

EIS Special Studies, Technical Memorandums, and Permit Application Submittals Through June 1, 2007

The following is a list of special studies, technical memoranda, and permit applications that were completed specifically for the proposed Minnesota Steel project near Nashwauk, Minnesota. These documents were used in the development of the Minnesota Steel EIS along with many additional references, which can be found in Chapter 10 – References. Copies of these special studies are available for review upon submittal of a request to the MNDNR Project Manager.

AIR

Permit Applications

Application for Permit to Construct and Operate an Integrated Steel Plant – Minnesota Steel Industries, LLC., Nashwauk, Itasca County, Minnesota. Barr Engineering Company. May, 2007.

Ecological Screening Level Risk Assessment

Ecological Screening – Level Risk Assessment. Barr Engineering Company. August, 2006.

Supplemental Information to the August 2006 Ecological Screening-Level Risk Assessment. Barr Engineering Company. November, 2006.

Human Health Risk Assessment

Human Health Screening – Level Risk Assessment. Barr Engineering Company. February, 2007.

Supplemental Information to the February 2007 Human Health Screening-Level Risk Assessment (HHSRA). Barr Engineering Company. May, 2007.

Cumulative Impacts Analysis

Cumulative Impacts Analysis: Minnesota Iron Range Industrial Development Projects – Assessment of Potential Visibility Impacts in Federal Class I Areas in Minnesota. Barr Engineering Company. November, 2006.

Cumulative Impacts Analysis: Minnesota Industrial Development Projects – Ecosystem Acidification. Barr Engineering Company. August, 2006.

Cumulative Impacts Analysis: Minnesota Iron Range Industrial Development Projects – Evaluating Particulate Matter (PM₁₀) Air Concentrations in Federal Class I Areas in Minnesota and Implications for Prevention of Significant Deterioration (PSD) Air Quality Increment. Barr Engineering Company. November, 2006.

Cumulative Impacts Analysis: Minnesota Iron Range Industrial Development Projects – Mercury Deposition and Bioaccumulation in Fish in Northeast Minnesota. Barr Engineering Company. October, 2006.

Other

Mercury Air Pollution Control Assessment at Minnesota Steel. Barr Engineering Company. October, 2006.

Mercury Overview: A Summary of Mercury Releases and Potential Impacts to the Environment. Barr Engineering Company. October, 2006.

Report: *Review of Fibers-Related Data for the West End of the Mesabi Iron Range and the Former Butler Taconite Ore Deposit*. Barr Engineering Company. July, 2006.

Minnesota Steel, Estimated CO₂ Footprint. Barr Engineering Company. June 1, 2007.

ALTERNATIVES DEVELOPMENT AND EVALUATION

Technical Memo: *Alternative Tailings Basin Sub-Alternatives Development*, Wenck Associates, Inc. October, 2006.

Technical Memo: *Alternative Pellet Furnace Evaluation*, Wenck, Associates, Inc. December, 2006.

Technical Memo: *Processing Plant Alternatives Development*, Wenck Associates, Inc. September, 2006.

Technical Memo: *Stockpile Alternatives Development*, Wenck Associates, Inc. September, 2006.

Technical Memo: *On-Site Sanitary Wastewater Treatment Alternatives Development*, Wenck Associates, Inc. June, 2006.

Technical Memo: *Tailings Basin Alternative Study*, Nashwauk, Minnesota. Barr Engineering Company. July, 2005.

ENVIRONMENTAL REVIEW

Minnesota Steel Industries, LLC. Taconite Mine, Concentrator, Pellet Plant, Direct Reduction Iron Plant, and Steel Mill Project - Scoping Environmental Assessment Worksheet (EAW) and Draft Scoping Decision Document. Minnesota Department of Natural Resources (DNR). July, 2005.

Minnesota Steel Industries, LLC. Taconite Mine, Concentrator, Pellet Plant, Direct Reduction Iron Plant, and Steel Mill Project - Final Scoping Decision Document. Minnesota Department of Natural Resources (DNR). October, 2005.

INFRASTRUCTURE

Draft Report: MSI Infrastructure Improvements, Wetland and Natural Heritage Data Assessment and Avoidance Potential for Linear Alignments. Short Elliot Henderson (SEH), Inc. January, 2005.

Itasca County Public Infrastructure Improvement Study: Railroad, Roadway, Gas Pipeline, Fresh Water Supply, Wastewater Treatment. Short Elliot Henderson (SEH), Inc. December, 2005.

Preliminary Engineering Report – City of Nashwauk: Water and Sanitary Sewer Infrastructure Improvement to Minnesota Steel (Appendix A of Itasca County Public Infrastructure Study). RLK. August, 2005.

Technical Memo: Results of the Nashwauk Area Traffic Analysis – MSI Infrastructure Improvement Project (Appendix E of Itasca County Public Infrastructure Study). SEH, Inc. January 28, 2005.

MINING

Preliminary Report: Dam Safety Permit Application for Proposed Tailings Basin. Barr Engineering Company. November, 2006.

Technical Report: *Taconite Ore Body Located at the Former Butler Taconite Mining Operation, West of Nashwauk, Minnesota*, Volume VIII – Permit to Mine Application. Barr Engineering Company. February 8, 2007.

Technical Report: *Taconite Ore Body Located at the Former Butler Taconite Mining Operation, west of Nashwauk, Minnesota*. Volume VII: Preliminary Tailings Basin Design. Barr Engineering Company. January, 2007.

MISCELLANEOUS

The Economic Impact of Constructing and Operating Minnesota Steel Industries LLC in Itasca County, Minnesota. University of Minnesota – Duluth Labovitz School of Business and Economics, Bureau of Business and Economic Research. April, 2006.

