

## NONMETALLIC MINING RECLAMATION PERMIT

This permit is issued under the Chippewa County Nonmetallic Mining Reclamation Ordinance and Wisconsin Administrative Code NR135.

**Operator:** E.O.G. Resources

**Owner:** Dennis Schindler

**Permit Number:** 2011-03

**Date:** October 14, 2011

### Permit Conditions

#### 1. Standards & Implementation

- a. All mining and reclamation shall be conducted in compliance with the reclamation plan that is comprised of the following documents: "Non-Metallic Mining Reclamation Plans; DS Mine; Town of Cooks Valley, Chippewa County, Wisconsin", dated and received August 22, 2011.
- b. All mining and reclamation shall be conducted in compliance with all provisions and standards of the Chippewa County Nonmetallic Mining Reclamation Ordinance and Wisconsin Administrative Code NR135.
- c. All mining and reclamation shall be conducted so that they meet or exceed provisions of Reclamation Standards for Non-Metallic Mines in Chippewa County (July 2007) and Plan Content Specifications and Engineering Requirements for Non-Metallic Mine Construction in Bedrock (9/17/2009).
- d. To monitor the extent of contemporaneous reclamation, a Reclamation Report & Activities Plan shall be filed with the Dept. of Land Conservation & Forest Management for each calendar year. The report shall be submitted no later than 30 days from the end of the permit year. The plan shall contain the items listed in Appendix N of the reclamation plan including: 1) the extent of current mine development, 2) the dates and results of storm water facility site inspections, 3) activities implemented to provide groundwater protection, 4) the dates and results of storm water discharge monitoring, 5) the reclamation and storm water management activities planned during the next calendar year, 6) a record of the type, volume, and use of material brought to the mine for reclamation, 7) a certified statement that a lease is in effect for the upcoming year, 8) any other items as required by this permit.

#### 2. Financial Assurance

- a. Financial Assurance in the form of Surety Bond or Irrevocable Letter of Credit meeting the requirements of the Chippewa County Nonmetallic Mining Reclamation Ordinance and NR135.40 is required throughout the life for the mine.

- b. The amount of financial assurance shall equal as closely as possible the cost to Chippewa County of hiring a contractor to complete reclamation according to the approved reclamation plan. The amount of financial assurance shall be reviewed annually by the Dept. of Land Conservation & Forest Management to assure it equals the current estimated reclamation costs.

3. Size & Scope

- a. The total permitted area of the mine site is 234 acres. The mine site includes all areas of nonmetallic mineral extraction, haul roads, stormwater ponds, soil berms, and other areas meeting the definition of “nonmetallic mining site” or “site” in the Chippewa County Nonmetallic Mining Reclamation Ordinance.

The final floor elevations of the mine shall be no lower than the elevations shown on the cross sections depicted in Figure 4 of the reclamation plan.

- b. Changes to the areal extent or depth of the mine, or changes to the operation that may affect the capacity to meet reclamation standards of NR 135 and Chippewa County Nonmetallic Mining Reclamation Ordinance as documented in the Reclamation Plan, shall require a revised Reclamation Plan and permit modification under NR 135.24.

4. Site Dewatering

The operator has set the mine floor elevation at approximately 1,105 ft. msl and will conduct operations to avoid excavation that extends into the regional water table.

The operator may routinely, without notice, pump and transfer water within the mine boundaries.

In the event that localized groundwater mounding conditions are experienced, that are unrelated to seasonal rainfall events, the operator may implement temporary practices to dewater the mine floor that may result in an offsite discharge, if such measures do not either a.) continue for more than seven (7) days or b.) create an offsite surface or baseflow discharge that may adversely affect an adjacent property owner.

In the event that it is determined that the provisions for temporary dewatering are inadequate or cannot be met, the operator shall immediately notify the Dept. of Land Conservation & Forest Management.

In the event that the operator chooses to establish a longer term dewatering program, the operator shall prepare a site dewatering plan.

The dewatering plan shall provide a description of alternatives to site dewatering, a description of proposed dewatering practices and discharge rates, a description of surface water and groundwater monitoring actions, and an evaluation of offsite impacts and measures proposed to mitigate those impacts.

The plan shall be prepared by a professional licensed geologist, hydrologist, or engineer and shall be submitted to the Dept. of Land Conservation and Forest Management for review and approval prior to implementation.

