

**Former Twin Cities Army Ammunition Plant (TCAAP)  
Restoration Advisory Board Meeting  
Conducted Virtually using Microsoft Teams  
April 20, 2021**

**Time/Place:** 7:00 pm, April 20, 2021 – Microsoft Teams

**Attendees:** Approximately 28 people attended the meeting including 6 Restoration Advisory Board (RAB) Community Members and 11 Government RAB Members. Names of attendees are included in the attachment.

**Agenda:** Review/Approve Minutes from Last Meeting, Old Business, Cleanup Status Update, New Business, Next Meeting Agenda, and Public Comments.

**Introduction:** Ms. Cathy Kropp took attendance. Mr. Forrest Kelley, called the meeting to order at 7:12 pm. Ms. Linda Albrecht provided plans for the evening.

Review/Approve Minutes of Last Meeting

- Draft minutes from the previous meeting were sent out to RAB members and some administrative changes were requested. Those changes were made and sent back to RAB members for review. No additional changes were voiced.
- Ms. Kropp asked for a vote to accept the minutes.
- No objections were raised.
- The minutes will be finalized, published on the website.

Old Business

- Revised operating procedures were sent to RAB members for comment. Some administrative changes were requested. Those changes were made, and the operating procedures were sent back to RAB members for review.
- Ms. Kropp requested a vote to accept changes to the operating procedures. No objections were raised.
- Revised mission statement was sent to RAB members for comment. No additional changes were requested. Ms. Kropp requested a vote to accept changes to the mission statement. No objections were raised.
- The operating procedures and mission statement will be finalized, published on the website, and distributed to RAB members.

**Presentations:**

TCAAP Cleanup Status Update, Linda Albrecht (USAEC)

- Ms. Albrecht reminded everyone of the former TCAAP boundaries.
- In February, the Draft Final Annual Performance Report (APR) was submitted to regulators. Once the APR is approved it will be posted on the TCAAP website.
- As part of the annual update, 228 Army monitoring and extraction wells were sampled in June/July 2020. Two commercial wells were also sampled.

- The groundwater monitoring plan is approved annually by the U.S. Environmental Protection Agency (USEPA) and Minnesota Pollution Control Agency (MPCA). The results are documented in the APR and published on the website.
- Ms. Albrecht reviewed FY2020 plume maps for Prairie du Chien Plume, Jordan Plume and OU2 Unconsolidated Sediments Plume.
- As part of the annual sampling, 17 commercial irrigation/industrial wells (not used for drinking water) are sampled every four years. Sampling for 13 of these wells was completed in 2020. Cleanup standards were exceeded in 4 wells. The Army notified well owners and requested resampling. The Army has started resampling and expects completion in May.
- The Army has prepared a Well Inspection Report to document the inventory and status of all 333 active Army wells. Based on the assessment, the Army recommended abandoning 40 wells that are considered no longer necessary in support of the groundwater monitoring plan. The report was submitted to regulators in March 2021 for concurrence.
- The Army completed an OU1 optimization study to determine if it was possible to increase the amount of contaminant removed by relocating a well closer to the center of the plume. The Army presented the results of the optimization study to the USEPA, Minnesota Pollution Control Agency (MPCA) and New Brighton and will be discussing it with the other stakeholders on 21 April 2021. Once the well location is approved and finalized the Army will fund the installation of a new well and continue to work with New Brighton to ensure drinking water operations are not affected by Army actions.
- The Army has also been working on OU2 optimization to increase the ability to capture and treat contaminants. The Army is installing some extraction wells closer to the source areas to accomplish this. The TCAAP Groundwater Recovery System (TGRS) was installed in 1987. The Army has been designing and optimizing a secondary treatment called Source Groundwater Recovery System (SGRS) for almost two years. The 90% design will be presented to stakeholders on 21 April 2021. Construction is expected to begin in late 2021 and become operational in 2022.
- Ms. Albrecht reviewed maps indicating current piping, the pumping plan, and Process flow. SGRS will treat for both 1,4-Dioxane and Trichloroethylene (TCE).
- Since January, MPCA and USEPA have provided comments on the 60% design drawings. The 90% design drawings were submitted in March and the 100% design drawings will be submitted in April.
- The Army is also working at Site A in OU2. It has a shallow plume of 1,2-dichloroethene that has shifted southeast from where it was predicted to go. There was a vapor intrusion (VI) study in 2013 that was negative but because the plume has shifted the Army is redoing the study of the area. The heating month VI study was completed in March and in May the Army will do the non-heating month. At the end of the study two additional wells will be installed at site A in the shallow plume.
- The Army is actively working at OU2 Site K where there is a shallow groundwater TCE plume. The Army has started a treatability study to see if bioremediation can be used to remove a higher volume of TCE contamination. The study will take about three years and as part of it the Army will be installing additional groundwater wells at Site K. USGS is doing the treatability study. They will attend a future RAB meeting to provide a presentation about their study.

