

1. Provide comprehensive list of analogous projects or sites that demonstrate the Army's process relative to the Human Health Risk Assessment (HHRA), feasibility study, and decision making from proposed and reasonable alternatives.

A comprehensive list would include hundreds of sites over the nearly 30 years of the Army's DERP program. What follows is a selection of projects that are representative of similar sites with similar contaminants that are analogous to Army's cleanup efforts at Badger AAP.

Year	Installation	Active, BRAC or Excess	Nature of Site	Risk Assessment	Action
2014	Milan Army Ammunition Plant, TN	Active	Explosives in on/off-post groundwater and soils	Yes	Record of Decision and Risk Assessments Finalized in 2014. Risk exceeded EPA standard of 10 ⁻⁴ . Groundwater pump and treat system in place with long-term monitoring.
1993	Twin Cities Army Ammunition Plant, MN	Excess	Solvents in on/off-post groundwater	Yes	Record of Decision and risk assessment was completed in 1993. Risk exceeded EPA standard of 10 ⁻⁴ . Treatment system was added to the City of New Brighton's existing drinking water system to treat Army contamination that impacted the City's water supply.
2016	Longhorn AAP, TX	Excess	Perchlorate and Volatile Organic Compounds in soil and groundwater	Yes	Risk exceeded EPA standard of 10 ⁻⁴ . Remedy was soil excavation, groundwater pump and treat for 1.5 years then Monitored Natural Attenuation (MNA) to complete the restoration of the aquifer.
2005	Volunteer AAP, TN	Excess	Explosives in on/off-post groundwater	Yes	Risk exceeded EPA standard of 10 ⁻⁴ . Selected remedy was MNA and Institutional Controls.
1994/1996	Cornhusker AAP, NE	Excess	Explosives in on/off-post groundwater	Yes	Interim action was taken to extend City of Grand Island existing water lines to affected residents due to off-post Army contamination (TNT/RDX.) Risk exceeded EPA standard of 10 ⁻⁴ . Final off-post remedy was MNA.

2. Provide the timeline and scope of work associated with the HHRA and follow-on actions by the Army at the former Badger AAP.

The Army plans to have a Remedial Investigation and Human Health Risk Assessment (HHRA) awarded by mid-late August and completed in mid-2018. The HHRA will evaluate whether contaminant concentrations in the plume emanating from the former Badger Army Ammunition Plant exceed acceptable risk levels for lifetime exposure. The results of the HHRA and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process will inform future decisions and determine a path forward. While these actions are ongoing, the Army will continue testing residential drinking water wells and monitoring wells, ensuring the supply of safe drinking water.

3. Respond to request by Sen. Baldwin's office to resume testing of all residential wells.

The Army's testing frequency is based on current conditions and need. The Army has implemented numerous remedial actions throughout the areas impacted by operations at the former Badger Army Ammunition Plant. These actions have reduced contaminant concentrations in groundwater over time. The Army is currently sampling 52 residential drinking water wells. Modifications to the residential well sampling plan are coordinated with WDNR before implementing any changes. The Army will continue to monitor residential wells in accordance with the WDNR-coordinated plan. If a residential drinking water well exceeds the Wisconsin enforcement standards in the future, the Army remains committed to addressing the situation. Currently, the WDNR-coordinated groundwater monitoring plan includes 304 monitoring wells associated with Badger Army Ammunition Plant. These wells provide data used by the Army to identify changes to groundwater quality and give advanced warning of groundwater changes that could potentially affect residential wells.

4. Respond to request by Sen. Baldwin's office to resume the pump and treat remedy.

The pump and treat interim remedies (Interim Remedial Measures/Modified Interim Remedial Measures (IRM/MIRM)) were effective at reducing high concentrations of contaminants for the nearly 25 years they were in operation; however, such systems have a practical limitation over time of how much contaminant they can remove. By 2011, it became apparent that the IRM/MIRM had removed as much contamination as possible, as a result, the Army and WDNR agreed in 2014 that the pump and treat systems were no longer needed. Quarterly monitoring was instituted to monitor the effects and changes in the plume, and after four quarters of monitoring showed no appreciable plume changes with WDNR's concurrence, the extraction wells were abandoned and the land containing the MIRM facility has been transferred out of Army control. Additionally, based on the results of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) HHRA and an updated remedial investigation, the Army will evaluate what remedial measures may be needed to ensure continued protection of human health and the environment and will coordinate with the WDNR to incorporate applicable WDNR requirements in accordance with CERCLA.

5. What other emerging contaminants is the Army testing for in the Badger AAP affected area? Do they all have an assigned PAL/ES?

The Army's April 2017 sampling included the emerging contaminant 1,4 dioxane, which has an enforcement standard of 3 µg/l and a preventive action limit of 0.3 µg/l. The Army's testing showed detections of this contaminant were below the PAL. This compound was included due to past detections of 1,1,1 TCA, a probable co-contaminant.

6. What is the timeline for notification of other stakeholders to include the public to discuss the Army's change in position regarding the drinking water system?

The Army is proposing a public meeting in the summer of 2017 to detail the necessary next steps for completing the risk assessment and updated remedial investigation under CERCLA. Additional outreach to community stakeholders may also occur as necessary before and after the planned summer meeting. The Army's position remains to protect the drinking water source for residents potentially impacted by unacceptable levels of contamination coming from BAAP now and in the future.