5. Stormwater Management

- a. The operator shall fully comply with the terms of the Wisconsin Dept. of Natural Resources (DNR) WPDES Runoff Discharge permit WI-0046515-05 and any subsequent permit revisions.
- b. A stormwater management system shall be designed, installed and maintained to meet the nonmetallic mine standards established for surface water and groundwater protection in NR135.07 & 135.08, and shall meet WDNR Conservation Practice Standard 1064 (Sediment Basin).
- c. Stormwater ponds shall be constructed with a stable outlet that will safely accommodate runoff events up to the 100 year, 24 hour event (5.8 inches).
- d. In the event that stormwater runoff exceeds the capacity of the stormwater management system and stormwater runoff leaves the mine site, the operator shall immediately contact the Dept. of Land Conservation & Forest Management.
- e. The stormwater management system shall be routinely inspected and maintained by the operator to assure the system continues to function as designed.
- f. Sediment that accumulates in stormwater ponds shall be fully removed from the stormwater pond bottom when ponded water persists more than a week, or as needed after major storm events. If routine cleaning of sediment fails to eliminate ongoing ponding, a re-design of the storm water management system shall be undertaken.
- g. Sediment removed from stormwater ponds shall be stockpiled, seeded, stabilized, and used in mine site reclamation.
- h. Whenever changes to the stormwater management system are proposed or required, the operator shall retain a Professional Engineer to re-design the storm water management system. The re-design documentation shall include computations to show that the changes to the stormwater management system will meet the design requirements. This information shall be submitted to the Dept. of Land Conservation & Forest Management for review and approval prior to construction of the changes.

6. Site Clearing

- a. The Dept. of Land Conservation & Forest Management shall be contacted at least 72 hours prior to commencement of any new land clearing or stripping activities in undisturbed areas of the mine site.
- b. All topsoil, subsoil and overburden in areas of mining shall be systematically and individually stripped and stockpiled for future use in reclamation. The location of these stockpiles shall be identified with permanent signage or shall be identified on a map that shows the location of all stockpiles of topsoil, subsoil, and overburden. This map shall be submitted to the Dept. of Land Conservation & Forest Management after initial site stripping and after any changes in stockpile management.
- c. No topsoil, subsoil, or overburden material shall leave the site during the entirety of the site operations.
- d. Burning of stumps, or any other material, in the mine is prohibited unless permitted under local ordinances and authorized by the Dept. of Land Conservation & Forest Management.

7. Groundwater & Surface Water

- a. The operator shall install a groundwater monitoring well network for the purpose of establishing the actual groundwater elevation at the mine site and for monitoring changes to the groundwater elevation over time. The network shall consist of a minimum three (3) monitoring wells. The network shall be designed to triangulate the elevation of the water table surface and to establish the direction of groundwater flow at the site. The monitoring well network design shall be designed by a professional licensed geologist, hydrologist or engineer, and shall be reviewed and approved by the Dept. of Land Conservation & Forest Management in advance of well installation.
- b. Using the information gathered in the monitoring well network, the operator shall prepare a site specific groundwater elevation map. The operator shall provide this map to the Dept. of Land Conservation & Forest Management by 1/1/2012.
- c. The elevations of the water table surface in each of the wells shall be recorded monthly the first year of operation. Water table elevations shall be measured and recorded quarterly thereafter for the life of the mine, unless upon evaluation, an alternate monitoring frequency that continues to provide an adequate representation of water table elevations and fluctuations is agreed to by the Dept. of Land Conservation & Forest Management and the operator. All recorded water table elevations shall be submitted by the operator as part of the Annual Reclamation Report & Activities Plan.
- d. In the event that offsite monitoring shows that reclamation activities at this site have caused a lowering of the water table that results in adverse effects on surface waters or a significant reduction in the quantity of groundwater reasonably available for future users of groundwater, the operator will mitigate these effects by implementing water conservation practices to restore groundwater elevations.
- e. The operator shall develop and implement a groundwater sampling plan and monitoring program to characterize baseline groundwater chemistry, and to monitor select chemical parameters as they may be affected by surrounding land uses and mine reclamation activities.

All water samples shall be collected and analyzed using standardized methods and laboratory procedures.

To initiate the sampling program, the onsite monitoring wells, installed under Condition 7a., will be sampled before December 1, 2011.

To characterize the baseline condition, these initial monitoring well samples will be analyzed for the following chemical parameters: total suspended solids, (TSS), turbidity, nitrate, iron, arsenic, lead, naphthalene, acrylamide, and specific conductivity.

To maintain the sampling program, the onsite monitoring wells will be sampled at a frequency of once per year, for the following chemical parameters: naphthalene, acrylamide, and specific conductivity.

In the event that no detections of these parameters occurs over an extended period involving numerous sampling cycles, the sampling frequency may be reduced upon mutual agreement by the operator and the Dept. of Land Conservation and Forest Management.

A certified copy of all laboratory results will be submitted to the Dept. of Land Conservation and Forest Management within two (2) weeks of receipt, and shall be submitted in the Annual Reclamation Report & Activities Plan.

