

## Commenter 105 – Jeff J. Smith

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Trading (PIPT) guidance to be protective of the environment, meet regulatory requirements, and meet the needs of growing areas in Minnesota. PIPT allows new and expanding point source discharger to receive a discharge permit prior to completion of an applicable phosphorus-related TMDL.

Through PIPT, a new or expanding facility may increase its phosphorus discharge by purchasing a phosphorus reduction at another permitted facility. The MPCA documents the transfer of nutrient load, or trade, through the NPDES/SDS permitting process. More information about the PIPT is available online at <http://www.pca.state.mn.us/publications/wq-wvprm1-02.pdf>.

As the proposed facility would discharge more than 1,800 pounds per year of phosphorus (maximum discharge from Phase I & II = 17.2 MGD \* 0.05 mg/L \* 8.34 lb\*/MG\*mg \* 365 day/year = 2618 lb/year) the discharge is subject to the requirements of 40 C.F.R. 122.4(i). The Final EIS should indicate how Excelsior Energy plans to meet or comply with the NPDES/SDS Permit restrictions related to 40 C.F.R. 122.4(i).

### Section 4.5.3.2, Table 4.5-6 Applicability of Water Quality Standards

Footnote 5 of Table 4.5-6 states that TDS and sulfate standards are not applicable to the proposed project because the water in the CMP and Holman Lake are not being used for drinking water or irrigation. Under Minn. R. ch. 7050, waters of the state must meet all designated uses that they are currently serving or may serve such that at any time a resource can be used. Asserting that the CMP and Holman Lake are not being used for irrigation and drinking water at the present time does not translate to authorization to violate the water quality standards associated with those uses. Excelsior Energy may apply for a variance from a water quality standard only if it can be documented that there are no existing uses of the designated use classification. This footnote should be removed and the Final EIS should clarify how the proposed discharge will meet all water quality standards associated with Class 2B, 3B, 4A, 4B, 5, and 6 Waters of the State. If Excelsior Energy plans to apply for a variance from any of the applicable water quality standards, the Final EIS should include the specific criteria required to complete a variance application consistent with Minn. R. 7000.7000 and Minn. R. 7050.0190.

105-37

### Section 4.5.3.3 Domestic Wastewater Treatment

The DEIS includes two alternatives to treat domestic wastewater at the west range site. The first alternative would result in the construction of a stabilization pond with capacity to treat 45,000 gallons per day with an ultimate discharge to either Little Diamond Lake or Holman Lake. This alternative would require Excelsior Energy to apply for and obtain a new NPDES/SDS discharge permit for the proposed wastewater pond. As stated above in comments related to Section 4.5.3.2, the MPCA cannot authorize a new discharge of nutrients to the Lake Pepin watershed (including Little Diamond Lake and Holman Lake) before a TMDL is complete. New discharges to the Lake Pepin watershed are subject to the C.F.R. 122.4(i). Additionally, a new discharge to Little Diamond Lake or Holman Lake would be subject to the 30 ug/L phosphorus standard for lakes greater than 15 feet deep in the Northern Lakes and Forest Ecoregion. If the lakes are considered trout lakes, phosphorus would be limited to 12 ug/L.

105-38

The second alternative is to dispose of the domestic wastewater generated at the facility at the Coleraine-Bovey-Taconite (CBT) wastewater treatment plant (WWTP). The facility would be connected via 10,000 feet of 12-inch gravity sewer pipeline, a pump station, and 2,400 feet of forcemain to the city of Taconite's main pump station, located in the northeast corner of the city. According to the DEIS, the existing CBT WWTP has the capacity to treat the 45,000 gallons per day expected during construction and the 7,500 gallons per day expected during ongoing operations. The DEIS acknowledges that the CBT collection system struggles with excess flow as a result of inflow and infiltration (I/I). Since 1999, the city

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### Comment 105-37

The Final EIS has been updated in Section 2.2 (Volume 1) to describe the use of the enhanced ZLD system, which would eliminate the majority of water quality concerns as originally discussed in the Draft EIS.

### Comment 105-38

See response to Comment 76-17, which addresses the same concerns. As discussed in response to Comment 26-02, Excelsior has proposed to undertake an I/I study and to sponsor equipment improvements at the CBT WWTF, including upgrades for the digester, which would address the biosolids issue.

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of Taconite's main pump station has experienced six unique flow events that resulted in bypass conditions. Bypass flows at the main Taconite pump station discharge to a settling basin, formerly used by the Cleveland-Cliffs Iron Company, and eventually to Holman Lake. Bypass events are direct violations of the CBT NPDES/SDS Permit MN0053341. While it is true that the additional 7,500 gallons per day that Excelsior Energy would add to the collection system would not result in a significant burden to the existing WWTP under normal operating conditions, it is clear that the CBT collection system (particularly the collection system upstream of the main pump station in the city of Taconite) is in need of attention. The DEIS suggests that larger pumps could be installed or the system could be rehabilitated. The Final EIS should recommend that Excelsior Energy, in conjunction with the cities of Coleraine, Bovey, and Taconite, undertake an I/I study to determine the most urgent need for upgrades to the collection system and what resources are needed to complete the identified upgrades. The Final EIS should also discuss the current capacity to treat and store domestic biosolids. The CBT WWTP has historically had to haul biosolids to the wastewater treatment plant in Grand Rapids. The additional flow and subsequent solids load at the CBT WWTP underscores the need to invest in upgrades to the existing solids treatment infrastructure.

105-39

### Section 4.5.3.4 Surface Water Quality Standards – Mercury

This section, along with other sections in the DEIS, rely on the assumption that mercury in the facility effluent can be addressed by operating the facility such that the concentration of mercury in the effluent would not exceed the water quality standard of 6.9 ng/L. It is not recommended that Excelsior Energy base the water discharge strategy for the proposed facility around the assumption that the effluent limit will be 6.9 ng/L. It is possible that because the proposed project includes a discharge to a lake, that the mercury concentration would be limited to an ambient standard. Additionally, the discharge will be subject to the implementation plan currently being developed for the statewide mercury TMDL. The DEIS discussion of mercury water quality standards and potential permit standards should mention that 6.9 ng/L may not be compliant with potential NPDES/SDS Permit requirements or TMDL requirements. The Final EIS should discuss the proposed mercury fish tissue standard, the relationship between mercury and sulfate, and the bioaccumulation of methylmercury. Methylmercury builds up in the food chain so that humans and wildlife are exposed to unsafe levels of methylmercury by eating contaminated fish. The federal methylmercury fish tissue criterion is 0.3 mg/kg. The MPCA is proposing to adopt a 0.2 mg/kg methylmercury standard because of higher fish consumption rates. Sulfate-reducing bacteria play a key role in methylating mercury. The Final EIS should include a discussion of sulfate levels in the receiving waters, as well as the potential for methyl mercury formation in the lake and in the "wetland fringe" of Holman Lake described on page 4.7-15 of the DEIS. Data included in the DEIS indicates that the proposed discharge would increase the sulfate concentration in Holman Lake from approximately 10 mg/L tenfold to greater than 200 mg/L. However, the DEIS fails to discuss the current level of methylmercury in the fish in Holman Lake and how a tenfold increase in the concentration of mercury would impact mercury levels in fish tissue.

105-40

### Section 4.5.3.1 – Compliance with 316(b)

Section 4.5.3.1 of the DEIS discusses cooling water intake structures. Section 316(b) of the Clean Water Act and 40 C.F.R. 122.21 regulate cooling water intake structures. New facilities that use cooling water from waters of the U.S. are required to minimize impingement and entrainment of aquatic organisms. Operation of Phase I and Phase II of the proposed project will require up to 21.9 million gallons per day. 40 C.F.R. 122.21 requires facilities that withdraw equal to or greater than 10 mgd to reduce design intake velocity commensurate with closed cycle cooling towers, design and construct each intake structure to a maximum through-screen design intake velocity of 0.5 feet per second (fps), and comply with capacity- and location-based proportional flow requirements. Excelsior Energy is also required to provide the

## Responses

### Comment 105-39

The Final EIS has been updated in Section 2.2 (Volume 1) to describe the use of the enhanced ZLD system, which would eliminate the majority of water quality concerns as originally discussed in the Draft EIS. Section 4.5 (Volume 1) has been revised to describe the changes in water quality impacts anticipated with the enhanced ZLD system at the West Range Site.

### Comment 105-40

New text has been added to Sections 4.5.2.4 and 4.5.3.1 (Volume 1), which provides more details on compliance with CWA regulations as it pertains to intake structures. To demonstrate compliance, the new text includes discussions on intake velocity, intake flow, and prevention of thermal destratification. Detailed bathymetric and fish population data are provided in Excelsior Energy's application to the MNDNR for a water appropriation permit (submitted as Appendix 9 in Excelsior's Joint Permit Application to MPUC [Excelsior Energy, 2006a]). In summary, regarding fish populations, the CMP is a deep, cold, oligotrophic mine pit, fed primarily by groundwater. MNDNR records indicate that the CMP contains lake trout, black crappie, bluegill, horneyhead chub, largemouth bass, pumpkinseed sunfish, painted turtle, rainbow trout, rock bass, snapping turtle, walleye, white sucker, and yellow perch. Bass appear to be relatively abundant, but they grow slowly. Bluegill is also abundant in the CMP. The CMP also contains rainbow smelt, apparently the result of illegal stocking. The HAMP Complex is not managed as a fishery, and the MNDNR has never stocked it. Sampling in 1990 failed to identify any game species. Small species such as brook sticklebacks and common shiner were captured in minnow traps. In the LMP, the MNDNR has sampled common shiner and black crappie. The black crappie appear to be naturally reproducing. A "Design and Construction Technology Plan" and more details on use of intake structures will be part of an updated NPDES/SDS permit to be submitted to the MPCA for approval. Also, as described in 40 CFR 122.21(r), additional data can be collected over the course of the permit and submitted as part of permit reissuance procedures to better manage the overall water use strategy.

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source water physical data, the cooling water intake structure data, the water baseline biological characterization data, and the source water flow data required by 40 CFR 122.21 (2), (3), and (4). The regulations also require submittal of a Design and Construction Technology Plan to demonstrate that the proposed facility has selected and will implement the design and construction technologies necessary to minimize impingement mortality and/or entrainment per 40 C.F.R. 125.86(4). The June 2006 NPDES/SDS Permit Application submitted to the MPCA did not include these required elements. Nor does the DEIS include this information. This information is critical to the environmental review process and should be included in the Final EIS. These data are needed to characterize the facility and evaluate the water body and species affected by the cooling water intake structure, and the biological community in the vicinity of the intake structure, as well as the operation of the cooling water intake structures.

105-40  
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The Water Resources Plan on page 4.5-11 of the DEIS states that each pump station will meet the 316(b) requirements for cooling water intake structures. Excelsior Energy is proposing to use a pipe with wedgewire screen to withdraw water from the desired depth at the HAMP and the Lind Mine Pit (LMP) pumping stations. The DEIS states that sufficient length of screen will be provided to ensure intake velocities are maintained below 0.5 fps and ensure thermal stratification is not negatively disturbed. It is unclear from this statement how a longer screen will ensure a lower velocity or less disturbance of the thermocline. More detail including calculations supporting a velocity of less than 0.5 fps and thermal stratification data from the HAMP and the LMP should be included in the Final EIS. This information is needed to verify protection of the aquatic ecosystem, particularly because Excelsior Energy is proposing to withdraw the entire annual appropriation worth of water from the HAMP and LMP on a seasonal basis.

### Appendix H Process Water Alternative 1 – Eliminate Discharge to CMP

This alternative is problematic in that it results in an increased load of pollutants and higher flow to Holman Lake. Under this alternative all of the water quality concerns related to phosphorus, mercury, hardness, total dissolved solids, and specific conductivity discussed above would be realized in Holman Lake. Data included in Table 2 of Appendix H indicates that under this scenario the proposed project would result in an exceedance of water quality standards in Holman Lake and, therefore, would not be permitted under the NPDES/SDS Program. Of particular concern is the increase in mercury concentration in the lake from 0.9 ng/L to more than 3 ng/L. Increased mercury loading to Holman Lake increases the potential for methyl mercury formation and will likely result in an increase in the concentration methylmercury in fish tissue. As stated above in response to Section 4.5.3.4 of the DEIS, the MPCA is proposing to adopt a 0.2 mg/kg methylmercury standard because of higher fish consumption rates. The Final EIS should clarify what an increase in mercury loading to Holman Lake means in terms of mercury fish tissue concentration.

105-41

### Appendix H Process Water Alternative 2 – Relocated Discharge from Holman Lake to Swan River

The DEIS states that this alternative, the elimination of the Holman Lake discharge in favor of a discharge point to the Swan River, may be adopted in combination with Alternative 1. If both alternatives were enacted, it would result in no discharge of cooling tower blowdown to the CMP or Holman Lake. Directing the discharge to the Swan River eliminates concern over the creation of local impairments to Holman Lake and/or the CMP. The MPCA actively discourages new or expanding discharges to reservoirs and lakes. The DEIS indicates that Excelsior Energy is interested in pursuing potential water quality trading opportunities to offset their cooling tower blowdown discharge. If trading were available to offset discharges of pollutants such as phosphorus to the CMP or Holman Lake, all trades would have to be developed in such a way to avoid causing or contributing to an impairment of the most immediate receiving water (the CMP or Holman Lake) in addition to downstream water bodies. It is possible that a trade to offset a discharge to the CMP or Holman Lake would require trading credits generated in the

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## Responses

### Comment 105-41

The Final EIS has been updated in Section 2.2 (Volume 1) to describe the use of the enhanced ZLD system, which would eliminate the majority of water quality concerns as originally discussed in the Draft EIS. Section 4.5 (Volume 1) has been revised to describe the changes in water quality impacts anticipated with the enhanced ZLD system at the West Range Site.

### Comment 105-42

The Final EIS has been updated in Section 2.2 (Volume 1) to describe the use of the enhanced ZLD system, which would eliminate the majority of water quality concerns as originally discussed in the Draft EIS. Section 4.5 (Volume 1) has been revised to describe the changes in water quality impacts anticipated with the enhanced ZLD system at the West Range Site.

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local CMP or Holman Lake watershed. This would severely limit or eliminate potential trading partners. A discharge to the Swan River would result in more potential trading partners because the watershed spans more area.

The DEIS specifically discusses the possibility of water quality trading offsets for mercury and phosphorus. At this point, the MPCA is only prepared to authorize trading consistent with the Pre-TMDL Phosphorus Trading Guidance described above in comments to Section 5.4.3.2. According to the *U.S. Environmental Protection Agency's Water Quality Trading Toolkit for Permit Writers*, EPA does not support trading of persistent bioaccumulative toxics, including mercury. Currently the MPCA staff does not have a framework in place to consider mercury trading. The approved statewide mercury TMDL does include reserve capacity; however, until the waste location allocation implementation plan for the TMDL has been approved, it is unclear as to how the reserve capacity will be allocated.

The relocation of the discharge point to Swan River would eliminate potential impacts from heated cooling tower blowdown to the CMP and/or Holman Lake. Data included in the DEIS indicates the discharge may approach 86° Fahrenheit during peak summer periods. Minn. R. 7050.0220 limits the impact from heated discharges to 5° Fahrenheit above natural in streams, and 3° Fahrenheit above natural in reservoirs and lakes. Discharges are further limited to 86° Fahrenheit. Impacts from heated effluents to rivers and lakes are receiving heightened regulatory attention. Regardless of the discharge alternative selected, Excelsior Energy should design the system such that it complies with all applicable thermal discharge regulations. The DEIS indicates that during periods of low flow, the proposed project may require a variance from thermal effluent limits. If Excelsior Energy plans to apply for a variance, the Final EIS should clarify how the requirements of Minn. R. 7000.7000 and Minn. R. 7050.0190 will be met.

### Wetlands

Please contact Kevin Molloy (651-297-7572) or Tom Estabrooks (218-725-7763) if you have questions regarding our comments under this section.

**3.7.2 Affected Environment - Regulatory Framework.** The DEIS correctly identifies (on page 3.7-1) that a Clean Water Act (CWA) Section 401 Certification from the MPCA is required, due to the fact that the project requires a CWA Section 404 Permit from the U.S. Army Corps of Engineers (USACE). However, the DEIS did not sufficiently discuss that: a) under the Section 401 certification process, the MPCA is responsible for reviewing the proposal to determine if it will comply with state water quality standards, most of which are found in Minn. R. ch. 7050; and b) to receive an MPCA Section 401 Certification, the applicant must adequately demonstrate that the proposed project will be in compliance with state water quality standards. This section of the Final EIS should, therefore, be revised to incorporate these facts into the Final EIS. Further, the Final EIS should identify that any special conditions placed on a project during the MPCA Section 401 Certification process (presuming the project can, in fact, be certified by the MPCA) become enforceable requirements of the USACE Section 404 Permit that would be issued to the applicant. In addition, for this section of the final EIS to be considered accurate, it needs to be revised to identify that the project must also comply with the MPCA's requirements for wetland mitigation, which are detailed in existing Minn. R. 7050.0186 (the DEIS does not mention this).

