



October 19, 2023

Dwight Hollon  
U.S. Army Environmental Command  
2455 Reynolds Road  
Joint Base San Antonio Fort Sam Houston, TX 78234

SENT BY ELECTRONIC MAIL

Subject: DNR Comments on Revised Draft Proposed Plan for Site-Wide Groundwater  
Former Badger Army Ammunition Plant, Baraboo, WI  
DNR BRRTS Activity #02-57-001002, 02-57-562629, and 02-57-526445

Dear Mr. Hollon:

The Wisconsin Department of Natural Resources (DNR) has received and reviewed the document entitled “Draft Final Proposed Plan for Site-Wide Groundwater Former Badger Army Ammunition Plant Baraboo, Wisconsin” (Revised Draft PP), dated August 2023, prepared for the U.S. Army Environmental Command (Army) by SpecPro Professional Services, LLC (SpecPro).

In February 2023, DNR received an initial Draft Proposed Plan for Site-Wide Groundwater (Draft PP). DNR provided comments to the Draft PP in a letter dated June 2, 2023. The Revised Draft PP sufficiently addresses many of the comments provided by DNR. DNR provides the following comments to the Revised Draft PP:

- **DNR comment – June 2023:** The Human Health Risk Assessment (HHRA) used a cumulative cancer risk greater than  $1 \times 10^{-6}$  outside of the BAAP property line (off-site), and a cumulative cancer risk greater than  $1 \times 10^{-4}$  within the BAAP property line (on-site), as criteria for potential action or additional evaluation. The HHRA states there is no unacceptable risk associated with the Nitrocellulose Plume, which is only present on-site, or for several Contaminants of Potential Concern (COPCs) associated with the on-site portions of the Central Plume, DBG Plume, and PBG Plume. The DNR utilizes a  $1 \times 10^{-6}$  excess lifetime cancer risk threshold for establishing risk-based levels for groundwater. The DNR considers any contaminant found in groundwater that exceeds the [Wis. Admin. Code ch. NR 140 Enforcement Standard] NR 140 ES or Maximum Contaminant Level (MCL), whichever is more stringent, a contaminant of concern (COC) for that plume, regardless of if on-site groundwater is considered under the control of the Army. The DNR recommends amending on-site COCs for all groundwater plumes using a  $1 \times 10^{-6}$  cancer risk threshold. Any additional on-site COCs identified should then be reviewed for potential action or additional evaluation.

**Army response – August 2023:** The Army acknowledges the DNR’s  $1 \times 10^{-6}$  risk policy; however, the cancer risk thresholds were selected in compliance with NCP and EPA guidelines. Based on the NCP and EPA guidance, cumulative carcinogenic risks below  $1 \times 10^{-6}$  are generally considered to represent a negligible risk, cumulative risks between  $1 \times 10^{-6}$  and  $1 \times 10^{-4}$  are within a range considered acceptable under most conditions, and cumulative cancer risks above  $1 \times 10^{-4}$  indicate unacceptable levels of risk where remedial action or further evaluation needs to be considered.

In off-site areas, where the Army does not have control over the use of the groundwater as a drinking water source, a cumulative cancer risk greater than  $1 \times 10^{-6}$  is cause for potential action or additional evaluation. For areas within the BAAP property, where the Army has control over the use of groundwater as a drinking source, a cumulative cancer risk greater than  $1 \times 10^{-4}$  is cause for potential action or additional evaluation.

The Army will review the determination of on-site or off-site COCs for all groundwater plumes. The Army will update the COC tables in the PP.

**DNR response – October 2023:** When a Federal facility is not on the National Priorities List (NPL), State laws concerning removal and remedial actions, including State laws regarding enforcement, apply to Federal facility actions as long as the State law is not more stringent for Federal facilities than for private facilities. CERCLA § 120 applies to federal facilities, and CERCLA § 120(a)(4) states “State laws concerning removal and remedial action, including State laws regarding enforcement, shall apply to removal and remedial action at facilities owned or operated by a department, agency, or instrumentality of the United States or facilities that are the subject of a deferral under subsection (h)(3)(C) when such facilities are not included on the National Priorities List. The preceding sentence shall not apply to the extent a State law would apply any standard or requirement to such facilities which is more stringent than the standards and requirements applicable to facilities which are not owned or operated by any such department, agency, or instrumentality.”

DNR considers the groundwater on-site and off-site to be waters of the State, and ch. NR 140, Wis. Adm. Code groundwater standards apply as an Applicable or Relevant and Appropriate Requirements (ARARs) for determining risk and for setting groundwater cleanup levels at the site, regardless of whether the Army is in control of the groundwater.

**As previously requested by DNR, the Revised Draft PP should be updated to identify COCs based on a cumulative cancer risk of  $1 \times 10^{-6}$  and any contaminant found within on-site or off-site groundwater plumes in exceedance of an NR 140 ES. Any additional COCs identified should then be reviewed for potential action or additional evaluation.**

- **DNR comment – June 2023:** Evaluate the need for additional monitoring wells compliant with ch. NR 141, Wis. Adm. Code to better define the degree and extent of groundwater impacted by [dinitrotoluene] DNT associated with the [Nitrocellulose] NC Plume.

**Army response – August 2023:** There is no risk associated with the NC Plume. The Army acknowledges the WDNR’s request, but the Army’s focus is on the groundwater plumes that indicate potential risk to the public and their drinking water. The Army is planning to develop a comprehensive groundwater sampling plan that may include additional wells to define the NC Plume.

**DNR response – October 2023:** Associated with the previous October 2023 DNR response, DNR notes the NC Plume is located on-site and was reviewed for potential action or additional evaluation using a cumulative cancer risk threshold of  $1 \times 10^{-4}$ . The HHRA calculated a cumulative cancer risk of  $4 \times 10^{-6}$  for the NC Plume and concentrations of DNT in groundwater exceed the NR 140 ES.

The DNR appreciates your efforts to restore the environment at this time. If you have any questions or comments, please contact me at 608-206-5809 or at [luke.lampo@wisconsin.gov](mailto:luke.lampo@wisconsin.gov)

Sincerely,

A handwritten signature in black ink, appearing to read 'L. Lampo', written in a cursive style.

Luke Lampo  
Hydrogeologist  
Remediation & Redevelopment Program

cc:

Quang Nguyen, Army  
Joel Janssen, SpecPro  
Issac Ross, DNR