



February 7, 2020

Tom Quigley
Vice President, Exploration
Badger Minerals, LLC
414 10th Avenue
Menominee MI 49858

Subject: Notice of Intent to Drill – Town of Schoepke, Oneida County, Wisconsin

Dear Mr. Quigley:

We have completed our review of the Notice of Intent to Drill (NOI) submitted by Badger Minerals, LLC dated January 27, 2020 and received by the department on January 29, 2020. The NOI was submitted to comply with the notification requirements of s. NR 130.10 Wis. Adm. Code. The department's response to the application for a Metallic Minerals Exploration License will be under a separate cover.

The Notice of Intent to Drill outlines an exploratory drill program that includes up to 10 drill holes with a total drilled footage of up to 4,000 feet. The program is located in Sections 4 and 9 (T35N, R11E), in the Town of Schoepke, Oneida County. Work is expected to be carried out between February and March of 2020.

Based on your submittal, several department permits or approvals may be required.

Waterways and Wetlands - Kyle McLaughlin (kyle.mclaughlin@wi.gov, 715-360-6148)

While wetlands are located in close proximity to the drill locations, the activities described do not appear to be located directly in wetlands based on the mapped wetlands layer and the hydric soils indicator layer located on the department's surface water data viewer. Site access appears to be from established/maintained forest roads and trails. As such, no permit authorization is required under s. 281.36 Wis. Stats.

Department authorization is required for surface water withdrawals resulting in a water loss averaging 2 million gallons per day in any 30-day period. Additional details concerning anticipated water use volume is required to determine whether such thresholds will be attained by the proposal, ultimately informing department permit requirements for the activity. Such withdrawals may also be done only by the riparian property owner, or individuals acting on behalf of the riparian owner, unless the withdrawal is from a public roadway crossing. Additional information (riparian landowner information/agreements with riparian landowners) is required to ensure that the withdrawal of water from the northern withdrawal location is being completed by or on behalf of the riparian landowner in that location.

The placement of a surface water intake structure on the bed of a navigable stream is subject to department authorization under s. 30.12 Wis. Stats. Such placement may be exempt from department permit requirements provided the structure/placement can meet all eligibility standards and conditions found in [intake/outfall structure exemption checklist](#). Additional details concerning the proposed surface water intake structure

placement and pumping operations is required to determine whether a permit is necessary for the placement of an intake/outfall structure on the bed of the stream at the locations where the withdrawals are being proposed.

WPDES – Wastewater - Michelle Balk (michelle.balk@wi.gov, 715-635-4054)

The proposal may require a dewatering permit for wastewater discharge from the drilling sumps.

Stormwater – Erosion Control - Melissa Yarrington (melissa.yarrington@wi.gov, 715-359-0192)

It is clear the infrastructure needed to facilitate borings is approximately 50'x 50', and there will be ten of these proposed. What is unclear is if soil stockpiles will also be part of this area or stockpiled adjacent to these areas, and what the anticipated disturbance area will be to access each of these sites off the existing forest roads.

If the anticipated soil disturbance (i.e. clearing, grubbing, excavation, grading, stockpiling, filling, and pit-trench dewatering) result in a total land disturbance equal to or greater than one acre, a construction site permit is required under NR 216, Wis. Adm. Code.

Disturbance can result from soil stockpiles and clearing to the drill sites, in combination with the boring infrastructure pads/sumps. Additional consideration should also be given to any disturbance areas anticipated to field fit operations related to water resources, or any slopes encountered.

Endangered Resources - Stacy Rowe (stacy.rowe@wi.gov, 608-266-7012)

Based on the project area, an Endangered Resources Review will need to be submitted. A preliminary screening of the Natural Heritage Inventory indicated the potential for the presence of protected species within 1 mile of the proposed drill sites.

Site Reclamation

In accordance with s. 293.21(3)(b), Stats. and s. NR 130.05(2)(b)3, Wis. Adm. Code, the department is requiring that a surety bond payable to the department in the amount of \$25,000.00 (US) be submitted to the department prior to the commencement of drilling. The department has determined that this amount is necessary to adequately fund the termination of all drill holes and restoration of the drill sites. The surety bond that was submitted for the exploration license may be revised or a new bond may be issued to account for the additional \$20,000.00 bond requirement.

A cost estimate of \$23,480.00 to reclaim the drill site was included in Section 5 of the January 27, 2020 NOI submittal. After a review of the cost estimates, the department found that the estimates were reasonable with the addition of funds to account for administrative costs in the event the department needs to arrange for abandonment of the boreholes and reclamation of the drill sites.

Drilling Mud

Please be sure to only use drilling muds and additives approved by the department:

<https://dnr.wi.gov/topic/Wells/documents/DrillAbandonProducts.pdf>

If you need to use a product not on the approved list, please contact the department and we can consider a variance.

Disposal of Drilling Mud and Cuttings

Drilling mud and cuttings that encounter metallic sulfide minerals need to be managed so they do not have the potential to result in contamination or generate acidic runoff. Drill mud and cuttings from borings that penetrate more than 50 feet of rock with an average metallic sulfide content greater than 3 percent by volume

must either 1) be disposed at a licensed waste disposal facility, or 2) buried in place with native soils provided the drilling mud and cuttings are treated with cement or lime sufficient to neutralize any potential acid generation due to sulfide oxidation.

Please reach out directly to the department staff listed with follow up on the topic-specific issues. Please contact me with any additional questions.

Sincerely,



Benjamin Callan
Chief, Integration Services Section

cc: Oneida County
US Army Corps of Engineers
Phil Fauble, WDNR
Kyle McLaughlin, WDNR
Michelle Balk, WDNR
Melissa Yarrington, WDNR
Stacy Rowe, WDNR