**3.7.3 Affected Environment - Wetland Classification System.** The DEIS identifies that, at the request of the USACE, the Final EIS will characterize wetlands by community type using the Eggers and Reed classification system. The MPCA staff agrees this needs to be done, based on the inadequacy of the Circular 39 method; however, we note that the DEIS did not specify the extent to which this will be done

## Responses

### Comment 105-43

DOE has revised the first paragraph of Section 3.7.2 of the Final EIS (Volume 1) to include the following statement: "Under the Section 401 certification process the MPCA is responsible for determining if the proposal will comply with state water quality standards and requirements for wetland mitigation (Minnesota Rules Chapter 7050). Furthermore, once the USACE receives a Section 404 application a copy is forwarded to the MPCA for the purpose of initiating the State's Section 401 certification process. All special conditions placed on the project during MPCA Section 401 certification process will become enforceable requirements of the USACE Section 404 Permit."

### Comment 105-44

Comments pertaining to wetlands, including avoidance and minimization of impacts and mitigation of unavoidable impacts, have been addressed in the responses to related comments from USACE (Commenter 116), which is the Federal agency responsible for wetland permitting and a cooperating agency for this EIS. In particular, see responses to Comments 116-22 through 116-24. DOE has revised Sections 3.7 and 4.7 (Volume 1) and Appendix F2 (Volume 2) to present wetland information using the Eggers and Reed classification system.

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throughout the Final EIS and relevant appendices. Consequently, we request that all occurrences of the Circular 39 method used in the DEIS and associated appendices be converted to the Eggers and Reed Classification system. Doing so will help make the analyses of the anticipated wetland impacts and proposed mitigation throughout the final EIS more meaningful for the reader.

105-45

### 4.7 Environmental Consequences – Wetlands

- The MPCA staff re-emphasizes the point made above: all occurrences of the Circular 39 method in this chapter, including those within each table, need to be converted to the Eggers and Reed Classification system in the Final EIS to provide for a more meaningful analysis.

105-46

- While Tables 4.7-21 and Table 4.7-22 contain a summary of the total amount of wetland acreage this project is anticipated to impact, it does not specify the type of impacted wetlands. These summary tables should, therefore, be revised to clearly identify the total acreage of each type of wetland that is anticipated to be impacted, using the Eggers and Reed Classification System. Also, there are inconsistencies in the total acreage amounts within these tables relative to those found in Tables 6 and 14 of Appendix D-4, so the Final EIS needs to resolve this inconsistency.

105-47

- The discussion throughout the DEIS regarding the compensatory mitigation for the anticipated wetland impacts lacks substance and is considered incomplete by the MPCA staff. It contains no specific compensatory wetland mitigation plan for staff to analyze; it merely states that such a plan will be prepared to comply with the minimal requirements of the USACE and the state of Minnesota's Wetland Conservation Act. As noted above, nothing is mentioned regarding the need to comply with Minn. R. 7050.0186. Further, there is insufficient discussion regarding the possible detrimental effects to the water quality of the affected watersheds as a result of these anticipated wetland impacts, and the DEIS also fails to identify how the not-yet-developed compensatory wetland mitigation plan will genuinely mitigate those anticipated impacts. Therefore, the DEIS, to satisfy the applicable provisions of the Council of Environmental Quality Regulations for implementing the National Environmental Policy Act, needs to be revised to address this inadequacy. Specifically, the Final EIS needs to include: a) a discussion of the anticipated wetland impacts to the water quality of the watershed; and b) a specific plan proposed to be followed by the applicant to provide adequate compensatory mitigation for the permanent and temporal loss of the function and quality of the existing wetlands in the watershed. This compensatory mitigation plan needs to include the total amount of acres of anticipated wetland impacts broken down by wetland types, using the Eggers and Reed Classification System; it also needs to clearly propose an adequate amount of compensatory mitigation for the types of wetlands that the project will impact. The plan also needs to specifically identify where the proposed compensatory wetland mitigation will take place.

105-48

Appendix D-4. Staff noticed inconsistencies in the total amounts of wetland acreage identified within various tables used throughout this Appendix. Rather than reiterating each of these inconsistencies, MPCA staff requests that when revising all of the tables as required to convert them to the Eggers and Reed Classification System (see comment above), please proof-read the Final EIS to ensure there are no discrepancies between the tables.

## Responses

### Comment 105-45

See response to Comment 105-44, which addresses the same concerns.

### Comment 105-46

See response to Comment 105-44, which addresses the same concerns.

### Comment 105-47

See response to Comment 105-44, which addresses the same concerns.

### Comment 105-48

See response to Comment 105-44, which addresses the same concerns.

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### Stormwater

Please contact Tom Estabrooks (218-725-7763) if you have questions regarding our comments under this section.

105-49

This project will require an MPCA NPDES/SDS General Stormwater Permit for discharging stormwater during construction activity. Both the owners and operators of construction activity disturbing one acre or more of land are responsible for obtaining the NPDES/SDS General Stormwater Permit prior to commencing construction activities. Sites disturbing less than one acre within a larger common plan of development or sale that is more than one acre also need permit coverage. A detailed Stormwater Pollution Prevention Plan (SWPPP), containing both temporary and permanent sediment erosion control plans, must be prepared prior to submitting an application for the NPDES/SDS General Stormwater Permit. For more information regarding the requirements of the NPDES/SDS General Stormwater Permit and the SWPPP, please visit the following Web page: <http://www.pca.state.mn.us/publications/wq-strm2-05.pdf>.

The Final EIS must characterize the stormwater runoff and measures that will be taken to manage stormwater runoff from the project during construction and post-construction. Where ten or more acres of disturbed soil drain to a common location (five acres if discharging to a Special Water), a temporary or permanent sediment basin must be provided prior to the runoff leaving the construction site or entering surface waters. Permanent stormwater treatment is required where the project's ultimate development replaces vegetation and/or pervious surfaces with one or more acres of cumulative impervious surface.

### III. LAND

#### Solid Waste and Mining

Please contact Julie Henderson (651-296-8596) if you have questions regarding our comments under this section.

105-50

The DEIS identifies slag and elemental sulfur as potentially marketable non-hazardous wastes that will be generated. Minn. R. 7035.2860 provides a regulatory framework for beneficial use of a material classified as a solid waste. These rules provide a list of materials and uses that have standing beneficial use determinations, which means that the generator can use the material as specified without contacting the MPCA. There are standing beneficial use determinations for coal combustion slag when used as a sand blast abrasive and when used as a component in manufactured products, such as roofing shingles, ceiling tiles, or asphalt products. Any other use for coal combustion slag and any beneficial use for elemental sulfur would require a case-specific beneficial use determination unless the material is to be used by incorporating it into a manufactured product.

105-51

Section 6 of the DEIS provides a regulatory and permit requirements list. Beneficial Use Permit should be added to this list because it may be necessary for the regulated party to obtain a Beneficial Use Permit depending on how the materials generated are beneficially used. In addition, this list indicates that an MPCA Solid Waste Storage Permit would be needed for any non-hazardous solid waste generated. The description provided for this Solid Waste Storage Permit should clarify that a storage permit would be needed for any non-hazardous solid waste that would be stored in quantities larger than 10 cubic yards for more than 48 hours. Materials that are authorized for beneficial use do not need a Solid Waste Storage Permit, but do need to comply with the storage standard requirements in subparts 2, 6, and 7 of Minn. R. 7035.2855.

## Responses

### **Comment 105-49**

Proposed stormwater management is discussed in Section 4.5.2.5 (Volume 1). As part of the planned addition of an enhanced ZLD system at the West Range Site, all stormwater discharges (outside of a 100-year rainfall event) would be eliminated, as stormwater would be treated and reused within the plant, primarily for cooling water. With regard to construction, sediment basins would be required on the IGCC Power Station Footprint, where construction activities would result in at least 10 acres draining to a common location. Construction of other, linear project elements is unlikely to exceed this limit. Project-specific BMPs would be developed during detailed design and described in the SWPPP, which would be submitted to the MPCA prior to submitting an application for the NPDES/SDS General Stormwater Permit (see response to Comment 99-20). New text has been added to Section 4.5.2.5 (Volume 1) that provides additional details on stormwater control strategy.

### **Comment 105-50**

Thank you for your comment. The information quoted from Minnesota Rules 7035.2860 has been added to Section 2.2.3.3 (Volume 1) of the Final EIS.

### **Comment 105-51**

Chapter 6 (Volume 1) of the EIS has been revised to include “Beneficial Use Permit” and to clarify that the Solid Waste Storage Permit “would be needed for any non-hazardous solid waste that would be stored in quantities larger than 10 cubic yards for more than 48 hours. Materials that are authorized for beneficial use do not need a Solid Waste Storage Permit, but do need to comply with the storage standard requirements in subparts 2, 6, and 7 of Minn. R. 7035.2855.”

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Section 4.16.2.2 of the DEIS provides an estimate of 8.7 million cubic yards of combined disposal capacity available at two landfills (in Virginia and Canyon, Minnesota) that could accept industrial solid waste. Based on information provided in the 2006 Solid Waste Annual Reports for each landfill, the remaining permitted capacity at the Voyageur Industrial Solid Waste Landfill in Canyon and the St. Louis County Landfill in Virginia was approximately 3.2 and 1.6 million cubic yards, respectively. Expansion at both landfills is a possibility, but any increase in disposal capacity would have to go through the state permitting process for approval. This needs to be clarified in the Final EIS.

### Storage Tanks and Hazardous Wastes

The facility is not considered a major facility under Minn. R. ch. 7001 because the total substance design storage capacity of all tanks at the site would be less than 1,000,000 gallons. Therefore, an aboveground storage tank permit is not required for the facility. However, the facility must notify the MPCA of all tanks larger than 500 gallons, which are subject to Minn. R. chs. 7001 and 7151. Please contact Joann Henry (651-297-8664) for additional information regarding tank notification requirements.

105-53

According to the DEIS, the facility would be regulated as a large-quantity generator (LQG) of hazardous waste subject to the requirements of Mn. Rules Chapter 7045 and would require a large-quantity generator license. The facility would not be considered a Treatment, Storage, or Disposal (TSD) facility and would not require a Resource Conservation and Recovery Act permit. Please contact Kathy Gedde (651-296-7258) for additional information related to the licensing of LQGs.

Thank you again for the opportunity to provide comment on the DEIS for the Mesaba Energy Project. These comments address matters of concerns identified by the MPCA staff reviewing the DEIS, and are submitted to the responsible governmental unit for consideration. These comments do not constitute approval by the MPCA for any element of the Project for the purpose of pending or future permit action by the MPCA.

Furthermore, additional comments or requests for information may be submitted in the future to address specific issues related to the MPCA permits that are required. Ultimately, however, it is the responsibility of the project proposer to obtain the required permits and comply with permit conditions. If you have questions about these comments, please contact the program staff identified for the specific areas of concerns.

Sincerely,



Jeff Smith, Manager  
Air Quality Permitting Section  
Industrial Division

JS:mbo

## Responses

### **Comment 105-52**

Section 4.16.2.2 (Volume 1) has been revised to clarify that expansion at the Voyageur Industrial Waste Landfill in Canyon and the St. Louis County Landfill in Virginia, although a possibility, would require approval from the state through the state permitting process.

### **Comment 105-53**

The text in Section 4.16.2.2, Impacts of Operation, Hazardous Waste (Volume 1), has been revised to read, "Due to the quantity of hazardous waste generated, the Mesaba Generating Station would likely be regulated as a large-quantity generator of hazardous waste and would need to adhere to the requirements set forth under RCRA for the handling of generated hazardous waste. Hazardous waste generated during operations would be properly managed in accordance with...."

**Responses**

**Comment 106-01**

See responses to Comments 1-01, 1-02, 1-03, 6-01, 22-01, and 38-01, which address the same concerns.

**Commenter 106 – Cynthia Driscoll**

From: Cynthia B. Driscoll  
[mailto:cdris@paulbunyan.net]  
Sent: Friday, January 11, 2008 3:24 PM  
To: Bill.Storm@state.mn.us  
Subject: Mesaba Energy's Draft EIS

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Bill Storm  
Department of Commerce  
85 Seventh Place East  
St. Paul, MN 55101-2198

Dear Bill Storm:

I live in Grand Rapids, MN and am very concerned about the potential impacts of Mesaba Energy on the environment here in Itasca County and the fact Mesaba energy will not be capturing and sequestering CO2.

The Mesaba Energy DEIS should have an accurate detailed plan for harmless capture of highly concentrated levels of mercury, sulfates and dissolved solids, where and how, and not into our local air, the Canisteo Mine Pit or the Mississippi River. Itasca County is one of the poorer counties in Minnesota, a county where many people depend on fishing and wild game for their food. The health impact of mercury poisoning is perhaps greater here than in many counties. The DEIS should certainly not repeat Excelsior Energy's misleading statements without investigating thoroughly their merit.

Our state government is planning to reduce greenhouse gas emissions by 2050, a plan which requires immediate attention from us all. Why would the DEIS not address the negative health impacts of emissions for local people, for the earth's people?

Thank you for considering my comments.

Cynthia B. Driscoll  
1221 SW Fourth Street  
Grand Rapids, MN 55744

106-01

**Commenter 107 – Paul J. Milinovich**

**From:** jack milinovich [mailto:jmilinovich\_308@yahoo.com]  
**Sent:** Friday, January 11, 2008 3:55 PM  
**To:** Bill.Storm@state.mn.us  
**Subject:** Mesaba Energy Project, PUC Docket No. E6472/GS-06-668

DOE Draft EIS for the Mesaba Energy Project (DOE/EIS-0382D)  
Comments on the Draft EIS

To whom it may concern:

This project has been brought up now a few times and has been put down by the PUC at least once that I have known. A plant of this nature environmently will not help the area where it is planned to go in. What I am concerned about is two (2) impacts that will affect the area east of the plant.

**107-01**

One: The water contamination of the Canisteo mine pit, Holeman Lake, Swan River and the Mississippi River. Water will be released into the mine pit and Holeman Lake which is of course connected to the folowing water sources listed above. The mine pit water would ruin the trout fishery that is located there as well as be shut down for recreational use by the public. Two towns rely on the drinking water coming from here. Where will there drinking water come from? The Holeman Lake senerio would of course have the water ways destroyed leading into the Mississippi River and lets figure out how many towns along the river rely on that for their drinking water.

**107-02**

Two: Air quality no matter how you look at it will be placed at a high risk. Where I am located east of the proposed plant will be affected by the emissions of carbon dioxide, mercury, SO2 and NOx and co (carbon). There is enough mercury poisoning already taking place. All you have to do is take a sample of the water in the surrounding lakes and see the levels of merury from the acid rain. Take a trip to any large city and from the outside looking in see the smog, acid deposition and air pollution produced. We, to the east this plant will affected by these emissions coming from this plant every day.

Please re-look at your proposal and once again do not grant the contiuation of this project.

Paul J. Milinovich  
President of the Swan Lake Association  
30055 East Shore Drive  
Pengilly, Mn. 55775

**Responses**

**Comment 107-01**

See responses to Comments 6-01, 7-02, 76-07, and 105-33, which address the same concerns.

**Comment 107-02**

See responses to Comments 1-01, 38-01, 82-37, and 95-26, which address the same concerns.

Commenter 108 – Kevin Reuther



Minnesota Center for Environmental Advocacy

The legal and scientific voice protecting and defending Minnesota's environment

26 East Exchange Street - Suite 206  
Saint Paul, MN 55101-1667  
651.223.5969  
651.223.5967 fax  
mcea@mccenter.org  
www.mccenter.org

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Executive Director

January 11, 2008

VIA ELECTRONIC AND U.S. MAIL

Bill Storm  
Minnesota Department of Commerce  
85 7th Place East, Suite 500  
St. Paul, MN 55101

Re: Comments on Joint DOE/DOC EIS for Mesaba Energy Project,  
PUC Docket Number E6472/GS-06-668

Dear Mr. Storm:

I write on behalf of the Minnesota Center for Environmental Advocacy ("MCEA") with comments on the draft Environmental Impact Statement ("EIS") for the Mesaba Energy Project. MCEA is a Minnesota nonprofit environmental organization whose mission is to use law, science, and research to preserve and protect Minnesota's natural resources, wildlife, and the health of its people. MCEA has state-wide membership. Energy policy has been an important focus of much of MCEA's work, and MCEA regularly participates in matters before the Minnesota Public Utilities Commission. Thank you for the opportunity to present comments on the scope of the EIS for the Mesaba Project.

MCEA reiterates and incorporates by reference the comments it submitted August 24, 2006 on the scope of the EIS and further submits that the draft EIS is inadequate because it fails to address the environmental effects of climate change and fails to account for climate impacts in its review of environmental effects.

**The EIS fails to address the environmental effects of the Mesaba Project's contribution to increased levels of greenhouse gases.**

The EIS fails to address or take into account what is likely today's most pressing environmental concern: climate change. As the agencies and Project proponents are aware, there is no longer a legitimate debate about *whether* human-induced climate change is happening; rather, the debate has come to focus on what to do about it. The scientific consensus that greenhouse gas emissions are contributing to climate change is well-documented and the subject of numerous reports from national and international agencies including the Intergovernmental Panel on Climate Change ("IPCC"), the National Academy of Sciences, the American Meteorological Society, the American Geophysical Union, and the American Association for the Advancement of Science. It has also become a major issue of public concern. As exclaimed in a Time Magazine headline from last year: "Be Worried, Be Very Worried." Time, *Special Report: Global Warming*, April 3, 2006.