NOISE

Technical Memo: *Minnesota Steel – Blasting Impact Assessment*, David Braslau and Associates, Inc. January 16, 2007.

Technical Memo: *Minnesota Steel – Haul Truck Noise Assessment*, David Braslau and Associates, Inc. January 16, 2007.

PLANTS AND WILDLIFE

Plants

Botanical Survey. Barr Engineering Company. August, 2005.

Endangered Species Takings Permit Application for Minnesota Steel Industries, LLC. Barr Engineering Company. March, 2006.

Minnesota Steel *Botrychium* Transplant Strategy. Barr Engineering Company. September, 2006.
Technical Memo: *Cumulative Impacts – Threatened and Endangered Plant Species*, Wenck, Associates, Inc. November, 2006.

Wildlife

2006 Canada Lynx Assessment – Final Interim Report for Minnesota Steel Industries, LLC. Nashwauk, Minnesota. ENSR Corporation. June, 2006.

Cumulative Effects Analysis on Wildlife Habitat Loss/Fragmentation and Wildlife Travel Corridor Obstruction/Landscape Barriers in the Mesabi Iron Range and Arrowhead Regions of Minnesota. Emmons and Olivier Resources, Inc. May, 2006.

2007 Canada Lynx Assessment. ENSR Corporation. April, 2007.

WATER

Permit Application

NPDES/SDS Permit Application Revisions for the Minnesota Steel Industries Proposed Taconite Processing and Steel Mill Operations. Barr Engineering Company. February, 2007.

NPDES/SDS Permit Application, update of Attachment 2A. Barr Engineering Company - Correspondence to MPCA. April 12, 2007

Water Appropriations and Work in Public Waters Permit Application Revisions. Barr Engineering Company. December, 2006

Hydrology

Minnesota Steel Industries: Lake and Stream Hydrologic Impacts Evaluation. Barr Engineering Company. January, 2006.

Minnesota Steel Industries Surface Water and Groundwater Yield Near Nashwauk, Minnesota. DNR – Gleason. October, 2006.

Technical Memo: *Little Sucker Lake Watershed Update*. Barr Engineering Company. April 26, 2007.

Technical Memo: *Physical Impacts to Non-Wetland Water Resources*. Wenck, Associates, Inc. January, 2007; Updated May, 2007.

Water Quality

Laboratory-Based Rates of Phosphorus Release as a Function of Initial Sulfate Concentration for Profundial Sediments of Swan Lake, Minnesota. US Army Corps of Engineers. Spring Valley, Wisconsin. Engineer Research and Development Center (ERDC) Eau Galle Aquatic Ecology Laboratory. April, 2006.

Modeling of Phosphorus Transport in Swan Lake. University of Minnesota - St. Anthony Falls Laboratory. August, 2006.

Oxhide Lake Water Quality Evaluation (31-106P). Itasca County, Minnesota. Technical Memorandum prepared for: Minnesota Department of Natural Resources in cooperation with the Minnesota Pollution Control Agency. Wenck Associates, Inc. January 2007; Updated May, 2007.

Snowball Lake Water Quality Evaluation (31-108P). Itasca County, Minnesota. Technical Memorandum prepared for: Minnesota Department of Natural Resources in cooperation with Minnesota Pollution Control Agency and for Minnesota Steel Industries, LLC. Wenck Associates, Inc. January 2007.

Swan Lake Nutrient Study (31-0067), Itasca County, Minnesota. Prepared for: Minnesota Department of Natural Resources in cooperation with the Minnesota Pollution Control Agency. Wenck Associates, Inc. December, 2006; Updated May, 2007.

Pilot Plant Environmental Sampling (Concentrator and Pelletizer). Barr Engineering Company. October 28, 2005.

Pilot Plant Environmental Sampling (Concentrator, Pelletizer and Direct Reduced Iron). Prepared for Minnesota Steel Industries by Barr Engineering Company. January, 2006.

Monitoring

2005 Water Monitoring Plan for Minnesota Steel Industries. Barr Engineering Company. April, 2005.

2005 Surface Water Monitoring Report. Barr Engineering Company. January, 2006.

Invertebrate Monitoring of Streams – Minnesota Steel Industries, LLC. Project. Barr Engineering Company. February, 2006.

Surface Water Quality Monitoring Within and Downstream of the Minnesota Steel Industries Project Area: Swan Lake, Tributary Streams and Mines Pits. Barr Engineering Company. January, 2007.

WETLANDS

Permit Application

Wetland Delineation and Wetland Functional Assessment Report. Minnesota Steel Industries, LLC. Barr Engineering Company. January, 2006.

Wetland Permit applications. Minnesota Steel Industries, LLC. Barr Engineering Company. August, 2005. [Includes January 2005 submittal and June and August 2005 revisions]

Mitigation Plan

Preliminary Wetland Mitigation Plan, Minnesota Steel Industries, LLC. Barr Engineering Company. May, 2006.

Revised 5-year Mitigation Plan for Sites 229 and 248 in Aitkin County. Barr Engineering Company. November, 2006.

Revised 20-year Wetland Mitigation Plan. Barr Engineering Company. November, 2006.

Revised Wetland Impacts and Mitigation Plan. Barr Engineering Company. December, 2006.

Wetland Mitigation Plan Update: Revised 5-year Wetland Mitigation Plan. Barr Engineering Company. November, 2006.

Hydrology and Monitoring

Revised Wetland Hydrology Study Plan. Barr Engineering Company. April, 2006.

Wetlands Hydrology Monitoring Report. Barr Engineering Company. January, 2006.

Cumulative Impacts

Technical Memo: *Cumulative Impacts – Wetlands*, Wenck, Associates, Inc. November, 2006.