- For OU3, which is off post, the selected remedy is monitored natural attenuation. The Army is not actively treating the plume, but the groundwater is monitored, and sampling is done each summer. The data is then reported in the APR. The Army reviews data over time to ensure there is improvement. Natural attenuation is a slow process.
- **Round Lake Cleanup:** An update was also provided on Round Lake which was at one time part of TCAAP but was transferred to U.S. Fish and Wildlife Service 1974. Round Lake includes metals and polychlorinated biphenyls (PCB) contamination, primarily in the upper one foot of the sediment.
  - The Army has been working with the USEPA, MPCA, Minnesota Department of Natural Resources (MDNR) and USFWS for many years and several studies have been completed. In March 2020, a supplemental Remedial Investigation and Feasibility Study (RI/FS) was approved by the Army's Federal Facility Partners, USEPA and MPCA. The study is now available on the TCAAP website.
  - All parties have agreed to use the mean probable effect concentration quotient called the mPEC-Q to measure success in removing contaminants from Round Lake sediments.
  - The preliminary remedial action objective (RAO) is to get to an mPEC-Q level of .6 or lower throughout Round Lake to minimize the adverse effect to the benthic organisms and the waterfowl that eat them. The benthic organisms can be used as indicators of the changing environmental conditions. MDNR and USFWS have a list of the benthic organisms on their websites: [www.dnr.state.mn.us](http://www.dnr.state.mn.us) or [www.dot.fws.gov](http://www.dot.fws.gov). Interested parties may search for aquatic invertebrates to learn more.
  - Under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the RI is conducted to determine the nature and extent of the contamination, so the type of contaminant, as well as vertical and horizontal boundaries. The RI phase is where the presence and level of unacceptable risk to human health and the environment is evaluated. Once the site has been characterized, effective remedial alternatives can be developed and evaluated. The Code of Federal Regulations (CFR), Title 40 Part 300 subsection 430 paragraph (d) explains the purpose of the RI/FS. The FS then documents the alternatives developed to address unacceptable risk. The alternatives are evaluated based on an established set of nine USEPA criteria. The Army can then identify the preferred remedial alternative which is documented in the Proposed Plan. Each alternative developed by the Army is explained in detail in the document. The nine USEPA criteria are also detailed in the Proposed Plan.
  - The Army is currently preparing the Proposed Plan. When it is approved by USEPA and MPCA, the Army will make it available to the public for comment for 30 days. During that time, the Army will hold a public meeting to review the proposed plan with the community. The Army will present all the site information, discuss the preferred alternative and request input from the community. The Army plans to hold the public meeting in conjunction with the RAB meeting. The public comment portion of the meeting will occur after the RAB meeting has adjourned. The Army will record all public comments. The Army will not address comments in the meeting. An official response to comments will be published in a responsiveness document included with the Record of Decision (ROD).
  - One member requested clarification on USEPA's allotted review time for the proposed plan.