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Responses

Comment 108-01

See responses to Comments 102-16 and 102-30, which address the same concerns.

Comment 108-02

See responses to Comments 14-02, 102-30, 102-32, and 105-29, which address the same concerns. Additionally, the conclusions of the Minnesota Climate Change Advisory Group (MCCAG) Final Report (see page EX-6) are as follows:

Together, the estimated emission reductions associated with the MCCAG's recommendations and recent actions would be enough to achieve Minnesota's GHG reduction goal for 2015 and be within 2.4 MMtCO<sub>2</sub>e of meeting Minnesota's goal for 2025. The 25 recommendations analyzed in terms of their cost-effectiveness were estimated to have a total net cost of about \$726 million between now and 2025, representing the incremental cost to the recent actions.

While the MCCAG's 15 other recommendations were not readily quantifiable, many of them would likely achieve additional reductions and net savings (e.g., recommendations for the Transportation and Land Use sector). Importantly, the MCCAG concluded that the 2015 goal will be met under the assumption that Mesaba Phase I and Big Stone II are both constructed, and do not implement any CO<sub>2</sub> capture and sequestration, before 2015.

108-01

108-02

## Commenter 108 – Kevin Reuther

Bill Storm  
January 11, 2008  
Page 2

The EIS does not adequately address the environmental effects of Mesaba's projected emissions of approximately 10 million metric tons per year of carbon dioxide ("CO<sub>2</sub>").

The greenhouse gas emissions from the Mesaba Project would represent a very significant increase in state-wide greenhouse gas emissions at a time when Minnesota's express state policy is to achieve significant reductions in emissions. For example, between 2000 and 2004 the total increase in greenhouse gas emissions from all sources in the state was only 2.3 million. See Ciborowski, *Greenhouse Gas Inventory*, (attached). The Mesaba Project alone represents almost five times the amount of increase from all sectors over that four-year period. Thus, the Project would cause an almost 500% increase in the rate at which state greenhouse gas emissions are going up, assuming all other emissions remained constant, at a time when state policy requires significant reductions in emissions. See Minn. Stat. § 216H.02 ("It is the goal of the state to reduce statewide greenhouse gas emissions across all sectors producing those emissions to a level at least 15 percent below 2005 levels by 2015, to a level at least 30 percent below 2005 levels by 2025, and to a level at least 80 percent below 2005 levels by 2050.")

The EIS must evaluate the environmental consequences of continued increases in greenhouse gas emissions. The statement in the EIS contending that there are "differences of opinion" on "the extent to which any climate changes are caused by greenhouse gas emissions from human activity" is simply not true. The overwhelming scientific consensus is that anthropogenic sources of greenhouse gases is leading to climate change, and the fact that the DOC/DOE Environmental Impact Statement would suggest anything different is astounding. The IPCC, which the EIS cites (albeit to a 2001 rather than the more recent 2007 assessment), has said that global warming is "unequivocal" and states with "very high confidence" that warming is the result of human activity. See, IPCC Fourth Assessment Report (2007) available at <http://www.ipcc.ch/ipccreports/ar4-wg1.htm>.

Thus, there is no question whether Mesaba's contribution of 10 million tons CO<sub>2</sub> annually, representing a significant increase in the growth of Minnesota's greenhouse gas emissions, will have adverse environmental consequences. It clearly will, and those consequences must be addressed in the EIS.

Environmental review laws require "a detailed statement" on the environmental consequences of a proposed action. 42 U.S.C. § 4332(C); Minn.Stat. § 116D.04, subd. 2a. Further, the level of significance of the environmental impact must dictate the attention paid to the issue in the EIS. 40 C.F.R. § 1502.2(b) ("Impacts shall be discussed in proportion to their significance"). As stated in MCEA's initial comments, it is beyond dispute that climate change presents the largest single threat to environmental resources, with consequences affecting water, air, land, and all living things, including humans. It violates basic environmental review principles that climate change effects from this project, a proposal that will contribute significant amounts of greenhouse gases, increasing the rate and scale of impending climate changes, are not addressed in this EIS. Information on climate change impacts on the environment is readily available and, in many instances, already in the

## Responses

108-02  
(cont'd)

## Commenter 108 – Kevin Reuther

Bill Storm  
January 11, 2008  
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government agencies' possession. See Links and Resources collected at Minnesota Climate Change Advisory Group, Climate Change Impacts, <http://www.mnclimatechange.us/background-impacts.cfm>; see also, Minnesota Pollution Control Agency Global Climate Change and its Impact on Minnesota, at <http://www.pca.state.mn.us/hot/globalwarming.html#gastrends>. Climate change and its concomitant environmental effects is a consequence of greenhouse gas emissions. The Mesabà Project is a major source of emissions and, as a result, these environmental effects must be addressed in the EIS. Failure to account for greenhouse gas emissions associated with the Project makes the EIS inadequate. See *Border Power Plant Working Group v. Department of Energy*, 260 F.Supp.2d 997, 1029 (S.D. Cal. 2003).

Finally, because the responsible governmental units ("RGUs") have not considered any of the environmental effects of climate change to which the Mesaba Project's emissions will contribute, they also have not evaluated alternatives or strategies that could mitigate emissions and subsequent effects. State and federal law require such inquiries and analysis in an EIS. Minn. Stat. § 116D.04, subd. 2a; 40 C.F.R. § 1500.2(e). The only mitigation measure considered appears to be carbon capture and sequestration which the Department of Energy has concluded is currently not feasible.

The EIS is inadequate without a thorough analysis of the environmental effects caused by continued increases in greenhouse gas emissions, and it will not withstand a legal challenge. Therefore, MCEA requests that the RGU's develop an analysis of the environmental impacts of the Project's greenhouse gas emissions that is thorough and detailed. The analysis should include a comprehensive evaluation of the greenhouse gas "footprint" of the project, the environmental impacts on Minnesota's natural resources of continued increases in greenhouse gas emissions, and an evaluation of any alternatives to mitigate the Project's carbon footprint.

### **The EIS fails to take into account the likely effects of climate change when modeling environmental impacts.**

The EIS also appears to ignore the known or expected consequences of climate change in its analyses of environmental effects. The failure to account for expected changes potentially impacts all areas evaluated in the EIS. Predicted consequences of climate change – even assuming that atmospheric concentrations of greenhouse gases are stabilized soon – include drought, heavier rain events, increased flooding, more violent storm events, and changes in vegetation and habitat. See, e.g. Union of Concerned Scientists, *Great Lakes Communities and Ecosystems at Risk*, (available at <http://www.ucsusa.org/greatlakes/>). These changes to the environment should be factored in when evaluating the environmental impacts of the proposed Project. It is not clear that the models used account for predicted changes associated with climate change. For example, the projected changes in precipitation will affect surface water availability for the project, yet this does not appear to be considered in the EIS. (Likewise with regard to water resources, the EIS does not appear to have accounted for water use by Minnesota Steel, a recently permitted project that will consume

## Responses

### **Comment 108-03**

See responses to Comments 14-02, 102-16, 102-32, 105-28, 105-30, and 108-02, which address concerns about GHG emissions and impacts. The responses to Comments 76-03 and 76-31, respectively, address water appropriations at the West Range and East Range Sites. The response to Comment 83-01 explains DOE's goals for IGCC technology within the CCPI Program, which may enable future reductions in emissions to be achieved cost-effectively in comparison to other coal-fueled plants.

DOE has reviewed the report referenced in Comment 108-03 (Confronting Climate Change in the Great Lakes Region, by the Union of Concerned Scientists and the Ecological Society of America, [http://ucsusa.org/assets/documents/global\\_warming/greatlakes\\_final.pdf](http://ucsusa.org/assets/documents/global_warming/greatlakes_final.pdf)) and offers the following summary of potential impacts to habitats, fish, and wildlife in the Great Lakes Region from global climate change:

- Aquatic habitats would likely experience lower water levels as watersheds would experience a general drying from lower precipitation rates and increased evaporation rates causing lower stream flows overall. Water quality may decrease from higher water temperatures, lower oxygen concentrations, longer ice-free periods, greater microbial decomposition, increased algal growth and eutrophication. Ultimately, these alterations to aquatic habitat could cause changes in the distribution of perch, bass, minnows, whitefish, northern pike, walleye, lake trout (and other cold water species), brook trout, white perch, and striped bass.
- Forested habitats would experience a northward movement of many species typical of more southern locations and a decline in the boreal species (e.g., white pine and hemlock) in the region. Fire risks would increase from the drier conditions. Elevated CO<sub>2</sub> and potentially increased nitrogen availability could accelerate the rate at which pioneer species (e.g., aspen) give way to species that establish in the shade of pioneering trees (e.g., maple); however, elevated levels of ozone may counter these effects. Forest insect pests (e.g., gypsy moth) may become more widespread. Overall, changes in population and community dynamics of forest insects are difficult to predict and the fitness of some species would be expected to improve while others deteriorate. Changes in forest composition could occur, as well as the timing of seasonal physiological changes by vegetation (e.g., tree leaf-out). This circumstance could

108-02  
(cont'd)

108-03

## Commenter 108 – Kevin Reuther

Bill Storm  
January 11, 2008  
Page 4

108-03  
(cont'd)

enormous amounts of water in and around the proposed West Range Site.) The need to address projected changes due to climate change is true not just for the example of water availability, but for many other aspects of the EIS as well, including the wetlands analysis and the air impact modeling.

**The EIS should evaluate the economic and social impacts of a Project that is not necessary to meet demand.**

108-04

MCEA maintains its position that the EIS should appropriately consider the need for the project. See August 24, 2006 MCEA Comments on Scoping. In this regard MCEA requests that the proceedings of the Minnesota Climate Change Advisory Group Technical Working Group on energy supply be made a part of the record of this case. In particular, MCEA requests that the evaluation of cost efficiency of reducing greenhouse gas emissions from various energy supply options which shows the relative expense of IGCC (and IGCC with carbon capture and sequestration) be made part of the record in this matter. Because the Department of Commerce is the lead agency convening the Minnesota Climate Change Advisory Group, these documents are already "before the agency" and are not reproduced here. If you require MCEA to supply hard copies of these documents for some reason, please let me know.

Thank you for the opportunity to comment on the draft EIS. If you have questions, please let me know.

Sincerely,

  
Kevin Reuther

Enclosure

## Responses

### Comment 108-03 (cont'd)

adversely affect migratory songbirds through loss/conversion of habitat and seasonal arrival timing that may be asynchronous with these typical vegetation changes.

- Climate change may benefit some forest-dwelling mammals, such as white-tail deer, raccoons, possums, and skunks through reduced winter mortality. However, increased deer populations could reduce moose populations, because deer carry certain parasites that severely stress moose. Also, increased populations of omnivorous mammals (e.g., raccoons and skunks) could result in increased predation of ground-nesting songbirds and other vulnerable species. Wildlife could also experience increased instances of infection due to increased winter survival of pathogens and the introduction of wildlife diseases to new locations.
- These are some of the potential impacts of global climate change on the regional environment.

A new section has been added to the Final EIS (Section 5.2.8 [Volume 1]) that discusses the incremental emissions of greenhouse gases from the Mesaba Energy Project relative to the effects of global climate change. This new section references the report cited above.

### Comment 108-04

As stated in responses to Comments 75-05 and 75-07, MDOC has determined that the Mesaba Energy Project is exempt from a Certificate of Need, because the project meets the requirements of the "innovative energy project" statute (Minnesota Statutes 216B.1694). That statute was enacted by the Minnesota Legislature specifically to meet state needs for advanced energy projects in the TTRA by establishing incentives as described in Section 1.2.2 (Volume 1) of the Final EIS. Therefore, MDOC has not addressed the need for power in this EIS. As stated in response to Comment 37-01, DOE's purpose and need in this EIS are to demonstrate a specific, advanced coal-based technology selected competitively for co-shared funding under the CCPI Program.

**Commenter 109 – Dave Hudek**

**From:** Ly Her [mailto:simp.lyher@hotmail.com]  
**Sent:** Friday, January 11, 2008 5:45 PM  
**To:** Bill.Storm@state.mn.us  
**Subject:** Mesaba Energy Project - PUC Docket No. E6472/GS-06-668

- I would like to submit the following comments and concerns:
- 109-01** | 1. Site is too close to residential areas. Possible well and lake water contamination.
  - 109-02** | 2. Life expectancy of plants.
  - 109-03** | 3. Train noise and shipping coal dust.
  - 109-04** | 4. CO2
  - 109-05** | 5. Mercury output level too high!

Dave Hudek  
6407 377th St  
North Branch, MN 55056

**Responses**

**Comment 109-01**  
Sections 3.10.1.2 and 3.10.1.3 (Volume 1) describe the locations of residential properties in proximity to the West Range Site and East Range Site, respectively. Fewer than a dozen residences are located within 1,000 feet of the proposed West Range Site boundary, and the closest residence to the proposed plant footprint is located approximately 0.7 mile to the southwest. There are no residences located within 1,000 feet of the proposed East Range Site boundary, and the closest residence to the proposed plant footprint is located approximately 1.2 miles to the south. See responses to Comments 6-01 and 7-02, which address the concerns about contamination of wells and lake waters. In general, use of the enhanced ZLD system would eliminate any direct discharges to nearby surface waters and, thus, negate the majority of the water quality concerns as described in the Draft EIS. Discussions regarding water quality impact in Section 4.5 (Volume 1) have been revised for the Final EIS to reflect use of the enhanced ZLD system at the West Range Site.

**Comment 109-02**  
Following the 1-year demonstration period for DOE under the CCPI Program, the Mesaba Energy Project is expected to operate commercially for at least 20 years as stated in Section 2.1.1.2 (Volume 1).

**Comment 109-03**  
See responses to Comments 38-03, 105-04, and 105-05 which address the same concerns.

**Comment 109-04**  
See responses to Comments 1-01, 1-03, 12-02, 67-01, 102-30, 105-28, and 105-29, which address the same concerns.

**Comment 109-05**  
See response to Comment 1-01, which addresses the same concern.

## Commenter 110 – William E. Berg

January 7, 2008

William E. Berg  
32680 Co. 326  
Bovey MN 55709-5571

Mr. Bill Storm  
Minnesota Department of Commerce  
85-7<sup>th</sup> Place Suite 500  
St. Paul, MN 55101-2198

Mr. Richard Hargis  
Department of Energy  
PO. Box 10940  
Pittsburg, PA 15236-0940

**Re: Meaba Energy Project, PUC Docket No. E 6472/GS-060668 DOE Draft EIS for the Mesaba Energy Project (DOE/EIS-0382D (Comments on draft EIS))**

**Dear Mr. Storm and Mr. Hargis:**

I am a graduate natural resources scientist, with 3 years of federal, 31 years of state, and 7 years of contractual experience. Following are my comments on the above stated draft EIS for the proposed Mesaba Energy IGCC electric generating plant to be built on the West Range site near Taconite, Minnesota. The comments apply only to the preferred West Range location near Taconite, Minnesota.

After reviewing the above stated draft EIS, it is my professional opinion that the “No Action” alternative is unquestionably the only feasible alternative, for the following reasons:

110-01

1. The draft EIS clearly states that the proposed plant siting will be a major source of CO<sub>2</sub>, SO<sub>2</sub>, NO<sub>2</sub>, and mercury. Of particular concern is CO<sub>2</sub>, to be released into the atmosphere (presuming the very likely absence of carbon sequestration) at the rate of 10 million tons per year, and the mercury, whose health risks have been well quantified. With changing climate and changing prevailing wind directions, more study is needed beyond what the draft EIS mentions as standards and “current data.”

110-02

2. The draft EIS clearly states that there will be adverse impacts from erosion and sedimentation.

110-03

3. The draft EIS states that clean water demands of 8,800-10,300 gpm., with a peak demand of 15,200 gpm. will have no adverse impacts; this needs to be proven beyond what the EIS states. The draft EIS fails to clarify where the wastewater will exit, and the adverse impacts of this deposition.

110-04

4. The draft EIS states that 155 acres of vegetation will be eliminated on site, plus dozens of additional acres for rail lines, etc. I could not find where any mitigation is defined for either these acres, or for any wetland acres.

110-05

5. The draft EIS lessens the possible adverse health impacts, and data are lacking to quantify and substantiate stated impacts. In fact, approximately 70 health care professionals in the immediate area stated in the Grand Rapids Herald review (about one year ago) that health risks from Mesaba Energy are potentially great. Unless I missed it, the health concerns from coal dust along the railway in urban Grand Rapids are not mentioned in the draft EIS.

110-06

6. The draft EIS inadequately addresses the economic burden placed on local communities and Itasca County for infrastructure changes such as Co. Rd 7 (“Scenic” Highway), railroads, crossings, etc. The draft EIS fails to quantify whether this burden will be passed on to taxpayers, and if so, to what extent?

