



# **Minnesota Pollution Control Agency**

## **STATE OF MINNESOTA**

### **Minnesota Pollution Control Agency**

#### **INDUSTRIAL DIVISION**

#### **PUBLIC NOTICE OF INTENT TO MAJOR MODIFY**

**STATE DISPOSAL SYSTEM (SDS) PERMIT MN0069868**

Public Comment Period Begins: September 20, 2012

Public Comment Period Ends: October 22, 2012

Current Permit Issued: October 28, 2010

Current Permit Expiration Date: September 30, 2015

#### **Name and Address of Permittee:**

Magnetation LLC  
102 NE 3rd St Ste 120  
Grand Rapids, MN 55744

#### **Facility Name and Location:**

Magnetation LLC Plant 2  
27692 County Road 10  
T56N, R24W, Section 27,  
Bovey, Itasca County, Minnesota

#### **Description of Permitted Facility**

The application and plans indicate that Magnetation LLC operates a scam mining operation and processing facility located at the former Holman tailings basin in Section 27 and the North  $\frac{1}{2}$  of Section 34, Township 56 North, Range 24 West. Limited scam mining as well as operation of a water supply pond for the Magnetation Plant 2 operations occurs in the former East Trout Lake tailings basin located in the Southeast  $\frac{1}{4}$  of Section 33, and S  $\frac{1}{2}$  of Section 34 of Township 56 North, Range 24 West; the Northeast  $\frac{1}{4}$  and South  $\frac{1}{2}$  of Section 3; the East  $\frac{1}{2}$  of Section 4; the Northeast  $\frac{1}{4}$  of Section 9; and the Northwest  $\frac{1}{4}$  of Section 10, Township 55 North, Range 24 West.

The company proposes to add an additional scam mining site, the Plummer site, located in the SW  $\frac{1}{4}$  of Section 26; the E  $\frac{1}{2}$  of the SE  $\frac{1}{4}$  of Section 27; The W  $\frac{1}{2}$  of the SE  $\frac{1}{4}$  of the NE  $\frac{1}{4}$  of Section 27; the NE  $\frac{1}{4}$  of the NE  $\frac{1}{4}$  of Section 34; the N  $\frac{1}{2}$  of the SE  $\frac{1}{4}$  of the NE  $\frac{1}{4}$  of Section 34; the N  $\frac{1}{2}$  of the NW  $\frac{1}{4}$  of Section 35 and the NE  $\frac{1}{4}$  of Section 35; all of Township 56 North, Range 24 West.

Processing of the tailings from the scam mining operations at all three sites will result in the production of iron oxide concentrate.

The total area for this project will consist of three former tailings basins originally closed in the 1960s and 1970s. The Holman tailings basin site currently under lease by Magnetation is approximately 430 acres in size with the basin itself being approximately 300 acres. The company is also leasing approximately 1,000 acres of the East Trout Lake tailings basin site which is located south of the Holman site. The Holman tailings basin is bounded by earthen dikes that form the impoundment including what used to be a settling basin on the southeast end of the site. The East Trout Lake site will provide an alternate source of the water supply for the processing facility. Approximately 40 acres of the northwest portion of the site may be mined during the permit period as well. The proposed Plummer basin is owned by Magnetation and includes a small portion of land leased from the State of Minnesota. The Plummer basin is located to the east of the Holman site and is approximately 400 acres with a mineable area of approximately 300 acres. An additional 67 acres on the eastern edge of the Plummer basin is leased from the State of Minnesota. The leased land will be used as a buffer area outside the basin perimeter. No tailings disposal will occur on the State leased land.

The primary source of water for the processing facility is obtained through appropriation of water from the Canisteo Pit via Holman Lake to the Holman tailings basin. Magnetation will pump water from the Canisteo Pit to an existing wetland complex, which flows naturally into the north end of Holman Lake and then pump water from the southern end of Holman Lake via a closed hydraulic system into the tailings and reclaim water ponds within the Holman tailings basin.

There are two additional surface water sources permitted for this facility. The clear water pond located within the East Trout Lake Basin was the original process water source for the facility and was used for the initial filling of the Holman Basin tailings and clear water ponds. It is now the operational alternate to Holman Lake. The backup source for initial Holman Basin tailings and clear water pond filling is a small pond located east of the Holman Basin, referred to as the SE Pond. Once the initial Holman Basin tailings and reclaim clear water ponds are filled, the SE pond becomes the tertiary source of make-up process water. The SE Pond will eventually be phased out as a water source.

The company proposes to process an average of 2.2 million metric tons of tailings per year and a maximum of 3.2 million metric tons of tailings per year. The material to be mined is coarse tailings (sand and silt-sized particles). The company proposes to produce an average of 650,000 tons/year and a maximum of 800,000 tons/year of iron oxide concentrate, grading between 63 percent to 66 percent iron content.

Material will be mined out of the Holman, East Trout Lake and Plummer tailings basins using back hoes or other excavators and hauled to a concentrator plant located on the southeast end of the Holman tailings basin. Process make-up water will be routed from the Canisteo Pit via Holman Lake (primary source) at an approximate rate of 0.44 mgd or East Trout Lake clear water pond (alternate source) at an approximate rate 0.43 mgd. The company will use a wet process for the production of iron concentrate, which will consist of various unit processes comprising the proprietary Magnetation Process (patent pending) including, but not limited to, hoppers, feeders, conveyors, screens, size reducers, pumps, hydro-cyclones, the Rev3 Separator (patent pending), slurry tanks, and dewatering devices. Water will be reclaimed and cycled from the tailings disposal areas and to the concentrator plant at a rate of 14.4 and 14.2 mgd respectively. Tailings from the processing plant will be pumped via pipeline or flow by gravity via pipe or launder to the existing settling pond at the southeast end of the Holman site. All process water will be

stored within the Holman tailings basin pond and recirculated through the concentrator plant. Discharge of tailings to the Holman and Plummer tailings basins from the concentration process is proposed at an average rate of 17.3 mgd and a maximum rate of up to 22.0 mgd. Disposal of tailings will not take place at the East Trout Lake site.

The chemical additive, NeoSolutions NS-6850 has been approved for use to improve solids recovery in the company's process. NS-6850 has been approved at an average rate of use of 8.4 mg/kg; not to exceed 2500 ppm as identified in the SDS Permit application.

No waste rock will be excavated or stockpiled as this is an existing natural ore tailings basin. There will be no modification to watersheds. The existing sites are contained by dikes, with no surface runoff discharge to the environment outside the dikes. All water generated on site will be stored within the site and re-circulated. All runoff from snowmelt or rainfall at the site will be contained on site. There will be no discharge of water or tailings outside of the containment dikes. There will be no discharge to surface waters from this facility.

Mining areas will be stabilized temporarily during operations, and permanently reclaimed as areas of the mine become inactive or upon closure. Temporary stabilization will consist of temporary mulch cover, and/or temporary seeding, and/or temporary salvaged topsoil. Permanent reclamation will consist of permanently covering/re-vegetating the surface of the tailing in the mined out areas, and tailing delta areas produced by the discharge of the plant and reclaiming any slopes that may remain at the site. Permanent reclamation will be conducted in accordance with Mineland Reclamation Rules (Minn. R. ch. 6130).

The location of the Facility is shown on the attached map.

#### Proposed Permit Modification

The purpose of this proposed major permit modification is to include tailings disposal at the proposed Plummer site located to the east of the Holman site. Addition of a monitoring well, ground water monitoring requirements and surface water monitoring requirements at the permitted area is included as part of the tailings disposal proposal.

Modifications to the draft permit include the following:

- P. 3-5 – Facility Description: updated to include activities at the Plummer site
- P. 6 – Topographic map: updated to show location of Plummer site and new monitoring locations
- P. 7 – Facility Layout Diagram: updated to show location of Plummer site
- P. 8 – Process Flow Diagram: updated to show previously permitted various water sources
- P. 9 – Summary of Stations: updated to include new monitoring locations SW-002, SW-003, and GW-003. Removed station WS-002.
- P. 10-11 – Limits & Monitoring Requirements: updated to include monitoring requirements for SW-002, SW-003, and GW-003.
- P. 12 – Special Requirements: changed annual report submittal date to January 31 of each year.
- P. 13 – Ground Water Stations Chapter: updated to include Upgradient Monitoring Well Evaluation and Installation requirements for GW-003.
- P. 14 – Surface Water Stations Chapter: updated to include requirements for SW-002 and SW-003.
- P. 21 – Stormwater Management: changed annual report submittal date to March 31 of each year.

No other changes are proposed for this major permit modification.

#### **Preliminary Determination on the Draft Permit**

The MPCA Commissioner has made a preliminary determination to major modify this SDS permit for a term of approximately five years. The proposed permit modification is described above.

A draft permit is available for review at the MPCA office at the St. Paul address listed below, at the Duluth regional office and on-line at <http://www.pca.state.mn.us/news/data/index.cfm?PN=1>.

A copy of the draft permit will be mailed to you if the MPCA receives your written or oral request at this office. If you have questions about this draft permit or the Commissioner's preliminary determination, please contact Stephanie M. Handeland at 651-757-2405.

#### **Written Comments**

You may submit written comments on the conditions of the draft permit or on the Commissioner's preliminary determination. Only comments or petitions concerning the proposed modification portions of the permit will be considered.

Written comments must include the following:

1. A statement of your interest in the permit application or the draft permit.
2. A statement of the action you wish the MPCA to take, including specific references to sections of the draft permit that you believe should be changed.
3. The reasons supporting your position, stated with sufficient specificity as to allow the Commissioner to investigate the merits of your position.

#### **Petition for Public Informational Meeting**

You also may request that the MPCA Commissioner hold a public informational meeting. A public informational meeting is an informal meeting that the MPCA may hold to solicit public comment and statements on matters before the MPCA, and to help clarify and resolve issues.

A petition requesting a public informational meeting must include the following information:

1. A statement identifying the matter of concern.
2. The information required under items 1 through 3 of "Written Comments," identified above.
3. A statement of the reasons the MPCA should hold a public informational meeting.
4. The issues that you would like the MPCA to address at the public informational meeting.

#### **Petition for Contested Case Hearing**

You also may submit a petition for a contested case hearing. A contested case hearing is a formal evidentiary hearing before an administrative law judge. In accordance with Minn. R. 7000.1900, the MPCA will grant a petition to hold a contested case hearing if it finds that: (1) there is a material issue of fact in dispute concerning the application or draft permit; (2) the MPCA has the jurisdiction to make a determination on the disputed material issue of fact; and (3) there is a reasonable basis underlying the disputed material issue of fact or facts such that the holding of the contested case hearing would allow the introduction of information that would aid the MPCA in

resolving the disputed facts in making a final decision on the draft permit. A material issue of fact means a fact question, as distinguished from a policy question, whose resolution could have a direct bearing on a final MPCA decision.

A petition for a contested case hearing must include the following information:

1. A statement of reasons or proposed findings supporting the MPCA decision to hold a contested case hearing according to the criteria in Minn. R. 7000.1900, as discussed above.
2. A statement of the issues proposed to be addressed by a contested case hearing and the specific relief requested or resolution of the matter.

In addition and to the extent known, a petition for a contested case hearing should also include the following information:

1. A proposed list of prospective witnesses to be called, including experts, with a brief description of proposed testimony or summary of evidence to be presented at a contested case hearing.
2. A proposed list of publications, references, or studies to be introduced and relied upon at a contested case hearing.
3. An estimate of time required for you to present the matter at a contested case hearing.

#### **MPCA Decision**

You may submit a petition to the Commissioner requesting that the MPCA Citizens' Board (Board) consider the permit issuance. To be considered timely, the petition must be received by the MPCA by 4:30 p.m. on the date the public comment period ends, identified on page 1 of this notice. Under the provisions of Minn. Stat. § 116.02, subd. 6(4), the decision whether to issue the permit and, if so, under what terms will be presented to the Board for decision if: (1) the Commissioner grants the petition requesting the matter be presented to the Board; (2) one or more Board members request to hear the matter before the time the Commissioner makes a final decision on the permit; or (3) a timely request for a contested case hearing is pending. You may participate in the activities of the Board as provided in Minn. R. 7000.0650.

The written comments, requests, and petitions submitted on or before the last day of the public comment period will be considered in the final decision on this permit. If the MPCA does not receive written comments, requests, or petitions during the public comment period, MPCA staff as authorized by the Board, will make the final decision on the draft permit.

Comments, petitions, and/or requests must be submitted in writing on or before the end date of the public comment period identified on page 1 of this notice to:

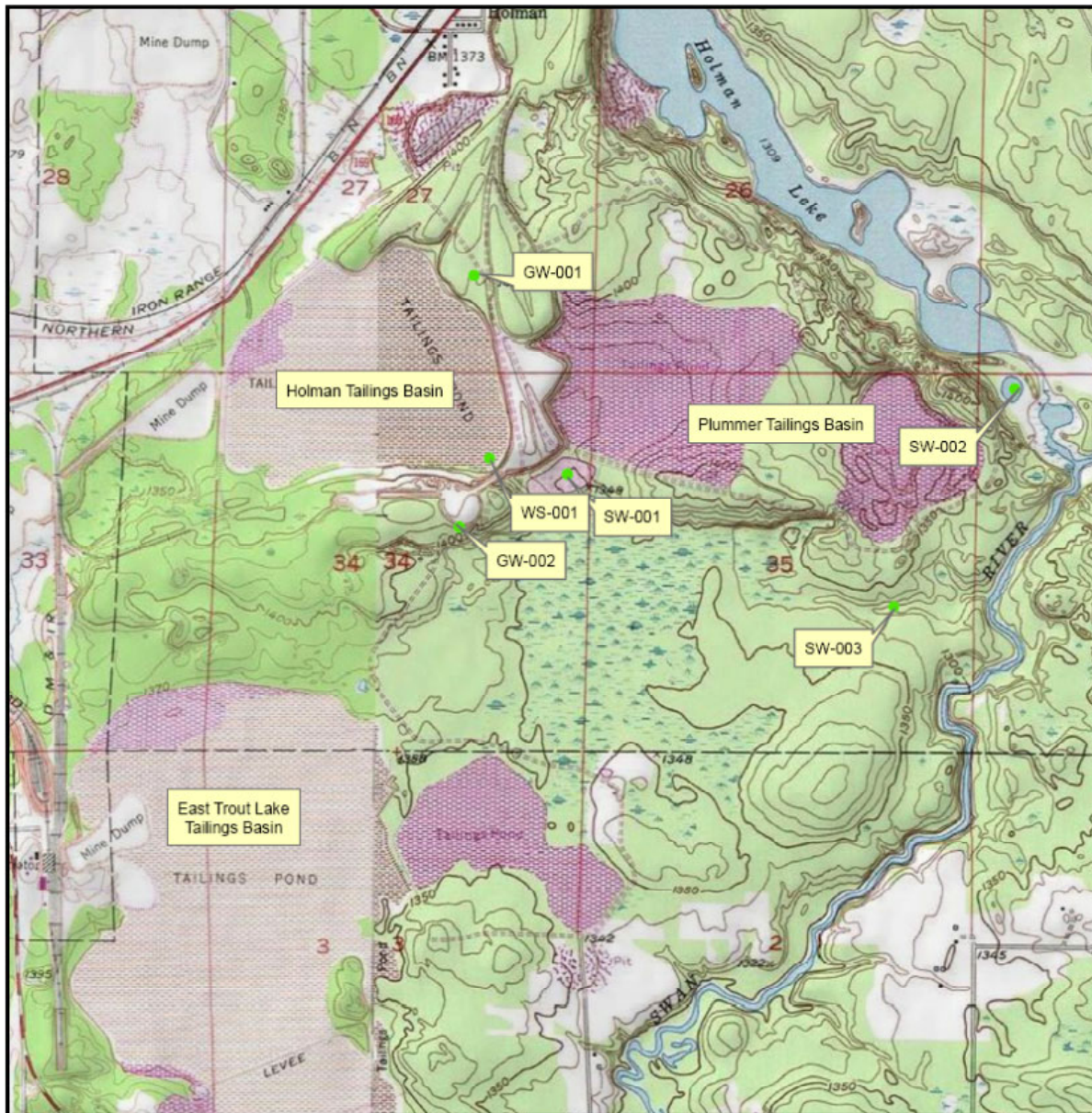
Stephanie M. Handeland - SP5  
Industrial Division  
Minnesota Pollution Control Agency  
520 Lafayette Road North  
St. Paul, MN 55155-4194

### Topographic Map of Permitted Facility

MN0069868: Magnetation Plant 2

T56N, R24W, Sections 26, 27, 34 & 35; T55N, R24W, Sections 3, 4 & 10

Taconite, Itasca County, Minnesota



Map produced by: MPCA Staff, 08/22/2012

Source: USGS Quad

Scale: 1:24,000

0 0.15 0.3 0.6 Miles

