.S. The Army prioritized sites based on drinking water receptor vulnerability. Arcadis will assess the inventory of potential releases while being protective of drinking water receptors. Due to community concerns at Badger AAP, some limited sampling was conducted ahead of schedule to determine if there is a source at Badger AAP. However, a standard PA has not yet been conducted. PFOS and PFOA are not CERCLA hazardous substances, so the Army has voluntarily implemented this program. Soil, groundwater, sediment and surface water sampling were collected at Badger AAP in 2018. All groundwater samples collected were below the USEPA health advisory levels for PFOS and PFOA. Arcadis will now begin the PA process to identify any other potential release points. Additional sampling may be conducted following the results of the PA. A final report is expected in fall 2019.

Questions and Answers:

Responses to questions posed after each presentation will be provided on the website in the near future to ensure the entire community is aware of the information.

Future Meeting Topics:

Remedial Investigation/Feasibility Study
Gruber's Grove Bay treatability study
RAB Membership (suggested by a RAB member)

Attachments:

- Attendees
- Agenda

MICHELE HOPP
Community co-chair Badger RAB

Randall J. Cerar
Army co-chair Badger RAB

ATTENDEES
(in alphabetical order)

- Linda Albrecht
+ Calvin Boldebuck
Wendy Carlson
- Randy Cerar
+Dave Considine
- Troy Darr
Doug Gjertson
Mike Gleason
* Roger Heidenreich
- Curtis Hedman
Brian Jacobs
*Joel Janssen
Terri Klubertanz
Larry Klubertanz
- Cathy Kropp
*Ron Lins
= Autumn Luedke
- Bryan Lynch
* Bob Newport
* Laura Olah
+ Sam Otterson
*Randy Poelma
Joseph Quinnan
- Robert Reine
Kimberly Schrupp
- JD Smith
Donna Stehling
* William Stehling
* Charlie Wilhelm

* indicates the individual is a Restoration Advisory Board Member
+ indicates the individual attended representing an elected official
- indicates the individual was representing the Army or a regulator
= indicates the individual was representing a media outlet

**Badger AAP Public Meeting
Agenda
20 March**

6:00 – 6:05 – Announcements (Lee Carroll – Facilitator)

6:05 – 6:10 – Introduction Army RAB Co-Chair; Army Commander's Representative
(Cathy Kropp – AEC)

6:10 – 6:20 – Groundwater Sampling Updates & Residential Well Sampling Update –
New Plume Maps (Joel Janssen)

6:20 – 6:25 – Gruber's Grove Bay Update (Linda Albrecht – AEC)

6:20 – 6:40 – Questions/Comments

6:40 – 7:40 – Human Health Risk Assessment (Bryan Lynch - AEC)

7:40 – 8:00 Questions/Comments

Short Break

8:10 – 8:50 PFAS Presentation (Arcadis)

8:50 – 9:00 Questions/Comments