## Responses

### Comment 110-01

See responses to Comments 1-01, 7-03, 12-02, 83-01, and 105-28, which address the same concerns.

### Comment 110-02

Sections 4.4.2.1 and 4.5.2.5 (Volume 1) of the Draft EIS addressed the potential for soil erosion and sedimentation during construction. As stated, the use of best management practices required by state and Federal regulations would mitigate potential adverse impacts to acceptable levels and avoid long-term damage to soil and water resources.

### Comment 110-03

See responses to Comments 6-01, 76-07, and 116-13 which address the same concerns.

### Comment 110-04

See response to Comment 53-08 regarding the loss of vegetation and habitat. There are no regulations or requirements to mitigate for lost forest resources; however, portions of these forested areas may occur within wetlands, which would require mitigation. Section 4.7.7 (Volume 1) of the EIS addresses wetland permitting and mitigation.

### Comment 110-05

See response to Comment 7-03, which addresses the health risk analysis for the Mesaba Energy Project. The responses to Comments 38-03, 105-04, and 105-05 address dust control measures for coal handling operations.

### Comment 110-06

See response to Comment 80-11 regarding the CR 7 realignment originally proposed by Itasca County. The Mesaba Energy Project would include the construction of the revised access road alignment connecting to the existing alignment of CR 7, and the rail spur from the main line, including associated crossing features.

**Commenter 110 – William E. Berg**

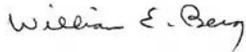
Page 2

- 110-07 7. The draft EIS mentions the economic benefits in terms of increased employment resulting from Mesaba. It fails to quantify how many of these new jobs will be from local, non-local, or transient sources. Increased jobs should never be used as a prime reason to build such an industrial facility with so many adverse impacts as Mesaba Energy.
- 110-08 8. The draft EIS quantifies 1,000-1,600 tons per day of waste slag as a result of Mesaba operation. It fails to specify what will be done with this waste, or what harmful elements it contains.
- 110-09 9. The draft EIS states that “IGCC technologies are more efficient, economical, reliable, and more environmentally favorable than conventional coal steam generating electric generation.” Neither Mesaba Energy nor any other coal gasification facility meets any of these criteria, especially with no CO2 sequestration.

110-10 Just because Congress has authorized the Clean Coal Power Initiative Program, it does mean that Federal funds in the amount of \$36 million should be allocated to Excelsior Energy, Inc. for start-up of Mesaba Energy, especially on the West Range site. The draft EIS speculates that if these funds are not allocated to Excelsior Energy, Inc., another IGCC facility might not be built elsewhere. This speculation is totally without merit, and should not be included in the draft EIS. In fact, there are likely several other sites where an IGCC facility could be built, with far fewer adverse environmental consequences, and in an area that might be able to handle carbon sequestration on site.

Any of the above items as stated in the draft EIS are by themselves reasons to not build the Mesaba Energy facility on the West Range site. But when considered together, they are an enormous justification for the Minnesota Department of Commerce and the U. S. Department of Energy to decide on the “NO ACTION” Alternative.

Very sincerely,



William E. Berg

**Responses**

**Comment 110-07**

The responses to Comments 16-01, 80-03, and 80-05 discusses the economic and employment impacts on the region from the Mesaba Energy Project and the limitations in predicting employment at the level of a community.

**Comment 110-08**

See responses to Comments 53-03 and 82-34, which address the same concerns. Comment 105-50 by MPCA addresses the beneficial use of coal combustion slag.

**Comment 110-09**

Based on experience with the Wabash River Plant and other research and demonstrations of IGCC, DOE considers gasification to offer substantial improvements in environmental performance over conventional coal-fueled power plants. See also response to Comment 1-01 on the same subject. Through the CCPI program and the cost-shared funding of demonstration projects like Mesaba, DOE intends to advance IGCC technology to provide enhanced environmental performance, greater capacity, and increased efficiency and availability.

**Comment 110-10**

Thank you for your comment. It has been noted and will be included in the administrative record for this EIS.



**Commenter 111 – Alan Walts**

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

JAN 11 2008

REPLY TO THE ATTENTION OF:

E-13J

Richard A. Hargis  
National Energy and Technology Laboratory  
P.O. Box 10940  
Pittsburgh, PA 15236-0940

**RE: Draft Environmental Impact Statement, Mesaba Energy Project,  
CEQ # 20070471**

Dear Mr. Hargis:

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the Mesaba Energy Project. We offer our comments under the National Environmental Policy Act (NEPA), and Section 309 of the Clean Air Act.

The Mesaba Energy Project is a two-phase 1,212-megawatt facility that has a project operating period of 20 years, provided the 1-year trial is successful. Phase I, proposed to be co-funded by DOE, is a 606-MW plant; Phase II is an identical, co-located and privately funded 606-MW plant. The project is proposed by Excelsior Energy under DOE's Clean Coal Power Initiative (CCPI) competitive solicitation. DOE selected the project to demonstrate commercial viability of the integrated gasification combined cycle (IGCC) process.

The preferred alternative is a 1,200-acre site near Taconite, MN (Itasca County); the alternative evaluated is an 810-acre site near Hoyt Lakes, MN (St. Louis County). Connected actions included road construction, road modifications, and right-of-way considerations for railroad spurs, power lines, and gas pipelines. Both locations are near Federal Class I air quality areas (Boundary Waters Canoe Area and Voyageurs National Park). The alternatives would have direct impacts to between 133 and 172 acres of wetlands.

Based on the information provided in the DEIS, EPA has assigned a rating of "EO-2." The "EO" indicates that we have environmental objections to the proposed project. The "2" indicates that additional information needs to be provided to support the impact analysis documented in the DEIS. This rating will be published in the Federal Register. Our objections are based on the alternatives analysis and direct impacts to wetlands, and we question whether the project will meet Clean Water Act Section 404 requirements for selecting the least environmentally damaging preferred alternative (LEDPA). Discussion of this issue and comments on other topic are enclosed.

111-01

**Responses**

**Comment 111-01**

DOE acknowledges EPA's objections to the proposed project based on the alternatives analysis and direct impacts to wetlands. DOE discussed the limitation on available alternatives under the CCPI program with EPA staff on May 13, 2008, (see response to Comment 111-02). See response to Comment 111-03 regarding an updated analysis of the alternative sites considered. To more thoroughly address wetland impacts in the Final EIS, DOE has substantially expanded the avoidance and minimization of wetlands analysis, and identified changes in plant, rail, and road locations to reduce direct and indirect impacts to wetlands. With regard to the least environmentally damaging practicable alternative (LEDPA), DOE's understanding is that this determination will be made based on information presented in the Final EIS and Section 404 permit application.

**Commenter 111 – Alan Walts**

Thank you for the opportunity to review and provide comments on the DEIS. We look forward to working with you and the cooperating federal agencies on resolving our comments. If you have any questions or would like to discuss our concerns and recommendations, please contact Anna Miller of my staff at either [miller.anna@epa.gov](mailto:miller.anna@epa.gov) or (312) 886-7060.

Sincerely yours,



Alan Walts  
Acting Director, Office of Enforcement and Compliance Assurance

Enclosures

**Responses**

## Commenter 111 – Alan Walts

EPA Region 5 Comments for the  
Mesaba Energy Project  
Draft Environmental Impact Statement (DEIS)  
January 10, 2008

### Project Purpose and Alternatives Analysis

EPA questions whether the project meets Clean Water Act (CWA) Section 404 requirements for selecting the least environmentally damaging preferred alternative (LEDPA). The Clean Water Act (CWA) Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material, at 40 CFR Part 230 (Guidelines) require that a sequence of planning steps be demonstrated that involves avoidance, minimization, and compensation for stream and wetland loss associated with unavoidable impacts to waters of the U.S. The avoidance requirements are found in 40 CFR 230.10(a), which state: “Except as provided under Section 404(b)(2), no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.” The selection of alternatives is determined in part by the project’s purpose. EPA has questioned other CWA Section 404 permit applications (during the Army Corps of Engineers public notice process) where the purpose was too broad or too specific and excluded viable alternatives.

This project has four stated purposes, which are to: 1) demonstrate the commercial viability of IGCC technology on a utility-scale application, 2) help satisfy Minnesota’s baseload power needs, 3) implement Minnesota’s energy policies, 4) and utilize state and federal incentives under the Innovative Energy Project initiative. These four stated purposes are actually a combination of two project purposes and a set of modifiers that specify the applicant’s desired conditions and benefits for the project. The demonstration of the commercial viability of IGCC technology on a utility-scale application (1) is one project purpose that can be accomplished anywhere in the United States, not just in Minnesota. The need to provide additional baseload power in Minnesota (2) is another project purpose, which can be accomplished using a number of different technologies, fuels, and locations within the State. It does not require the use of IGCC technology. The purpose to implement Minnesota’s energy policies (3) is actually a desired benefit from the second project purpose. This benefit cannot be considered as a project purpose because it isn’t associated with an actual project. Lastly, the purpose to utilize state and federal incentives (4) is a desired condition by the applicant that cannot be considered a project purpose. The economic savings and development benefits associated with these incentives do not define an actual project either.

The four stated purposes are very specific and conditional; as a result, they narrowly define the project such that all practicable alternatives except those in a portion of Minnesota known as the Taconite Tax Relief Area (TTRA) are excluded. Therefore, we would, in reviewing the CWA Section 404 permit, reject the project purposes as stated by the applicant and the resulting alternatives analysis upon which it is based. In general, EPA recommends that CWA Section 404 applicants satisfy the LEDPA requirement by evaluating alternatives related to a single project purpose, or a set of related purposes that

## Responses

### Comment 111-02

DOE discussed EPA’s comment relating to the purpose statement with EPA staff on May 13, 2008. Text in Section 1.4.1 of the Final EIS (Volume 1) has been revised as follows: DOE’s purpose in the context of the CCPI Program is to demonstrate commercial-readiness of the ConocoPhillips E-Gas™ gasification technology in a fully integrated and quintessential IGCC utility-scale application. The technical, environmental, and financial data generated from the design, construction, and operation of the facility would result in a commercial reference plant for the technology.

DOE has revised Chapter 2 of the Final EIS (Volume 1) clarifying its position with respect to the scope of alternatives analysis and the reasonable alternatives available to the agency. DOE’s decision is whether or not to provide co-funding and a potential loan guarantee for a demonstration project selected competitively in Round 2 of CCPI announcements. The CCPI Program has a Congressional mandate to demonstrate advanced coal-based technologies; hence, projects that would not demonstrate coal-based technologies are not reasonable alternatives. Furthermore, the CCPI Program allows for Federal co-funding only of projects selected through a formal announcement and negotiation process. Therefore, DOE cannot select alternative projects that have not been proposed in response to the announcement.

DOE received 13 applications in Round 2, including two that proposed different archetypal IGCC technologies. DOE selected both IGCC projects for co-funding. The Mesaba Energy Project was the only application that proposed to demonstrate the Conoco-Phillips E-Gas™ gasification technology; DOE did not receive an alternative application proposing to demonstrate this specific technology in Round 2. Moreover, the CCPI Program provides for applicants to identify their own site or sites for proposed projects; DOE does not participate in the site selection process, which generally precedes the submission of an application for co-funding.

The project proponent for the Mesaba Energy Project proposed two alternative sites in the TTRA of northeastern Minnesota expressly to take advantage of incentives established by the Minnesota Legislature in its 2003 Special Session as summarized in Section 1.2.2 (Volume 1) of the Final EIS. These incentives also provide access to \$10 million in state grant funding from a renewable development account for innovative energy projects; the right to enter into a power purchase agreement with a utility company that can pass through costs of development, construction, and operation; the power of eminent domain to acquire

111-02

**Commenter 111 – Alan Walts**

**Responses**

do not eliminate viable alternatives in favor of desirable project benefits which are separate from the project’s purpose. From our understanding of DOE’s goals, the basic project purpose is (1): To demonstrate the commercial viability of IGCC technology. This purpose would not restrict the alternatives analysis to the TTRA and would allow the pursuit of the least environmentally damaging, most practicable alternative available.

**Comment 111-02 (cont’d)**

land and rights-of-way for permitted sites and utility corridors economically; exemption from state Certificate of Need requirements normally applicable to a large electric power generating plant; and eligibility to increase transmission capacity without a Certificate of Need and additional state review. The project proponent has estimated the value of these incentives to exceed \$300 million.

111-02  
(cont’d)

Recommendations:

We recommend that the Final EIS (FEIS) identify one project purpose: demonstrating the commercial viability of IGCC technology is the prime purpose for the project, as selected and presented by the DOE for funding under the CCPI. We also recommend that the alternatives analysis be based on this project purpose.

We recommend that the DOE/applicant explain why the economic benefits of only considering alternative locations in the TTRA are critical to the project, given the cost of wetlands mitigation and other costs tied to the present alternatives analyzed in the DEIS.

The project proponent has stated that it would not have submitted an application in response to the CCPI announcement if it did not intend to locate the Mesaba Energy Project in the TTRA, because without those incentives the project would not be viable. The financial value of the incentives far outweighs any potential mitigation costs associated with sites in the TTRA, which the project proponent has estimated to represent substantially less than one twentieth of the total value of the incentives. Therefore, from DOE’s perspective, any consideration of an alternative location for this specific proposed IGCC demonstration project outside of the TTRA would be equivalent to the No Action Alternative for the EIS.

111-03

Based on our review of the DEIS, other alternatives within the TTRA were dismissed for unclear reasons that are not supported by data, maps, and other specific information presented in a format that compares alternatives directly to one another. A more quantitative discussion is needed for some of the eliminated alternatives. For example, in Appendix F1, the Hibbing Industrial Park site is designated “unavailable” without a specific reason.

**Comment 111-03**

Within the TTRA, the project proponent performed an alternative site screening and evaluation process beginning with 17 prospective sites as summarized in Appendix F1 (Volume 2). The project proponent has provided additional specific comparative information about variables considered in the site screening process in a revised version of Appendix F1 for the Final EIS. Issues and constraints identified have been further and better explained, discussions made more consistent, and the text and figures more clearly linked together. During discussions in September 2008 regarding the Draft EIS the USACE provided additional comments regarding Appendix F1 which have been incorporated into the document.

Recommendation: We recommend that the DOE/applicant include quantitative information and data on siting variables, including cost, wetlands acreage and impacted wetlands types, to compare alternatives.

111-04

**Wetland Mitigation**

EPA recommends that the FEIS quantify mitigation for wetlands losses, identify potential locations and replacement ratios, and describe the project’s mitigation plan and timeframe for both permanent and temporary impacts. EPA is concerned with the wetlands mitigation for this project for several reasons:

- 1) Wetlands already comprise a relatively high percentage of total land cover in the project area, meaning that few areas are available for mitigation;
- 2) Existing opportunities available for creating wetlands (reclaiming old mine pits and tailings basins) represent far less than ideal mitigation, especially for the variety and types of wetlands being impacted (which include forested wetlands and bogs); and
- 3) The demand for wetland mitigation in the watershed is high, due to other projects under development (e.g. mining projects) that will also incur significant wetland impacts.

Therefore, mitigation will require thorough planning. In addition, the loss of forested and bog wetland habitat typically require higher than 1:1 mitigation ratios because of the

**Comment 111-04**

Comments pertaining to wetlands, including avoidance and minimization of impacts and mitigation of unavoidable impacts, have been addressed in the responses to related comments from USACE (Commenter 116). USACE is both a cooperating agency for this EIS as well as the Federal agency responsible for wetland permitting under the CWA. In particular, see responses to Comments 116-22 through 116-24.

A conceptual mitigation plan that is consistent with feedback from the USACE regarding the types of mitigation sites (restoration of farm fields that are sites of historic wetlands that had been drained to support

**Commenter 111 – Alan Walts**

**Responses**

111-04  
(cont'd)

extended period of time (decades) that their functions will be lost while mitigation areas are establishing themselves.

Recommendation: We recommend that the FEIS include specific information on how the applicant intends to provide mitigation for the wetland impacts incurred by this project, including information on potential mitigation sites, commitments to replace lost wetlands with a comparable type, expected mitigation ratios, and long-term mitigation monitoring.

**Permanent and Temporary Wetland Impacts**

The West Range Site has estimated permanent impacts of 172 acres of wetlands; the East Range Site has estimated permanent impacts of 133 acres. The DEIS is unclear on what amount of temporary impact will occur to shrub, forested, and bog wetlands through the placement of utility lines and the construction of transportation corridors. The impacts to shrub, forested, and bog wetlands would not be temporary because only emergent vegetation would be allowed to return to these maintained rights of way.

111-05

Recommendation: We suggest the FEIS reevaluate wetlands impacts from utility lines and transportation corridors as more than temporary impacts and provide mitigation of these impacts under the mitigation plan.

**Wetlands Classification**

The use of the Circular 39 classification system to describe the wetlands impacted is problematic because it does not provide sufficient information on the wetland types being impacted. For example, Circular 39 Type 7 (wooded swamp) does not distinguish between hardwood swamps and coniferous swamps, which are two very different types of plant communities. Similarly, Circular 39 Type 2 does not differentiate between sedge meadow and calcareous fen; these are distinctly different wetland community types and each would be assessed differently regarding what constitutes adequate mitigation.