- The Army confirmed that USEPA has 40 days, not 30 days to review the proposed plan.
- The Army may receive comments from the FFA partners to which they must respond, and that may require some back-and-forth discussion until the document is acceptable. That is why the public meeting cannot occur until the document is back from USEPA and MPCA as an approved document.
- Once the proposed plan is approved the Army will accept written comments for 30 days. Oral comments will be accepted at the end of the RAB/public meeting. The Army will respond to all comments in the responsiveness summary, included in the decision document.
- Once all comments have been considered, the Army will publish a ROD that documents the alternative selected. Following publication of the ROD, the Army will begin remedial design, construction, and reporting. The RAB will be updated as each step progresses.
- **Upcoming Actions:** Upcoming actions include Army submission of the field summary report to document work completed at OU1, and a work plan for two additional borings. Once the borings are complete the Army will propose a new well location. At OU2, the vapor intrusion study will be completed at site A in May and construction of the SGRS will begin. The USGS three-year treatability study is ongoing at Site K. Groundwater monitoring will continue at OU3. For Round Lake, the Army will develop the Proposed Plan and conduct a public comments period and public meeting.

#### New Business

- Ms. Kropp requested input on topics for future RAB meetings, noting that the next meeting will be a public meeting for Round Lake. New items will not be added to that agenda but may be added for future meetings. Any suggestions for future agenda items can also be submitted via email.
- No suggestions were brought forth at the meeting,
- Since the mission statement and operating procedures were approved there are no additional administrative requirements for the RAB. If something happens such as someone leaving the RAB or someone identifies a change that needs to be made, then a separate administrative meeting can be held. Currently, all upcoming RAB meetings are expected to be normal meetings in which the Army will provide cleanup status updates.
- Ms. Kropp asked the RAB for suggestions on how to improve the RAB meetings.
- No suggestions were brought forth at the meeting.

#### New Meeting Agenda

- The next meeting will be specifically about Round Lake and the associated proposed plan. The date will not be determined until the Proposed Plan has approval and the public comment period can begin. The Army will provide the RAB with as much notice as possible.
- At the next RAB meeting, the minutes from this meeting will be approved, old RAB business will be reviewed, any RI/FS questions will be answered, and the Army will explain the Round Lake Proposed Plan and the preferred alternative. The Army will answer any questions. The RAB meeting will then be adjourned, and the official public

comment portion of the meeting will begin for the Proposed Plan. The Army will take public comments into consideration prior to selecting the alternative.

- Both written and oral comments will be received. If comments are submitted via email, there is no need to submit them orally at the meeting. Both oral and written comments will be included in the responsiveness summary.
- The RAB does not need to submit comments as an entity. All individual comments will be accepted.
- The Agenda for the meeting on July 20, 2021 will be very similar to this meeting. The RAB will review and approve minutes for the proposed plan meeting, review old business, discuss any new business, and review agenda for the meeting in October. The Army will provide a cleanup status update and receive any comments from the RAB.
- Ms. Albrecht asked the RAB for any comments, concerns, or suggestions.
- The RAB Co-Chair, Mr. Forrest Kelley, adjourned the meeting at 7:56 pm.

