



January 23, 2018

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*[sent electronically]*

Subject: Badger Army Ammunition Plant – Baraboo, Wisconsin  
BRRTS #02-57-001002

Dear Mike:

Thank you for meeting with Department staff on the Gruber's Grove Bay (GGB) sediment sampling results. As we discussed in our August 11, 2017 letter and at the meeting, the Army's 2016 report documented levels of mercury in the sediment of the bay that continue to pose an unacceptable risk to aquatic life, after the last dredging project. The purpose of this letter is to provide you with more details as to an acceptable course of action consistent with Wisconsin's Spill Law (Wis. Stats. § 292) that would result in the state's satisfaction with the environmental quality of sediment in GGB and support a request to the Environmental Protection Agency to remove the GGB from the Clean Water Act Impaired Waters list.

In order to facilitate this process, we would like you to outline a remedial action design and construction process for our approval. This process would include preparation of:

- A Wis. Adm. Code § NR 722 remedial actions options report to evaluate remedial actions to reduce the risk posed by contaminants of concern (COCs) in GGB, consistent with the Wis. Admin. Code § NR 700 rule series.
- A schedule of activities.
- List of key contacts for those involved in the site investigation and remedial action options analysis.

In July of 2016, the Department received a "Gruber's Grove Bay Sediment Sampling Report – Final" which was prepared by SpecPro, Inc. on behalf of the Army. As we discussed at our October 13th meeting the report documented a continuing concern with levels of mercury remaining in the bay and that our goal of restoring adequate benthic habitat from both a chemical and physical standpoint has not yet been achieved.

We believe that further action is needed to assess remedial actions that can successfully address COCs in GGB. The Army last attempted to remediate GGB in 2006 with a dredging project that had difficulty in efficiently removing the targeted sediment above the remedial action level (RAL). An RAL was set for mercury which the data showed was a co-occurring contaminant with other COCs identified at GGB. While the 2006 project removed significant quantities of mercury contaminated sediment, large quantities of dredged residuals containing significant concentrations of mercury were left behind. The presence of the dredge residuals was documented by sediment sampling and a diver survey in 2007. The diver survey documented dredge wind rows of up to three feet thick in the sediment residuals indicating significant

quantities of the targeted inventory were left behind. Sampling for sediment chemistry showed mercury concentrations of up to 9 ppm which are well above the RAL of 0.36 ppm.

The objective at Gruber's Grove was to remove low density sediment that contained the mercury discharged by the Badger Plant. In reviewing the dredging data it appears that much of the material dredged in 2006 was the higher density native materials that were located below the mercury contaminated sediment. The Department believes that the project goals are achievable using more modern dredging equipment and contracting specifications specific to modern environmental dredging techniques. We have successfully used dredging equipment to remove low density contaminated sediment on the Fox River, Sheboygan River and other sites over the past decade. Contractors with experience in environmental dredging could be helpful in developing plans and specifications for insuring a future removal can meet the requirements for restoring Grubers Grove Bay and delisting this site.

We continue to enjoy our open working relationship with you and the Army and appreciate you efforts to attain our mutual goals of removing Gruber's Grove Bay from the state's list of impaired waters and to achieve closure for the site. Please contact us regarding this letter so that we may plan for future actions.

Regards,



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