111-06

Recommendation: EPA recommends that the FEIS use the Eggers and Reed system (1997) or the Cowardin Classification. Both Eggers and Reed and Cowardin provide more specific plant community information that will be useful and necessary to determine adequate mitigation. We recommend their use to identify wetland impacts as well as to describe the wetland communities to be established for mitigation.

**Air Emissions**

EPA is aware that the Minnesota Pollution Control Agency (MPCA) and the project applicant are discussing air emissions and air permitting requirements. EPA will continue to discuss air permitting factors with MPCA, which has authority for direct implementation of the Clean Air Act in Minnesota.

111-07

We appreciate that the DEIS includes projected annual emissions for CO<sub>2</sub> and discusses the general effects of greenhouse gas emissions and global climate change. We also note that the DEIS has described how the facility will be designed for possible retrofitting of

**Comment 111-04 (cont'd)**

agriculture) and mitigation ratios required has been included in the Final EIS.

**Comment 111-05**

See responses to Comments 116-22 through 116-24, which address the same concerns. Tables 4.7-33 and 4.7-34 (Volume 1) have been revised in the Final EIS to more clearly define permanent and temporary impacts on wetlands, including utility ROWs and transportation corridors.

**Comment 111-06**

As stated in response to Comment 105-44, DOE has revised Sections 3.7 and 4.7 (Volume 1) and Appendix F2 (Volume 2) to present wetland information using the Eggers and Reed classification system. DOE has maintained the Circular 39 classification to identify wetland impacts as well as describe the wetland community types to be assessed for adequate mitigation. The Circular 39 classification is necessary for wetlands where access was not granted for field delineation. Eggers and Reed classification could not be assigned to these areas because it relies on the identification of vegetation through field inspection.

With respect to the Eggers and Reed classification for the NWI mapped basins, DOE has provided an estimated Eggers and Reed classification by comparing the Cowardin and Circular 39 classifications and review of available mapping. A note to the bottom of the tables indicates that these classifications are estimated for use in calculating wetland disturbances and mitigation within linear corridors (because property owners for land to be crossed by transmission lines and/or a natural gas pipeline declined to grant access to conduct wetland delineations).

**Comment 111-07**

See response to Comment 49-01, which addresses the interaction between EPA and the MPCA regarding air permitting requirements. Thank you for your comment pertaining to green house gas emissions and climate change; it has been noted and will be included in the administrative record for this EIS.

**Commenter 111 – Alan Walts**

**Responses**

**111-07  
(cont'd)**

CO<sub>2</sub> capture technology. This information is useful to the general public in understanding the project.

**Recreational Use of Canesteo Mine Pit**

The applicant has requested that Canesteo Mine Pit be closed for recreational uses to meet security requirements for process water intake facilities, should the West Range alternative (the DEIS's preferred alternative) be selected; therefore the loss of this resource is a potential outcome of this project.

**111-08**

Recommendation: EPA recommends that the DEIS discuss whether the Minnesota Department of Natural Resources' decision on the applicant's request to close recreational use of the pit would affect site selection or possibly result in changes to the water management plan described in the DEIS. The DEIS should also identify that a feature of the West Range proposal is the elimination of the pit's recreational use, when the Canesteo Mine Pit is discussed in other sections (such as in the project description and in the water management plan). This information will be useful for public reviewers to understand the project's impacts.

**Water Quality**

EPA is aware that the MPCA and the project applicant are discussing water management and water quality, pursuant to the National Pollutant Discharge Elimination System (NPDES) permit program under the Clean Water Act. EPA will discuss water quality and discharge permitting factors with MPCA, which has authority for direct implementation of the NPDES program in Minnesota, as necessary.

**111-09**

**Comment 111-08**

The MNDNR's decision on the project proponent's request to close the CMP for recreational use would not preclude selection of the West Range Site (or its status as the project proponent's preferred alternative), nor would it affect the water management plan. Though closing may not be essential, the project proponent believes that limiting the CMP's recreational use, especially in the vicinity of the intake structure, would protect the security of critical infrastructure elements. The project proponent will continue to coordinate with MNDNR to determine whether these security interests and local recreational interests can co-exist. Further discussions will involve identifying additional stakeholders in the decision-making process, formulating post-9/11 security options to protect key infrastructure, and selecting the security option best suited to balance local concerns, water needs and economic development. DOE does not anticipate any circumstance that would prevent the project proponent's use of the CMP in its water management plan. The project proponent's request to close the CMP for recreational use is stated in Draft EIS Section 4.13.3.2 under *Parks and Recreation* (Volume 1). Text explaining the potential loss or limitations to recreational use of the CMP has been added to Sections 4.5.3.1 and 4.13.3.1 (Volume 1) of the Final EIS.

**Comment 111-09**

As stated in response to Comment 6-01, the project proponent has announced its commitment to implement the enhanced ZLD system at the West Range Site. This commitment will be reflected in a revised permit application to the MPCA that will negate most of the water quality impacts evaluated in Section 4.5.3 of the Draft EIS (Volume 1). The use of an enhanced ZLD system at the West Range Site was addressed as Mitigation Alternative 3 in Draft EIS Section 5.3.2.1 (Volume 1), which considered the potential impacts of implementing the system.

## Commenter 111 – Alan Walts

### SUMMARY OF RATING DEFINITIONS AND FOLLOW UP ACTION\*

#### Environmental Impact of the Action

##### LO-Lack of Objections

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

##### EC-Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impacts. EPA would like to work with the lead agency to reduce these impacts.

##### EO-Environmental Objections

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

##### EU-Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS date, this proposal will be recommended for referral to the CEQ.

#### Adequacy of the Impact Statement

##### Category 1-Adequate

The EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collecting is necessary, but the reviewer may suggest the addition of clarifying language or information.

##### Category 2-Insufficient Information

The draft EIS does not contain sufficient information for the EPA to fully assess the environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

##### Category 3-Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

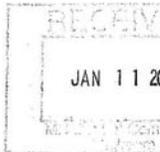
\*From EPA Manual 1640 Policy and Procedures for the Review of the Federal Actions Impacting the Environment

## Responses

Commenter 112 – Paul Minerich



Public Comment Sheet  
Mesaba Energy Project  
PUC Docket No. E6472/GS-06-668



Name: PAUL MINERICH  
~~ESSG~~

Representing: \_\_\_\_\_

Email: \_\_\_\_\_

Address: 1533 GRAY DRIVE  
HIBBING MN.  
55746

Tel: \_\_\_\_\_

Comments:

I AM PERSONALLY AGAINST THIS PROJECT TO A POINT. I KNOW THIS COUNTRY NEEDS MORE POWER ON THE GRID. BUT IS IT NEEDED IN THIS AREA? IF THIS POWERPLANT WAS ABLE TO SELL TO MN. STEEL IN NASHWAUK I'M LEANING MORE FOR IT. IF NOT, I DON'T BELIEVE IN POLLUTING ITASCA COUNTY FOR THE SAKE OF OTHERS.

TOPICS OF INTEREST I'M AGAINST ARE:

1. HIGH PARTICULATE. CAN IT BE LOWERED?
2. SEQUESTER CO<sub>2</sub> IS IT FEASIBLE?
3. RECIRCULATE WATER IN CANISTEO PIT. NO!

MY BIGGEST CONCERN IS THE WATER. IN 15 YEARS FRESH WATER IS GOING TO BE PRECIOUS WHEN OGLALA AQUIFER IS DEPLETED. DEPT OF AGR. KNOWS THIS. THESE EXISTING MINES WHEN PUMPING WATER, OR MN. STEEL, SHOULD BE

Please submit comments to meeting moderator or send to:

William Cole Storm  
Department of Commerce  
85 7<sup>th</sup> Place East, Suite 500  
St. Paul, MN 55101-2198.  
Tel: 651-296-9535.

»»If mailing, fold along dotted lines and tape closed ««

Responses

Comment 112-01

With respect to the specific concerns raised in this comment, the response to Comment 82-69 addresses concerns about particulate emissions by the Mesaba Energy Project; the responses to Comments 1-02, 4-01, 4-03, and 53-04 address concerns about CCS; and the response to Comment 6-01 addresses the concerns about re-circulating blowdown water to the Canisteo Mine Pit.

112-01

Responses

Commenter 112 – Paul Minerich

112-01  
(cont'd)

Comments Continued:  
REQUIRED TO GIVE WATER TO INDUSTRY NEED.  
BY NO MEANS SHOULD WATER BE RECIRCULATED  
BACK INTO THE PIT! IF THESE 3 DEMANDS  
ARE MET, I'M 100% FOR THE PROJECT!

(Fold here)

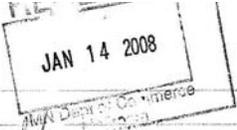
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St. Paul, MN

William Cole Storm  
Department of Commerce  
85 7<sup>th</sup> Place East, Suite 500  
St. Paul, MN 55101-2198.

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Commenter 113 – Helene (Perry) Berg



January 9, 2008

Mr. Bill Storm  
Minnesota Department of Commerce  
85 - 7th Place, Suite 500  
St. Paul, Minnesota 55101-2198

Dear Mr. Storm,

I am writing to express my thoughts regarding the Environmental Impact Statement (EIS) being submitted on the Mesaba Energy project. I am unable to access this lengthy of a document on my computer and even the summary is so lengthy it is difficult for me to decipher. For this reason, I will not address the specific document, but will summarize some of my concerns.

First, I am appalled by the fact that a huge amount of CO<sub>2</sub> would be released into the air by Mesaba Energy. I have seen no realistic plan to address this issue. With the current scientific knowledge that CO<sub>2</sub> is, at least in part, responsible for the rapid rate of global warming, it is unconscionable to consider building a coal gasification plant in an area that does not allow sequestration of CO<sub>2</sub> locally.

Second, I don't feel that the Mesaba plan has addressed the impact of other pollutants and how they will affect

Responses

Comment 113-01

DOE and MDOC recognize that the document is substantial in size and may be difficult to access electronically without adequate high-speed Internet service. However, printed copies were made available at the public libraries in Bovey, Grand Rapids, Hibbing, and Hoyt Lakes, as well as in the mayors' offices of Taconite and Hoyt Lakes. Printed copies were also available by request to DOE or MDOC; contact information was provided in public notices.

Comment 113-02

See responses to Comments 1-02, 12-02, 19-03, 82-11, 102-30, and 105-28, which address the same concerns.

Comment 113-03

See responses to Comments 1-01, 7-03, 38-01, and 109-05, which address the same concerns.

113-01

113-02

113-03

Commenter 113 – Helene (Perry) Berg

Responses

113-03  
(cont'd)

our air, water and ultimately, our health. We now know, for instance, that mercury is extremely harmful, even in minute amounts, but I understand that if the Mesaba plant is built, a great deal of mercury will be released into our environment. This is simply unacceptable.

113-04

Third, I feel that the hauling of coal across many states and through populated areas is risky, expensive, and unnecessary. Coal dust in itself is an air pollutant. The infrastructure needed would place a financial burden on local residents and it appears to me that this would offset the economic benefits of jobs this plant is supposed to produce. There are surely more effective and less damaging ways of creating jobs in our area. Why not use some of the millions of dollars spent on this project to build industries that would utilize our local resources and not threaten our environment with pollution and destroy our way of life?

Thank you for considering my input.

Sincerely,  
Helene (Perry) Berg  
326 80 Co. Rd. 306  
Dovey, Minnesota 55709

Comment 113-04

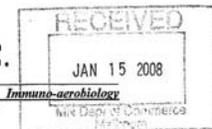
See response to Comment 12-01, which discusses the amount of emissions expected from the Mesaba Energy Project from trains and trucks transportation. The responses to Comment 12-02, 37-01, 46-01 and 111-02 explain DOE's and MDOC's involvement with the Mesaba Energy Project.

Commenter 114 – Darlene J. Swanson



QUAN-TEC-AIR, INC.

Mark C. Swanson



Jan 14, '08

Bill Storn  
MN Dept. of Commerce  
85 7th Pl Suite 500  
St Paul, MN 55181

Dear Sir:

I am writing to you concerning the proposed energy plant at  
Faconite. I know that you realize that in spite of improved  
technology, there is no such thing as a clean coal plant.  
A push by a few legislators and the small towns may  
be influenced by some job creation and the fact that a  
foreign invested MN steel plant in Nachwood will require more  
energy than currently available. However, the wise approach  
would be to have a vision for alternative energy such as  
wind, water, wood/biofuels. This would not only create  
more than ample employment, but afford us a legacy of clean  
air/water instead of mercury & sulfide emissions.

Senator Ellen Anderson, the head of MN Energy Commission,  
can answer any further questions you may have.

I thank you for allowing me this voice. Thanks again.

Darlene J. Swanson  
6898 Trep Rd.

Britt, MN 55710

2206 Deru Ln SW Rochester, MN 55902

Tele: (218) 254-5164

114-01

Responses

Comment 114-01

See responses to Comments 1-01, 12-02, and 37-01, which address the same concerns.

Commenter 115 – Norman W. Deschampe



GRAND PORTAGE RESERVATION TRIBAL COUNCIL

Norman W. Deschampe - Chairman • John Morrin - Vice Chairman • Gilbert Caribou - Secretary/Treasurer  
Kenneth Sherer - Councilman • Lorraine Wipson - Councilwoman

January 11, 2007

Richard Hargis  
U.S. Department of Energy  
National Energy Technology Laboratory  
P.O. Box 10940  
Pittsburgh, PA 15236-0940

Bill Storm  
Minnesota Department of Commerce  
85 7<sup>th</sup> Place, Suite 500  
St. Paul, MN 55101-2198

RE: Mesabi Energy Project Draft EIS

Dear Mr. Hargis and Mr. Storm,

The purpose of this letter is to provide comment on draft Environmental Impact Statement (EIS) for the Mesabi Energy Project.

Grand Portage Band of Lake Superior Chippewa is a federally recognized tribe with off-reservation treaty rights to hunt, fish, and gather in the 1854 Ceded Territory. In order to exercise treaty rights it is essential that natural resources are available and safe to eat or utilize. Regulators must ensure that any releases to the environment meet or exceed applicable air and water quality standards that have been established to protect natural resources and human health.

Carbon Capture and Sequestration

Carbon dioxide emissions have been shown to have a powerful impact on global climate and are the primary force behind the current rapid increase in global temperatures. Impacts of climate change are already being seen in the region such as increases in invasive plant species and a northward shift in ranges for birds and mammals. The summer temperature of Lake Superior has been shown to have risen 2.5° C from 1979-2006, far greater than the rise in regional air temperatures. It is vital that carbon dioxide emissions be reduced in order to slow the rise in temperatures and allow ecosystems to adjust, unfortunately this proposed project falls woefully short in this regard.

Annual emissions from the Mesabi Energy project include over 10 million tons of carbon dioxide per year. The draft EIS states that carbon capture and sequestration are currently not feasible for this project. The plant will be designed so it can be modified to capture carbon dioxide in the future if

Responses

Comment 115-01

As stated in responses to Comments 1-02, 12-02, and 82-11, DOE's CCPI Program seeks to develop and demonstrate advanced coal-based technologies for generating energy. The IGCC technology to be demonstrated by the Mesaba Energy Project is expected to contribute to these goals. Although DOE has determined that CCS is not feasible during the 1-year demonstration period, the IGCC process provides for substantially improved capabilities to capture CO<sub>2</sub> compared to conventional coal combustion power plants. Captured CO<sub>2</sub> may ultimately be sequestered or otherwise used beneficially during the commercial life of the plant as explained in responses to Comments 1-02 and 12-02. The response to Comment 83-01 explains the potential opportunities that would be missed if DOE does not proceed with the demonstration. See also response to Comment 19-03, which addresses a related concern.

115-01

**Commenter 115 – Norman W. Deschampe**



GRAND PORTAGE R. T. C.

**Responses**

**115-01  
(cont'd)**

reductions are required by regulation or encouraged by economic incentives. Two primary options exist for such capture. Current available technology would result in an approximately 30% reduction in carbon dioxide emissions. The other potential option would require piping the carbon dioxide to sequestration sites in North Dakota or Manitoba, hundreds of miles away. A specific and detailed design for carbon capture, transport, or sequestration has not been developed. Proposed releases of carbon dioxide from this project appear inconsistent with efforts to reduce release of greenhouse gases. It is our understanding that one value of innovative power generation is to reduce emissions. We are extremely concerned about climate change and its effects on natural resources and related treaty rights in the region.

**115-02**

Regional Haze and Visibility

Modeling results indicate that visibility impacts are significant for the Boundary Waters Canoe Area Wilderness and Voyageurs National Park. Impacts from the East Range Site are substantially higher than the West Range Site. Much of the explanation and justification for these impacts appear to center on seasonal or weather events (winter, clouds, fog, precipitation) and potential future reductions from other power producers in the region. This approach seems flawed. Further, it is our understanding that agreement has not been reached over completion of the Best Available Control Technology (BACT) analysis for the project. A determination on what constitutes BACT for sulfur dioxide and nitrogen oxide emissions must be completed, and mitigation plans to offset any impact should then be developed. We have concerns over visibility issues, and support the Minnesota Pollution Control Agency position and issues raised by federal land managers. In addition to visibility issues these gases are the primary sources of acid rain, which can have a disproportionate impact on northern lakes and ecosystems due to the lack of natural buffers in the bedrock.