### Comments and Concerns

- **Q:** Of those four industry wells that exceed the standards, are they all located in the same area?  
**A:** Three were up to close to the original TCAAP boundary and one was further south (Linda Albrecht, USAEC).
- **Q:** Are the location of the wells that were sampled included in these documents?  
**A:** A map that shows what wells were exceeded is in the APR (Linda Albrecht, USAEC).
- **Q:** Are the wells that the Army is recommending for abandonment located on TCAAP or on the areas surrounding TCAAP?  
**A:** Some of both. There are quite a few on TCAAP and some in OU1 and OU3 areas (Linda Albrecht, USAEC).
- **Q:** Building 116 is currently where there is a treatment facility, and the Army is improving and upgrading the system to the secondary treatment? Is the piping underground or below ground?  
**A:** The pipes are run underground. The boundary wells will continue to go to the existing building, TGRS 116. The source wells will go to a new building with a new process system which uses both an oxidation system and an air stripper to remove both 1,4 dioxane and TCE (Linda Albrecht, USAEC).
- **Q:** For both systems, the effluent goes to a sand and gravel pit?  
**A:** Yes (Linda Albrecht, USAEC).
- **Q:** What is the fate of the water after that? Is there surface runoff? Does it infiltrate?  
**A:** It infiltrates (Linda Albrecht, USAEC).
- **Q:** For the homes that are potentially impacted, does the Army work directly with the homeowners to test the air or provide vapor mitigation if needed.  
**A:** If needed, yes. The plume was negative in 2013 and the plume has attenuated some since then, so the Army does not think Vapor Intrusion is a problem. However, the main issue is that the wells are no longer in the path of the plume. Currently, the Army can

obtain the data from the soil without entering the home. If the Army has any detections during the study, homeowners will be contacted to do samples inside the house (Linda Albrecht, USAEC).

- **Q:** Will you be uploading these maps to the website?  
**A:** The report is on the website and the maps are in the report. The supplemental RI/FS is available on the website at [www.tcaaprab.org](http://www.tcaaprab.org) on the very bottom of the homepage and will also be available under the resource tab (Linda Albrecht, USAEC).
- **Q:** What is the timeline for the proposed plan?  
**A:** The Army will officially submit the proposed plan to USEPA and MPCA on April 21, 2021. They will have 40 days to review and comment and then the plan will be finalized (Linda Albrecht, USAEC).
- **Q:** When will it be available to the public?  
**A:** Following review and concurrence by USEPA and the MPCA it will be released to the public (Linda Albrecht, USAEC).
- **Q:** The Army has determined the preferred approach to remediate Round Lake and will be proposing that approach in the plan?  
**A:** Correct (Linda Albrecht, USAEC).
- **Q:** Will you also be sending that to USFWS and MDNR as a courtesy since they are stakeholders, or will they have to wait until after the 40 days as well?  
**A:** It will be sent to USFWS and MDNR after USEPA and MPCA agree that it can be released to USFWS and MDNR. It may be released before the 40 days (Linda Albrecht, USAEC).
- **Q:** Is the feasibility report available on the website?  
**A:** The supplemental RI/FS is available on the website. It is a large document but if there is an issue downloading it the Army has some document transfer methods that can be used to send it on request (Cathy Kropp, USAEC).

## **ATTENDEES**

### **Government RAB Members Present**

1. Linda Albrecht (Acting Army Co-chair)
2. Brigitte Hay (MPCA)
3. David Brown (Northrop Grumman)
4. Melissa Collins (DNR)
5. Matt Kocian (Rice Creek Watershed District)
6. Nicole Menard (USFWS)
7. Mary Lee (MN ARNG Arden Hills Army Training)
8. Dave Perrault (City of Arden Hills)
9. Nyle Zikmund (City of Mounds View)
10. David Yang (City of Shoreview)
11. Bernard Walker (City of St. Anthony Village)

### **Community RAB Members Present**

1. Forest Kelley (Community Co-Chair)
2. Marie Rene Culhane
3. Tim Donakowski
4. Sara Frantz
5. Bobby Goldman
6. Keith Maile

### **Army and Army Contractors Present**

1. Cathy Kropp (USAEC)
2. Robert Reine (USAEC)
3. Susan Elrod (USAEC)
4. Paul Muethling (DCS G9)
5. Kay Toyne (ERG)
6. Hoa Voscott (Arcadis)
7. Shannon Dunn (Arcadis)
8. Tim Molitor (Arcadis)

### **Visitors**

1. Sarena Selbo (USFWS alternate)
2. Kristin Safakas (USEPA Alternate)
3. Joshua Straka (Congresswoman Betty McCollum)