- f. The operator shall offer property owners with existing private wells within 1,320 feet (1/4 mile) of the property, a pre-operation well evaluation by a licensed well driller and water test to be analyzed at a State certified lab. Well evaluation and water testing parameters include: total suspended solids, (TSS), turbidity, nitrate, iron, arsenic, lead, naphthalene, acrylamide, and specific conductivity.

The operator shall offer this service on a reoccurring basis at a frequency of once every three (3) years.

- g. In the event that offsite monitoring shows that reclamation activities at this site have caused State groundwater quality standards, established under Wisconsin Administrative Code NR140 or Federal drinking water quality standards established by the U.S. Environmental Protection Agency (EPA), to be exceeded at a point of standards application, the operator will seek to mitigate these effects by altering site operations.
- h. This permit does not relieve the owner or operator of the responsibility for compliance with all provisions of Wisconsin State Statute 281, Wisconsin Administrative Code NR 820, or Wisconsin Administrative Code NR 812, as they may pertain to waters of the state and the operation of any private wells on neighboring properties, and any associated liability under state law.

#### 8. Solid Waste, Materials Testing, & Spills

- a. The import, storage or disposal of any solid waste, recyclable materials or nonmetallic mine refuse generated outside the mine site is subject to the registration provisions of Chapter 30-77 of the Chippewa County Nonmetallic Mining Reclamation Ordinance.
- b. In the event that the site is registered to receive waste per county ordinance, a waste utilization plan will be developed to optimize the use of these materials in site reclamation. The plan will characterize the properties and chemistry of waste products from off-site processing facilities following the intent and procedures established in Wisconsin Administrative Code Chapter NR 518.06(1). The plan will also include a general assessment of benefits or possible adverse effects of the material's use following the intent and procedures established in NR 518.06(2).

Material characterization and test results will be evaluated by the operator, working through a professional licensed geologist, hydrologist, or engineer with the objective of meeting standards for groundwater quality management and protection, as established in Wisconsin Administrative Code Chapter NR 140. In the event that leachate concentration from material test results exceeds the preventive action limits referenced in NR 140, the solid waste material will not be received or deposited at the mine site.

Material tests will be conducted: 1) prior to disposition of any off-site material; 2) on an on-going basis at least once per year; 3) at the time of any changes to the properties or chemistry of the waste products associated with new sources of waste materials or new processing additives, including flocculants.

A certified copy of all laboratory results will be submitted to the Dept. of Land Conservation and Forest Management within two (2) weeks of receipt, and shall be submitted in the Annual Reclamation Report & Activities Plan.

- c. In the event of fuel spills or other hazardous waste spills, the operator shall immediately contact the Dept. of Land Conservation & Forest Management.
- d. Fueling inside of the mine shall be discouraged and limited to off-road equipment, including off-road trucks, loaders, scrapers, and dozers that cannot readily access an off-site fueling station. Fueling of this equipment shall occur in areas that pose a reduced risk of groundwater pollution. In all cases, spill containment practices; such as drip pans, absorbent pads or other recognized practices; shall be used to contain drips and spills during fueling.

9. Site Stabilization & End Land Use

- a. The operator shall select and apply appropriate best management practices to meet the reclamation standards established in NR 135.10-135.12 (as they pertain to final grading, revegetation, and site stabilization). If the standards cannot be achieved, additional best management practices with a higher level of engineering assurance will be applied. On reclaimed slopes where seed and mulch has been applied and erosion problems persist, use of erosion control mats will be implemented. If erosion control problems continue, best management practices with increased levels of engineering assurance will be used and may include but is not limited to riprap and terraces.
- b. Reclamation of areas designated with an agricultural end land use shall comply with all Wisconsin Administrative Code NR 151 standards (and any subsequent revisions) standards as they apply to non-point pollution control.

10. Permit Evaluation and Amendments

The Dept. of Land Conservation & Forest Management shall periodically evaluate the extent of contemporaneous reclamation achieved through mining operations, the extent of compliance with reclamation standards, and the effectiveness of the conditions that have been placed to achieve the reclamation standards.

The Dept. of Land Conservation & Forest Management may amend or alter operational conditions that do not significantly alter the scope of the reclamation plan or the reclamation permit issued under the authority of Sec. 30-105 of the Chippewa County Non-Metallic Mining Reclamation Ordinance.

All permit alternations or amendments shall be mutually acceptable and agreed to by the Dept. of Land Conservation & Forest Management and by the operator.

***As the operator, or authorized representative of the operator, I hereby acknowledge and agree to the above permit conditions.***

*Tim Stauffer*  
Signature

10/14/11  
Date

Tim Stauffer  
Printed Name - Operator

Regional Operations Manager  
Title

***As an agent and authorized representative of the Department of Land Conservation and Forest Management, I hereby acknowledge and agree to the above permit conditions***

David B. Nashold  
Signature

10-14-2011  
Date

David B. Nashold  
Printed Name - Authorized Staff

Environmental Engineer  
Title