**115-03**

Mercury

Emissions from the project include up to about 54 pounds of mercury per year. As another new source in Northeastern Minnesota, the project is inconsistent with Minnesota's total maximum daily load (TMDL) goal of reductions in mercury releases. With a statewide goal to reduce anthropogenic sources of mercury 93% from 1990 levels to annual emissions of 789 pounds per year, an increase of 54 pounds per year is significant. The locations proposed for this project are both in relatively close proximity to the newly permitted Minnesota Steel project which is projected to release approximately 70 pounds of mercury per year. We question how permitting would be handled for yet another facility that substantially increases mercury releases.

**115-04**

Of primary concern to us is mercury in fish, and ultimately potential human health effects. Tribal member's health will be put at risk throughout our region due to increased concentrations of mercury. A human health risk assessment to estimate risk to subsistence fishers was conducted and

**Comment 115-02**

See responses to Comments 49-01 and 49-11, which address the same concerns.

**Comment 115-03**

See response to Comment 97-04, which addresses the same concern.

**Comment 115-04**

See response to Comment 97-04, which addresses the same concern.

## Commenter 115 – Norman W. Deschampe



GRAND PORTAGE R. T. C.

115-04  
(cont'd)

referenced in the draft EIS. Results indicated increased in health risks from ingestion of fish due to mercury from plant emissions.

### Water Quality

Water discharges would primarily consist of cooling tower blowdown blended with additional wastewater from other plant systems. Constituents in the discharge would essentially be the same as those in the water supply but more concentrated as a result of repeated cycles through the process. The number of cycles of concentration would be determined by mercury concentrations and conditions of NPDES permits. More stringent requirements would be required on the East Range Site to comply with regulations for discharges within the Lake Superior Basin (mercury in particular). Anticipated discharges are expected to exceed water quality standards for hardness, total dissolved solids, sulfate, and conductivity. Water quality standards must be met, and if a variance is granted a specific plan and timeline to meet standards must be developed.

Federal law and guidance is specific regarding when a state may grant a water quality standards variance in NPDES permits. EPA's NPDES Permit Writers' Manual chapter 10 discusses the procedures and requirements for states or EPA permit writers when assessing variances from water quality standards. Section 10.2.3 of the NPDES Permit Writers' Manual provides:

115-05

*"Water quality standards variances require similar substantive and procedural requirements as removing a designated use of a waterbody, but unlike use removal, variances are both discharger and pollutant specific, are time-limited, and do not forego the currently designated use of a water body. A variance is appropriate where the state believes that the standard can be ultimately attained. By maintaining the standard rather than changing it, the state will assure that further progress is made in improving the water quality and attaining the standard."*

Once a use has been designated for a particular water body or segment, the water body segment cannot be reclassified for a different use except under very explicit conditions. To remove a designated use, as specified in Section 101(a)(2) of the Clean Water Act, the state must perform a use attainability analysis pursuant to 40 C.F.R. § 131.10(g). 40 C.F.R. 131.10(h) further provides that *"states may not remove designated uses if they are existing uses or if such uses will be attained by implementing effluent limits required under section 301(b) and 306 of the Act and by implementing cost-effective and reasonable best management practices for nonpoint source control"*.

A water quality variance is only appropriate if MPCA believes the applicable water quality standards can ultimately be attained. Whether standards can

## Responses

### Comment 115-05

See response to Comment 6-01, which addresses the same concerns.

**Commenter 115 – Norman W. Deschampe**



GRAND PORTAGE R. T. C.

**115-05  
(cont'd)**

be obtained requires analysis of all potential alternatives or combinations of alternatives for treatment or operation. When treatment options are rejected because of cost, financial disclosure regarding cost relative to revenues, gross and net, must be presented or a permittee has not met its burden of proof to demonstrate the need for a variance.

Cumulative Impacts and Site Location

A considerable number of projects exist, under development, or are proposed in the region. While we are supportive of economic development, we want to ensure that the environment and natural resources (and related treaty rights that rely on those resources) are properly protected. The cumulative impact from all industrial projects is a vital issue that must be addressed. Results from analysis of the East Range Site indicated that the hazard/cancer risk would exceed Minnesota Department of Health standards in an overlapping area with other mining projects. This is of concern, and cumulative impacts to the resources (air, water, wetlands, wildlife, etc.) must be clearly understood and identified.

**115-06**

In our review of the project, we primarily focused on the preferred West Range Site. Analysis in the draft EIS generally focused on this site and related impacts, and in many cases didn't include as detailed information on the alternative East Range Site. Environmental impacts are among reasons for preferring the West Range including water supply, greater distance from Class I air areas, and location outside of Lake Superior Basin. Cumulative impacts at the East Range Site are potentially high (St. Louis River watershed, along with the Partridge and Embarrass rivers watersheds) due to the number of current or proposed projects adjacent to the site. We are concerned about a potential "bait and switch" approach, under which the East Range Site would suddenly become the preferred location. In that case, we would ask for additional information in the EIS and an opportunity to further evaluate impacts to the environment.

**115-07**

It is unconscionable that this project might be permitted without being able to comply with existing water quality standards, emit 10 million tons of carbon dioxide per year and 54 pounds of mercury, and likely not comply with the Regional Haze rules. Further, the husband and wife team of Thomas A. Micheletti and Julie A. Jorgenson are Excelsior's main partners. Prior to the formation of Excelsior Energy, Ms. Jorgenson was a top executive for NRG, a company that was fined \$25 million for abusive practices during the California energy crisis. NRG was an Xcel energy subsidiary. NRG ultimately filed Chapter 11 bankruptcy in 2003, citing a 9.2 billion dollar debt. Thomas A. Micheletti was lobbyist for an Xcel energy subsidiary Northern States Power. Government officials ultimately blamed NRG, its subsidiaries and business partners for manipulating energy markets that caused the California energy crisis.

**Responses**

**Comment 115-06**

As stated in response to Comment 97-06, the Final EIS has been updated to provide any more recently available data for the Cumulative Impacts section and to provide information for the East Range Site as comparable to the West Range Site.

**Comment 115-07**

See response to Comment 105-33 regarding concerns about water quality; responses to Comments 22-01 and 102-30 regarding concerns about CO2 emissions; responses to Comments 38-01 and 42-01 regarding concerns about mercury emissions; and response to Comment 49-01 regarding concerns about regional haze.

**Commenter 115 – Norman W. Deschampe**



GRAND PORTAGE R. T. C.

115-08

With out being able to comply with Minnesota environmental statutes, and considering the main partners for Excelsior Energy had ties to the California energy crisis, it is astounding that this project has been exempted from demonstrating need due to qualifications as an "innovative energy project". We support the exploration of innovative technology, however this project does not appear to qualify for such an exemption. In addition to the environmental concerns outlined above, it is our understanding that significant issues exist with rulings from the Minnesota Public Utilities Commission and lack of power purchase agreements.

115-09

Both the federal and state governments have the responsibility to work with Indian Tribes on a government-to-government basis. Tribes are sovereign governments, and must be treated as such. Notification and consultation activities must be completed directly with all Tribes potentially affected by the proposed project. The planning process and project implementation must recognize the sovereign status of Tribes and the rights retained by treaty with the United States. This must be more clearly addressed in the draft EIS.

Sincerely,

Norman W. Deschampe  
Chairman

c.c. R.T.C. members

**Responses**

**Comment 115-08**

Thank you for your comment. It has been noted and will be included in the administrative record for this EIS.

**Comment 115-09**

As stated in response to Comment 97-01, DOE and MDOC have made appropriate and good faith efforts to ensure that the EIS has addressed issues of importance to Native American tribes with existing and historic affiliation to northeastern Minnesota. These efforts have included letters submitted to tribal representatives, direct contact by telephone, and several conferences with tribal representatives as described in Sections 1.6.1.3 and 1.8 (Volume 1).

**Committer 116 – Robert J. Whiting**



DEPARTMENT OF THE ARMY  
ST. PAUL DISTRICT, CORPS OF ENGINEERS  
ARMY CORPS OF ENGINEERS CENTRE  
190 FIFTH STREET EAST  
ST. PAUL, MN 55101-1638

REPLY TO  
ATTENTION

January 31, 2008

Operations  
Regulatory (2005-5527-WAB)

Mr. Richard Hargis  
NEPA Document Manager  
U.S. Department of Energy  
National Energy Technical Laboratory  
PO Box 10940  
Pittsburgh, PA 15236

Dear Mr. Hargis:

This letter is in regards to our review of the Draft Environmental Impact Statement (DEIS) dated November 2007 for the Mesaba Project. The St. Paul District, Corps of Engineers (Corps) review is in accordance with the National Environmental Policy Act (NEPA); NEPA implementation procedures for the Corps Regulatory Program (33 CFR Part 325); policy guidance under CEQ Regulations 40 CFR 1500-1508; Section 404 of the Clean Water Act (CWA); and Section 404 (b)(1) Guidelines (Guidelines) (40 CFR part 230).

During 2005 and 2006, the Corps expressed to the Department of Energy (DOE) and the applicant, the importance of an alternatives analysis sufficient to document the range, evaluation, and dismissal of alternatives under both NEPA and the Guidelines. The Corps reviewed preliminary sections of the DEIS in July 2006 and a preliminary draft of the DEIS dated November 2006. During meetings beginning in August 2006, we further expressed our concerns regarding the alternatives analysis in the DEIS and discussed with DOE fully integrating CWA Section 404 analyses into the NEPA review. Our December 26, 2007 letter to DOE more fully outlines these concerns. The DOE, in turn, declined to modify its approach to the DEIS and requested that the Corps work separately with the applicant.

Subsequently, the Corps worked with the applicant in an attempt to develop a purpose statement that could be used to satisfy Section 404 requirements and to provide documentation in the DEIS that describes the process and criteria used by the applicant to identify their alternatives. Much of this work was done from January to March 2007.

The Corps reviewed a second copy of the preliminary DEIS dated March 2007, which included the documentation prepared by the applicant, provided at Appendix F1 of the DEIS. In our June 5, 2007 letter to DOE, we discussed the preparation of this documentation (Appendix F1) and that our agreement to include it in the DEIS did not constitute our endorsement of the analysis or a confirmation that the analysis has identified the least environmentally damaging

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**Responses**

**Comment 116-01**

DOE acknowledges that USACE has not endorsed the project proponent's alternatives analysis, which was included in Appendix F1 of the Draft EIS, nor has USACE confirmed that the analysis identified the least environmentally damaging practicable alternative. DOE's understanding is that this determination will be made based on information presented in the Final EIS and Section 404 permit application and DOE acknowledges that USACE has the responsibility for making this determination before issuing a CWA Section 404 permit. DOE also recognizes that the wrong version of Appendix F1 was inadvertently included in the Draft EIS. DOE has worked with Excelsior to include the "correct" version of Appendix F1, which has been further updated, in the Final EIS. Issues and constraints identified have been further and better explained, discussions made more consistent, and the text and figures more clearly linked together. The project purpose and limitation on alternatives under the CCPI program were discussed with EPA and Corps staff on May 13, 2008.

116-01

## Commenter 116 – Robert J. Whiting

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practicable alternative, rather it documented the process and criteria used by the applicant to identify their preferred alternative.

At DOE's request, the Corps concurred in the release of the DEIS for public review and comment. **However, the DEIS dated November 2007 contains a different version of Appendix F1 than the version that the Corps reviewed and concurred in its release to the public.** Appendix F1 of the current DEIS contains information that had previously been removed at our request.

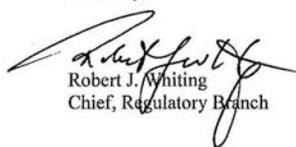
The Corps is aware that the Environmental Protection Agency (EPA) has provided comments to DOE regarding similar issues of an adequate project purpose and sufficient alternatives analysis under Section 404 of the CWA. Although it was our hope that these issues could be resolved, it appears that is not the case.

For reference, we have enclosed our February 23, 2007 comments provided to you on the review of the November 2006 advanced copy of the DEIS. Many of our previous comments remain applicable to the current DEIS, as identified in our enclosed comments on the November 2007 DEIS. Also enclosed are our letters to you dated July 18, 2006, December 27, 2006, and June 5, 2007.

The Corps also believes that there continue to be several NEPA deficiencies in the DEIS. These are 1) not addressing the alternative of a stand alone Phase I project; 2) not all direct actions are disclosed (e.g., not all wetland impacts appear to be disclosed in the impact tables); 3) not all impacts of connected actions are disclosed (e.g. need for additional high voltage transmission lines beyond the nearest substation); 4) not all impacts due to plant operations are disclosed (e.g., no evaluation of train and truck emissions over the 20 year life of the plant); and 5) an unresolved issue regarding the DOE's ability to evaluate alternatives to the applicant's proposed project.

We remain interested in coordinating with you on this proposal. Please contact Ms. Kelly Urbanek in our Bemidji Field Office at (218) 444-6381 with questions or for further coordination.

Sincerely,



Robert J. Whiting  
Chief, Regulatory Branch

Copy furnished:  
Bill Storm, Minnesota Department of Commerce  
Bob Cupit, Minnesota Public Utilities Commission

## Responses

### Comment 116-02

The issues enumerated in this comment have been addressed in response to respective subsequent comments as indicated below:

- (1) Comment 116-05 addresses the issue of a Phase I only outcome.
- (2) Comments 116-07, -22 and -23 address the impacts on wetlands.
- (3) Comment 116-15 addresses the issue of network upgrades.
- (4) Comment 116-38 addresses vehicular emissions.
- (5) Comment 116-11 addresses DOE's consideration of alternatives.

116-01  
(cont'd)

116-02

## Commenter 116 – Robert J. Whiting

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Mesaba Energy Project Draft EIS Comments  
By U.S. Army Corps of Engineers Regulatory Branch, St. Paul District  
Dated January 29, 2008

- 116-03** | 1. Several comments provided in our February 23, 2007 preliminary DEIS comments letter are unresolved (e.g., #2, #4, #8-10, #13-14, #18, #35, #41, #43, #44, #46, #47-49, #55-58, #61, #63, #65, #69, #75, #77-81, #83-93, #99-100, #103-104, #107).
- 116-04** | 2. Page S-6 second paragraph and Page 1-7. The Corps is aware that EPA takes issue with the purpose statement. This needs to be resolved.
- 116-05** | 3. Page S-4 second paragraph. The Corps has requested in prior comments that a “Phase I project only” be evaluated in the EIS. The DOE had informed the Corps that a phase 1 only project would not be considered because it isn’t being considered by the Minnesota Public Utilities Commission. However, CEQ 40 questions specifically state that “An alternative that is outside the legal jurisdiction of the lead agency must still be analyzed in the EIS if it is reasonable.” CEQ 40 questions also states that “In determining the scope of alternatives to be considered, the emphasis is on what is “reasonable” rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. In this case, a phase 1 only project is not outside the legal jurisdiction of the DOE, and can be carried out by the applicant. Whether the applicant desires a phase 1 only project, and whether the state is considering this option, are not sufficient to determine this alternative is not reasonable under NEPA .
- 116-06** | 4. Page S-26. Affects to Air Quality and climate are an important part of the Corps public interest review. However, the Corps would likely defer to the permitting agencies and federal land managers (MPCA, EPA, National Park Service, and Forest Service) analysis, and give great weight to their positions or opinions regarding impacts to Class I areas.
- 116-07** | 5. Page S-33. The text does not provide an overall magnitude of the wetland impacts in this textual form. It is recommended to have the impacts presented in a tabular format.
- 116-08** | 6. Page S-34. Please update the ESA discussion.
- 116-09** | 7. Pages 1-6 (paragraph 2) and 2-1 (paragraph 3). It is not clear what is meant by “consistent with DOE requirements and those of the MDOC, USACE, and USDA Forest Services.” Please clarify, or remove USACE from the sentence.
- 116-10** | 8. Page 1-6 discusses the need for additional baseload power and references documentation in Appendix F1. Because a reasonable review of the project need is an important part of our public interest review, and several utility companies have prepared and submitted new 2007-2008 resource plans, this information should be updated to reflect current projections.
- 116-11** | 9. Page 2-2, alternatives discussion. The Corps brought up concerns regarding the DOE’s limited alternatives analysis in an August 10, 2006 DOE/Corps conference call. We remain concerned regarding the limited scope of the alternatives analysis, and are aware that EPA has also expressed the same concern in their January 11, 2008 comment letter. This issue should be resolved prior to issuance of the FEIS.

## Responses

### Comment 116-03

The comments indicated are addressed in responses to the February 23, 2007 submission by USACE beginning with the response to Comment 116-26 in sequence. Only the comments listed here by USACE have been assigned numbers and responded to in this document. In consultation with USACE, DOE concluded that all other comments from the February 23, 2007 submission were addressed to USACE’s satisfaction in the Draft EIS as published.

### Comment 116-04

DOE discussed the statement of DOE’s proposed action and purpose and need for agency action with EPA and Corps staff on May 13, 2008. DOE has addressed EPA’s comment (111-02) relating to the purpose statement by revising text in Chapters 1 and 2 (as well as the Summary) of the Final EIS (Volume 1).

### Comment 116-05

Although DOE believes that the proper scope of the Final EIS is to address the impacts associated with both Phase I and Phase II developments since Phase II is a connected action, DOE agrees that a Phase I-only project is at least a reasonably foreseeable outcome. Therefore, the Final EIS has been updated in Chapter 4 (Volume 1) to provide an analysis of Phase I only impacts for the West Range and East Range Sites. It should be noted, however, that MDOC is precluded from considering alternative size, type of project, or timing under state regulations. In addition, DOE notes that the primary purpose of the Final EIS is to address the impacts associated with both Phase I and Phase II developments. The Project must also comply with Minnesota Rules Chapter 7849 (“Power Plants and Transmission Lines”) that requires an applicant to provide an engineering analysis addressing how each site could accommodate expansion of generating capacity in the future. Therefore, although a Phase I-only project is considered in the Final EIS, the siting criteria for the Project – providing sufficient resources and space for a Phase II expansion – remains intact.

### Comment 116-06

Thank you for your comment. It has been noted and will be included in the administrative record for this EIS.

### Comment 116-07

The Summary Comparison of Impacts table is intended to provide comparisons of impacts for all resource areas in a common format at a high level of summarization. Section 4.7 of the Final EIS (Volume 1) provides detailed tables (4.7-33 and 4.7-34) comparing impacts on wetlands for both of the project proponent’s alternative sites.

**Commenter 116 – Robert J. Whiting**

**Responses**

**Comment 116-08**

A Biological Assessment has been prepared to address potential effects on the Canada lynx, which has been incorporated into the main text of the Final EIS and is included in Appendix E (Volume 2).

**Comment 116-09**

The statement has been revised in the Final EIS (Volume 1) to delete the phrase indicated.

**Comment 116-10**

The most recent baseload electric power projections of Minnesota utilities identified in completed integrated resource plans have been updated in Appendix F1.

**Comment 116-11**

DOE discussed this comment with EPA and Corps staff on May 13, 2008. In response to this comment and a related comment by EPA (111-02), DOE has revised Chapter 2 of the Final EIS (Volume 1) clarifying its position with respect to the scope of alternatives analysis and the “reasonable” alternatives available to the agency.

**Commenter 116 – Robert J. Whiting**

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- 116-12** | 10. Page 2-7 second paragraph. The Corps does not concur with the reasons given for the applicant's stated preferred alternative.
- 116-13** | 11. According to an announcement by the applicant on January 23, 2008, Excelsior is proposing to utilize an enhanced ZLD on the West Range Site (please see our previous comments #41 and #80 from February 2007). Please update the analysis in the FEIS to reflect the enhanced ZLD on the West Range Site.
- 116-14** | 12. Page 2-30 Section 2.2.2.4 Infrastructure requirements. The discussion on the MISO studies is from DOE's response to our February 07 comments. What is the current status of the MISO studies? This information should be updated and reflected in the FEIS.
- 116-15** | 13. Page 2-30-31 Section 2.2.2.4. Includes discussion of the network upgrades that would be necessary (Boswell to Riverton, and full power deliverability to the Twin Cities). It does not appear that impacts resulting from these actions are discussed or evaluated.
- 116-16** | 14. Page 2-31 Section 2.2.2.5. Please clarify the last sentence in the first paragraph "The plans for connecting the BNSF and or CN, with the Mesaba...on the West or East Range ..would require plan approvals from the respective companies; however, no other public approvals would be needed." As you are aware, Department of the Army permits may be required for construction of the railway connection or improvements to the existing railway infrastructure. Please clarify.
- 116-17** | 15. Page 2-75 Section 2.3.2.5. The nomenclature used in the HVTL corridors to discuss alternatives for the East Site are different in different parts of the discussion. For example, the text includes the discussion of the 39 Line and the 43 Line and Figure 2.3-8 includes HVTL Alt 1 and HVTL Alt 2. Please clarify the discussion and the figures in identifying the preferred alternative on the East site.
- 116-18** | 16. Page 3.7-1 Section 3.7.2 Regulatory Framework. Please remove the statement "Federally regulated wetlands are governed by Section 404 and Section 401 of the CWA and are characterized as wetlands hydrologically connected or adjacent to Navigable Waters of the US". CWA jurisdiction has become more complicated and is difficult to accurately summarize. Recommend replacing this sentence with – "Under Section 404 of the Clean Water Act, a Corps permit is required for the discharge of dredged or fill material into waters of the U.S."
- 116-19** | 17. Page 3.7-1 last paragraph. The last paragraph is also not entirely accurate. We recommend removing the entire paragraph.
- 116-20** | 18. Page 3.7-2 last sentence in first full paragraph. Please remove the statement "The majority of wetlands identified in each alternative site have a connection to interstate commerce, however, some wetlands appear to be isolated" for the same reason given above. In addition, the Corps has not reviewed a final delineation report for either site or determined the jurisdictional status of wetlands at either site.
- 116-21** | 19. Page 3.7-4 Second paragraph. Please remove the statement "The 1987 Manual requires all wetland criteria, hydrophytic (wetland) vegetation, hydric (wetland) soil, wetland hydrology

**Responses**

**Comment 116-12**

Clarification has been added to the text of the Final EIS to indicate that these are the participant's principal reasons for selecting the preferred alternative and concurrence by USACE or DOE is not implied. Also, as previously noted Appendix F1 has been updated to more effectively and clearly document and explain issues and constraints at alternative sites.

**Comment 116-13**

The Final EIS has been updated to reflect the project proponent's announced decision, to be reflected in a revised permit application to the MPCA, to utilize an enhanced ZLD system at the West Range Site, which would eliminate discharges of process water and cooling tower blowdown into any water bodies (see new figures provided in Section 4.5.3 [Volume 1]). Use of the enhanced ZLD system at the West Range Site would be implemented as described for the East Range Site in Section 4.5.4 (Volume 1) of the Draft EIS. The impacts associated with using the enhanced ZLD system at the West Range Site are discussed under Mitigation Alternative 3 in Section 5.3.2.1 (Volume 1) and Appendix H (Volume 2) of the Final EIS. In general, the enhanced ZLD system would greatly reduce water quality impacts, reduce water appropriation needs, and eliminate wastewater discharge pipelines.

**Comment 116-14**

DOE provided information pertaining to the contents of MISO studies as available in Section 2.2.2.4 of the Draft EIS (Volume 1). New text has been added to Section 2.2.2.4 (Volume 1) regarding updates from feasibility and system impacts studies since publication of the Draft EIS. The information presented in the Final EIS is the latest available on these studies. See also the response to Comment 116-15 below.

**Comment 116-15**

Section 2.2.2.4 (Volume 1) of the Draft EIS explained that the POIs with the regional electrical grid would be the Blackberry Substation for the West Range Site and the Forbes Substation for the East Range Site. The section also discussed the HVTL infrastructure decisions needed from the MISO for the Mesaba Energy Project based on interconnection studies ongoing, planned, and anticipated. Draft EIS Sections 2.3.1.5 and 2.3.2.5 for the West Range and East Range Sites, respectively, described the alternative alignments and required upgrades for HVTL corridors from the plant sites to the POIs. The scope of the EIS did not extend to the power distribution system beyond the respective POIs due to the uncertainties surrounding the MISO interconnection studies and the fact that planned expansions to the regional transmission system did

**Comment 116-15 (cont'd)**

not account for the rapidly changing circumstances associated with expansions to the industrial mining/manufacturing base on the Iron Range.

Section 2.2.2.4 (Volume 1) of the Final EIS has been updated to describe the current status of the interconnection studies underway or in the queue at MISO. Those studies must be completed before the potential environmental impacts of required upgrades down-network from the POIs can be determined with any certainty. In most cases involving physical changes to the HVTL network, the PUC would require a HVTL routing permit application, which would trigger MDOC's preparation of an EIS to address specific routes, proposed actions, and potential impacts.

See response to Comment 80-20, which addresses the same concern.

**Comment 116-16**

The statement in question – “however, no other public approvals would be needed” – refers to additional public approvals on the agreements/contracts between Excelsior and the rail companies. As listed in Chapter 6 of the Draft EIS (Volume 1), Excelsior is required to obtain a CWA Section 404 permit for the discharge of dredged and/or fill material in any jurisdictional wetlands and waters of the U.S., which includes the construction of the rail connection and/or improvements to associated railway structures. The USACE is the regulatory agency with the responsibility of authorizing these actions. For clarification, text has been revised to the effect: “The plans for connecting the BNSF and/or CN with the Mesaba Generating Station on the West or East Range Sites would require plan approvals from the respective companies. No other public approvals would be required for the interconnection itself; however, the construction of the rail line would require permits, such as a Section 404 permit from the USACE for dredging or filling waters of the United States.”

**Comment 116-17**

The labeling of HVTLs for the East Range Site in Section 2.3.2.5 of the Final EIS (Volume 1) has been revised to provide better correspondence between the lines and alternatives in the text and illustrations.

**Comment 116-18**

DOE has revised the second sentence in the first paragraph of Section 3.7.2 of the Final EIS (Volume 1) to read: “Under Section 404 of the Clean Water Act, a USACE permit is required for the discharge of dredged or fill material into waters of the U.S.”

**Commenter 116 – Robert J. Whiting**

**Responses**

**Comment 116-19**

The third paragraph in Section 3.7.2 of the Draft EIS has been deleted in the Final EIS (Volume 1).

**Comment 116-20**

DOE has removed the following sentence in Section 3.7.2 of the Final EIS (Volume 1): “The majority of wetlands identified in each alternative site have a connection to interstate commerce; however, some wetlands appear to be isolated.” DOE acknowledges that USACE will make determinations about jurisdictional wetlands based on its review of the final wetland delineation reports.

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**116-21  
(cont'd)**

to be present in order for an area to qualify as a jurisdictional wetland.” for the same reasons given above.

**116-22**

20. Pages 3.7-8 through 3.17-15, The tables summarizing the wetlands on the west and east sites and corridors do not appear to be comparable summaries. For example, the West Range site tables indicate “Summary of Delineated Wetlands” and break down the plant site and associated corridors separately. While the East Range site tables indicate “Wetland Types” and include the plant site and associated corridors in one table. It is not clear if the East range site data is from on site delineation or gathered from desktop spatial tools. In addition, Table 3.7-5 - 565.13 acres of Wetland Type 2/3/4/6/7/8, is this one large wetland complex?

**116-23**

21. Section 4.7 Wetland Impacts DEIS and Pages 4.7-30 and 4.7-31. There are numerous references and tables on wetland impacts throughout the DEIS, however, it is difficult to understand the full magnitude of wetland impacts.

For example, Tables 4.7-21 and 4.7-22 include “Summaries of Total Temporary and Permanent Wetland Impacts” for the two sites.

- a. The tables do not identify the applicant’s preferred alternatives.
- b. The tables do not include corridor clearing impacts for the HVTL Alternative which are approximately 30.21 acres, according to Table 4.7-3.
- c. Please clarify Temporary/Permanent and Permanent/Permanent.
- d. What are the temporary impacts for the roads identified in the tables?
- e. Temporary ROW/Permanent Impacts in ROW do not appear to be included in the summary impact numbers. For example, the 26.45 acres of impacts under Rail Alternative 1A are secondary clearing impacts within construction limits. Footnote 3 states that the temporary impacts are actually permanent impacts which should be included in the permanent impacts for mitigation purposes. This is misleading.
- f. Are a majority of these temporary impacts actually secondary or indirect impacts that would be considered permanent? The Corps is inclined to look at one total impact number that includes all direct, indirect/secondary and temporary impacts.
- g. Based on our estimates, total impacts for the West Range Site could be approximately 240 acres.
- h. Due to these difficulties, the Corps is unable to utilize the information in the DEIS for consideration in determining the LEDPA.

**116-24**

22. Appendix D4 – Cumulative Assessment for Wetlands

The tables in Appendix D4 appear to be a more comprehensive list of the total wetland impacts for the sites (although it also appears that some impact numbers have changed). This assessment is presented by impacts by wetland type, which should be a part of the main analysis in the text of the DEIS.

While the Corps agrees that the assessment should be based on watershed boundaries, it appears that the Cumulative Assessment for Wetlands identifies two study areas and delineates “watersheds” that are not listed or established by MnDNR or USGS. The Corps recommends that the study be based on established watersheds.

**Responses**

**Comment 116-21**

DOE has revised the second paragraph in Section 3.7.4.3 of the Final EIS (Volume 1) to read: “The field investigations identified areas meeting wetland criteria as defined in the USACE Wetland Delineation Manual (USACE, 1987) herein referred to as the ‘1987 Manual.’ Determination of the wetland/upland boundary was accomplished using the three-parameter approach (hydrophytic vegetation, hydric soils and wetland hydrology) as outlined in the 1987 Manual.”

**Comment 116-22**

DOE has updated Table 3.7-4 in the Final EIS to reflect only delineated wetlands within the East Range Site, including the breakdown of the 565.13 acre wetland, and has added a new table reflecting only delineated wetlands within utility and transportation corridors for the East Range Site. This change provides comparable summaries for the West and East Range Sites. The East and West Range Sites were delineated as stated in the last paragraph of Draft EIS Section 3.7.4.3 (Volume 1): “A two-person team of wetland scientists delineated boundaries of the wetlands. Up to four teams were used to delineate the wetlands at the West Range Site and one two-person team delineated the wetland boundaries at the East Range Site. Access to the East and West Range was conducted by foot and/or by all-terrain vehicles.” This language remains in the Final EIS.

**Comment 116-23**

DOE has revised tables 4.7-33 and 4.7-34 in the Final EIS to more clearly define the anticipated permanent and temporary impacts of the project alternatives. This includes: (a) identifying the preferred alternatives; (b) including type conversion impacts in utility corridors; (c) clarifying temporary vs. permanent impacts; and (d) clarifying temporary road impacts.

**Comment 116-24**

DOE has revised the summary tables within Section 4.7 and Appendix F2 of the Final EIS to display wetlands impacts by type. DOE has made the appropriate modifications to the Cumulative Impacts Analysis in Section 5.2.5.

**Commenter 116 – Robert J. Whiting**

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23. Appendix D5 - Cumulative Impact Assessment- Wildlife Habitat

In reference to Comment #107 in our February 2007 comments, the Corps wishes to clarify that the request to compare the Cumulative Assessment for the Mesaba Project with the Minnesota Steel Cumulative Assessment was meant to center on a comparison on the methodology used in the MSI assessment.

A letter to DOE dated July 18, 2006, outlined our comments to the DOE’s approach for the cumulative impacts analysis for the EIS. With this letter, we attached the April 2006 Cumulative Impact Assessment Approach developed for the proposed mining projects. In our letter, we recommended that the scope of work for this study be adopted by DOE for the Mesaba project.

During a conference call on 3/5/07 regarding the wetland and biological resources sections of the DEIS, the Corps discussed the need to incorporate the same scope of work and incorporate the Ecological Classification System (ECS) and species assemblages that utilize the habitats within the ECS subsections. We forwarded several sections of the ECS and ECS subsection reports and the report “Tomorrow’s Habitat for the Wild and Rare – An Action Plan for Minnesota’s Wildlife”. The Corps continues to recommend that the DOE adopt a similar scope.

116-25

**Responses**

**Comment 116-25**

Additional information has been gathered to resolve discrepancies between the methodologies used in the Mesaba Energy Project Cumulative Impacts Assessment and in the Minnesota Steel Cumulative Impacts Assessment. Revised data and analysis within the EIS document include habitat mapping to level 3 under the Gap Analysis Program data and, comparably, level 4 of the ECS to match the analysis provided in the Minnesota Steel EIS. Section 5.2.6 (Volume 1) has been updated with this data and a revised analysis has been conducted to maintain consistency between the Mesaba EIS and the Minnesota Steel EIS.

DOE has included ECS and species assemblages that utilize the habitats within the ECS subsections in the biological resources sections of the Final EIS.

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Mesaba Energy Preliminary Draft EIS Comments  
by U.S. Army Corps of Engineers Regulatory Branch, St. Paul District  
February 23, 2007

### General comments:

1. The traditional format of affected environment and environmental consequences is more difficult to review than the updated format of combining the affected environment and consequences by resource. If possible, suggest updating the format to make the EIS easier to review.

116-26 | 2. I couldn't find any discussion in the DEIS of USFS review requirements.

3. As the lead federal agency, the Corps would like to arrange for the DOE to satisfy NHPA Section 106 and ESA Section 7 requirements for both agencies.

116-27 | 4. A reasonable alternative would appear to be a phase 1 project only. It appears to satisfy both the DOE and MN purpose & need statements, and would be less damaging to the aquatic environment. Please address this alternative.

5. If the improvements to County Road 7 that are associated with the proposed project would be federally funded, then FHWA should also be involved in the preparation of the EIS.

6. Impact criteria were established for some but not all resources evaluated. Sometimes the criteria were used to designate an impact, sometimes to designate an adverse impact, and sometimes it was used to identify significant impacts. What was the rationale for providing these impact criteria, what is their source, and why were they established at different levels and sometimes not at all for the various resource categories in the EIS?

7. Recommend coordinating the preparation of the EIS with the STB if the proposed new rail line would require their approval.

116-28 | 8. Based on the wetland impact acreage in the EIS, the East Range site appears to be less damaging to the aquatic ecosystem than the West range site. The 404(b)(1) guidelines specifically require that "no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences" (40 CFR § 230.10(a)). This means that between these two sites, the East Range site would be the least environmentally damaging practicable alternative (LEDPA), causing the West Range site to fail to meet the CWA Section 404(b)1 guidelines. Consequently, Excelsior must either a. demonstrate that the East Range site would be more damaging to the aquatic ecosystem than the West Range site, b. demonstrate that the East Range site would have other adverse environmental consequences that exceed the West Range site impacts, or c. demonstrate that the East Range site is not a practicable alternative.

## Responses

**NOTE: As indicated in Comment 116-03, USACE referenced certain comments that were submitted in February 2007 prior to publication of the Draft EIS as requiring further consideration by DOE. Only the comments listed in Comment 116-03 have been assigned numbers and responded to in the following pages. In consultation with USACE, DOE concluded that comments not indicated in Comment 116-03 and not assigned numbers in the following pages were addressed to USACE's satisfaction in the Draft EIS as published.**

### **Comment 116-26**

The USDA Forest Service has participated as a cooperating agency for this EIS as stated in Section 1.1 (Volume 1): "As a Federal Land Manager, the USDA Forest Service has an affirmative responsibility to protect air quality-related values of wilderness areas. Accordingly, the USDA Forest Service, as a cooperating agency, provides technical expertise in the review of air quality impacts." This language remains as presented in the Final EIS.

### **Comment 116-27**

See response to Comment 116-05, which addresses the same concern.

### **Comment 116-28**

DOE recognizes that USACE will not issue a CWA Section 404 permit unless Excelsior can demonstrate that the proposed site represents the LEDPA, as determined by USACE. DOE understands that USACE will make the LEDPA determination based on wetland impacts while taking into consideration impacts to other environmental resources and local communities.

The avoidance and minimization analysis and discussions in the Final EIS have been substantially expanded, and new rail and road alternatives developed (see Section 2.3 [Volume 1] of the Final EIS) in order to reduce direct and indirect wetland impacts, especially at the West Range Site. Additional explanations of the potential for indirect impacts to wetlands have also been added as appropriate to the Final EIS.

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- 116-29** | 9. Corps staff are still working with Excelsior representatives on the alternatives analysis needed to satisfy Corps NEPA and 404 requirements. Corps comments recently submitted to Excelsior regarding Corps NEPA and 404 requirements are attached for your information. We would like the DOE to include the supplemental information prepared by Excelsior in an appendix to the EIS.
- 116-30** | 10. We have substantial concerns with the water resources, wetlands, and biological resources sections of the EIS, and would like to have a teleconference with the DOE and preparers of the EIS to facilitate the preparation of constructive comments on these sections.
- Specific Comments:
- Section 1, Purpose and Need:**
11. P. 1-3, line 3: Please change "requested" to "agreed" to be a cooperating agency.
12. P. 1-3, line 11: please add, after the description of a cooperating agency, the following: "In the case of the Corps of Engineers, they are a cooperating agency because the placement of dredged or fill material in Waters of the U.S., including wetlands, associated with the proposal would require their authorization pursuant to Section 404 of the CWA. The Corps is participating in the preparation of the EIS from a regulatory perspective. In their role as a cooperating agency, Corps staff have provided input regarding potential aquatic resource impacts and related regulatory requirements."
- 116-31** | 13. P. 1-4, line 25/29: The EIS states that applications were "evaluated against programmatic criteria ....appropriateness of proposed site..including permits..." What were the programmatic criteria related to CWA Section 404 permit requirements?
- 116-32** | 14. P. 1-5, line 9/11: The EIS states that DOE reviewed preliminary environmental information during the selection process, pursuant to NEPA. How was this done? Were the preferred and alternate site subjected to the preliminary environmental review? If so, was the extent and magnitude of aquatic resources a consideration in this review?
15. P. 1-5, line 30: change "federal government" to "DOE" since there is more than one federal agency associated with the proposal.
16. p. 1-6, line 5: please change "government" to "DOE"
17. p. 1-6, line 21/22: "analysis of... proposed action and reasonable alternatives" appears to be a poor choice of words, given our understanding of the DOE position that it cannot evaluate alternative sites, regardless of whether they are reasonable, if they are not proposed by the applicant.

## Responses

### Comment 116-29

The supplemental information requested by USACE in its comment submitted February 23, 2007 was provided by the project proponent and included in Appendix F1 (Volume 2). A corrected and updated version of Appendix F1 has been included in the Final EIS.

### Comment 116-30

DOE discussed these issues with USACE representatives in a teleconference on March 5, 2007, before publication of the Draft EIS. In addition, DOE had meetings with the USACE on July 23, 2008 in Washington, August 7, 2008 in St. Paul, and September 3, 2008 in Bemidji and has had numerous phone calls and email exchanges to clarify feedback from the USACE.

### Comment 116-31

This EIS is a post-selection document. Programmatic criteria are described in Section 1.2 (Volume1). The criterion of "Project Feasibility" covers the appropriateness of proposed site(s).

### Comment 116-32

DOE explained to USACE how the information supplied by submitters under CCPI, including site information, was considered in its environmental review.

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116-33

18. p. 1-7, line 22/29: Corps staff have worked with Excelsior representatives to arrive at an appropriate project purpose relative to Corps NEPA and CWA section 404 requirements. As previously noted, we ask that this information be supplied as part of the EIS, in an appendix. Please add the following or a similar statement to page 1-7: "In consultation with Corps Regulatory staff, Excelsior has developed a purpose and need statement to satisfy corps NEPA and CWA section 404 requirements. This project purpose, provided in Appendix X, will be carried into the CWA section 404 permit evaluation, and will be the basis for the alternatives analysis required by Corps and EPA regulations."

19. P. 1-8, line 27/30: please take into account the purpose & need documentation prepared by Excelsior subsequent to this draft, and revise accordingly.

20. P. 1-9, line 15/19: Suggest moving this text to the socioeconomics portion of the EIS.

21. p. 1-10, line 20/22: Based on conversations with Excelsior, suggest revising the statement to be more clear that the PUC does not exercise eminent domain until they have approved a site. This is important in terms of practicable alternatives.

22. P. 1-10, line 29: The statement "considering... of, and reasonable alternatives to, their proposed action" appears to be a poor choice of words, given our understanding of the DOE position that it cannot evaluate alternative sites, regardless of whether they are reasonable, if they are not proposed by the applicant.

23. p. 1-11, line 5/6: incomplete sentence

24. P. 1-11: Please add the following discussion about the EIS: " CWA section 404 authorization is required for the proposed project because its construction would require discharges of dredged and/or fill material into waters of the U.S. As a cooperating agency in the preparation of the EIS, and the agency responsible for determining whether to issue a permit for wetland impacts associated with the proposed project, it is the Corps intention to adopt the EIS as part of its permit evaluation."

25. P. 1-21, line 9: The Corps was invited and agreed to be a cooperating agency. Please change "requested" to "agreed"

26. P. 1-28, line 30: The EIS states that the task force recommended constraining the cumulative impact analysis to only those proposed projects that are permitted. This may be more restrictive than current guidance regarding the assessment of reasonably foreseeable activities.

27. P. 1-29, line 4: please change "federal government" to "DOE"

28. P. 1-29, line 20: Based upon our understanding of the national approach taken by the FHWA in evaluating alternative solutions for federally funded highway projects in

## Responses

### Comment 116-33

DOE included the following statement beginning on the first line of page 1-7 of the Draft EIS (Volume 1): "In consultation with USACE regulatory staff, Excelsior has developed a purpose and need statement to satisfy USACE NEPA and CWA Section 404 requirements. The project purpose, provided in Appendix F1 and stated below, will be carried into the CWA Section 404 permit evaluation, and will be the basis for the alternatives analysis required by USACE regulations." The Final EIS was revised to include similar language in new Section 1.4.3 (Volume 1).

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their NEPA analyses, the statement made in the EIS regarding DOE's limited ability to evaluate alternatives is difficult to understand. The Corps, as a permitting agency, has the same type of obligation, with 3 options: 1) issue permit for the requested action, 2) issue permit with special conditions/modifications, or 3) deny permit. However, Corps regulations at 33 CFR 325 require the Corps to evaluate alternatives beyond those proposed by the applicant. Corps staff have worked w/ Excelsior reps regarding an appropriate alternatives analysis. Please add the following to this section: "At the request of Corps staff, Excelsior has prepared an alternatives analysis intended to satisfy Corps NEPA and CWA Section 404 requirements. This supplemental alternatives analysis is provided in appendix X"

29. P. 1-29, line 30: Please change "obtain the required permits from the state" to "obtain all required state and federal permits"

### Section 2:

30. p. 2-1, line 26: Please change "state agencies" to "state and federal agencies"

31. p. 2-1, line 29: 2 potential scenarios are listed for the no action alternative. What about a 3rd alternative: Mesaba energy project modified to meet state & federal permit requirements.

32. P. 2-2, line 1/8: I don't understand why proceeding with the project as proposed would be part of the no action alternative.

33. P. 2-2, line 8: Due to the Corps Regulatory scope of analysis, a federal EIS would be required as part of CWA section 404 permit evaluation.

34. P. 2-2, line 13/19: Please add the following to this section: "However, to satisfy Corps NEPA and CWA Section 404 requirements, Excelsior has prepared an analysis of alternative sites within the TTRA. This supplemental alternatives analysis is provided in appendix X"

35. P. 2-2, line 20/23: A reasonable alternative would appear to be a phase 1 project only. It appears to satisfy both the DOE and MN purpose & need statements, and would be less damaging to the aquatic environment. Please address this alternative.

36. P. 2-3, line 16: what is meant by "in conformance with MN statutes" would it be against MN statutes to site a plant outside the TTRA?

37. P. 2-4: Excelsior has indicated in its alternatives analysis that more coal would be burned at the East Range site than the West Range site. Table 2.1-1 shows the same amount at both sites.

38. P. 2-5, line 25: It is our understanding that the current proposed sites would not meet the criteria in the 2003 legislation, which was amended in 2006 to allow utilization

## Responses

### Comment 116-34

See response to Comment 116-05, which addresses the same concern.

116-34

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of the preferred or alternate site. In 2003, the Minnesota Statute required the site to be located in the TTRA on a previous mining or industrial site, have direct rail access to a Great Lake Port, and have onsite access to railroad infrastructure. The 2006 modifications to the statute deleted the requirement that the site be on previous mining or industrial site but still within the TTRA and changed the railroad access to existing railroad infrastructure within three miles of the site. If this is the case, then in the interest of full disclosure, this distinction should be made in the document.

39. P. 2-9, line 2: Please delete "for the federal proposed action" since there is more than one federal action associated with the proposal.

40. p. 2-20, line 4-18: Technology is available for CO<sub>2</sub> capture – Please explain why CO<sub>2</sub> is not included in the project as a reasonable measure to reduce impacts.

116-35 | 41. p. 2-27: The EIS states that the ZLD will be used at either site, and will be enhanced at the East Range site to treat cooling tower blow down. This option should also be evaluated for the West Range site as well. Please see also our comments on the Water Resources Section.

42. p. 2-28, line 17: typo, power vs. powder

116-36 | 43. p. 2-29 line 3: Since a FSQ would have less impact, please explain why it is not practicable.

116-37 | 44. p. 2-33: Please explain the contents of the MISO reports and impact studies and what their findings mean for the practicability of the proposed project. What overall network upgrades or new transmission system infrastructure is necessary in order for the project to deliver output or be designated as a network resource?

45. p. 2-36 line 3: The EIS states that air emissions would be independent of the site, but the analysis shows more PM10 emissions at the East Range site.

116-38 | 46. p. 2-36 line 16-19: Were truck and train emissions analyzed?

116-39 | 47. p. 2-62 line 1: The EIS states that rail route 1-A is preferred due to less impact, but it shows 77 acres wetland impact vs. 64 acres of impact for route 1-B. For route 1-A to be permissible, the applicant would need to demonstrate that it is the least environmentally damaging practicable alternative.

116-40 | 48. p. 2-69 line 26: Alternative 2 for wastewater treatment appears to be the least environmentally damaging practicable alternative.

116-41 | 49. p. 2-78: Rail alternative 2 at the East Range site appears to be the least environmentally damaging practicable alternative.

## Responses

### Comment 116-35

See response to Comment 116-13, which addresses the same concern.

### Comment 116-36

DOE included the following text in the sixth paragraph on page 2-27 of the Draft EIS (Volume 1): "Operating in fully slurry quench mode would result in reduced fuel use and, consequently, reduced pollutant emissions/discharges, and Excelsior intends to operate the Mesaba Energy Project in the more-efficient full slurry quench mode to the extent feasible. However, full slurry quench is an IGCC design improvement that is subject to further engineering and verification by experience at the Wabash River Plant. Therefore, to avoid unrealistic expectations, neither the maximum resource requirements nor maximum pollutant emissions/discharges operating under full slurry quench are considered in this EIS." This text has been retained in the Final EIS (Section 2.2.2.1, Volume 1).

### Comment 116-37

See responses to Comments 80-20, 116-14 and 116-15, which address the same concerns.

### Comment 116-38

Sections 2.2.3.1 and 4.3.2 (Volume 1) of the Final EIS have been updated to include a subsection with discussions regarding truck and train emissions associated with the Mesaba Energy Project (also see response to Comment 12-01 which addresses the same concern). Emissions from coal unloading and loading from trains are not expected to appreciably change air quality because emissions would be reduced by minimizing unenclosed points of material transfer components, enclosing conveyors and loading areas, and installing control devices such as baghouses and wetting systems.

### Comment 116-39

See response to Comment 116-28, which addresses the same concern.

### Comment 116-40

As stated beginning on the first line of page 2-61 of the Draft EIS (Volume 1): "Excelsior prefers Alternative 2 for treatment of domestic wastewater from the Mesaba Generating Station because it would avoid discharging treated domestic effluent upstream of public waters impaired for DO and nutrients." This text has been retained in the Final EIS (Section 2.3.1.3, Volume 1).

### Comment 116-41

See response to Comment 116-28, which addresses the same concern.

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50. p. 2-84 line 12: The EIS states that there is a significant cost of increased ZLD on East Range site. Does the applicant consider this a factor in the practicability of this site?

### Sections 3 and 4

Affected environment and environmental consequences were briefly reviewed consecutively by resource. Comments are provided in that sequence. Due to the brief review, lack of comment does not constitute agreement with the content of the EIS. Corps Regulatory staff will likely have additional comments upon a more thorough review of the EIS.

### Aesthetics (3.2/4.2)

51. P. 4.2-9 line 7: Regarding the GIS visibility analysis of emissions, I don't understand figures 4.2-1 & 4.2-2

### Air (3.3/4.3)

52. p. 3.3-2 shows a wind rose for West range site. Is there a wind rose for the East range site?

53. p. 3.3-6: Please explain the concept of class I and Class II areas. These are not defined in the glossary.

54. p. 3.3-7: Does the applicant view the closer proximity of the East Range site to the Class I areas as a consideration in the determination of the least environmentally damaging practicable alternative?

116-42

55. Section 4.3: Please address any aquatic resource impacts associated with mercury deposition.

116-43

56. p. 4.3-7: It does not appear that construction emissions were calculated. Why?

116-44

57. p. 4.3-8: Were train and vehicle emissions analyzed with the other emissions, to arrive at total emissions?

116-45

58. p. 4.3-9: The EIS states that plumes will rise to significant heights, several thousand feet. Was this modeled in the visual impact analysis?

59. 4.3-9 line 25 refers to high concentration of dissolved solids in source water. Please provide a complete set of water quality data to allow a comparison of eastern and western site water sources.

60. 4.3-33 Summary indicates the East Range will not comply with PM10. However, this section indicates it can be mitigated through the installation of control technology (pg.4.3-32). Does "mitigation" mean "compliance?"

## Responses

### Comment 116-42

Impacts to aquatic resources associated with mercury emissions from the power plant are discussed briefly in Section 4.3.2.6 of the EIS (Volume 1) with more detail on the risks associated with the fish ingestion mercury-exposure pathway in the Section 4.17, Safety and Health (Volume 1). The Final EIS has been revised to insert a missing sub-section heading (in printed copies of the Draft EIS) "4.17.2.3 Human Health Risks" for the text that addresses human health risks associated with air pollutants (including mercury emissions) from the project.

### Comment 116-43

Vehicle traffic emissions during peak construction were calculated and presented in Section 4.3.2.2 of the Draft EIS (Volume 1). However, emissions from other construction-related activities, such as site grading and soil movement, were not calculated. The qualitative assessment of the impacts from these activities is based on similar types of construction activities, and it was determined that the emissions would be small compared to the regulatory threshold used to determine the need for further impact analysis.

### Comment 116-44

See response to Comment 116-38, which addresses the same concern.

### