

MINNESOTA POLLUTION CONTROL AGENCY

Industrial Division

Board Item Cover Sheet

MEETING DATE: July 26, 2005 DATE MAILED: July 15, 2005

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Title of Board Item: Mesabi Nugget, LLC – Request for Approval of the following actions:

1. Authorization to issue Air Emission Facility Permit No. 06300025-001.

2. Approval of variances related to National Pollutant Discharge Elimination
System (NPDES)/State Disposal System (SDS) Permit No. MN0067687.

2. Authorization to issue NPDES/SDS Permit No. MN0067687.

LOCATION: Hoyt Lakes/White St. Louis
City/Township County

TYPE OF ACTION: Permitting and Variance

RECOMMENDED Request for Approval of the following actions:

ACTION: 1. Authorization to issue Air Emission Facility Permit No. 06300025-001.

2. Approval of variances related to NPDES/SDS Permit No. MN0067687.

3. Authorization to issue NPDES/SDS Permit No. MN0067687.

ISSUE STATEMENT:

Mesabi Nugget, LLC, (Company) proposes to construct a commercial-scale demonstration plant in St. Louis County designed to produce iron nuggets from iron ore concentrate at a rate of 600,000 metric tons per year (Project). The process utilizes coals, fluxes, binders, and iron ore concentrates which are fed into a rotary hearth furnace. In the furnace the raw materials are converted to metallic iron (nuggets) and slag. The Air Emission Permit will authorize construction and operation of the Project with an air infiltration system to control combustion pollutants and a wet scrubber to capture particulate pollutants and neutralize acids from the rotary hearth furnace. In addition, fabric filters will be installed to control particulate emissions from the raw material pulverizers, dryers and material transfer operations. The Water Quality Permit will authorize construction and operation of a chemical precipitation wastewater treatment plant to remove metals and sulfate from process wastewater generated by the wet scrubber. Effluent from the chemical precipitation treatment plant will then be treated by mercury filters prior to discharge to Second Creek at a rate of approximately 1,000 gallons per minute.

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The Company has requested variances for Hardness, Bicarbonates, Specific Conductance, and Total Dissolved Solids. During the comment period for the Air Emission and Water Quality Permits and water variances, concerns were raised about the proposed Project's potential to negatively impact air quality and water quality. No commenters requested a contested case hearing on the permits or the variances, however, several commenters requested that the Minnesota Pollution Control Agency (MPCA) Citizens' Board (Board) act on the proposed permits, one commenter requested that the Board deny the variance requests, and one commenter recommended that the Board deny issuance of the Air Emission Permit. Based on an analysis of the comments, the MPCA staff is recommending minor modifications to the permits to address some of the comments. Further, the MPCA staff recommends that the Board adopt the individual Findings of Fact, Conclusions of Law, and Order approving the Water Quality variances for Hardness, Bicarbonates, Specific Conductance, and Total Dissolved Solids and authorizing the Commissioner to issue the Air Emission and Water Quality Permits.

ATTACHMENTS:

1. Map of vicinity of the Mesabi Nugget, LLC, facility
2. Map of the Mesabi Nugget, LLC, facility
3. Findings of Fact related to issuance of the Air Emission Permit
4. Findings of Fact related to the request for variances to the Water Quality Permit and issuance of the Water Quality Permit
5. List of Comment Letters Received during the Public Notice for the Air Emission Permit and Water Quality Permit and the proposed variances for the Water Quality Permit
6. Responses to Comments on the Draft Air Emission Permit, Draft Water Quality Permit, and proposed variances
7. Draft Air Emission Permit No. 13700318-001
8. Draft Water Quality Permit No. MN0067687
9. Errata sheet with modifications to the Air Emission Permit

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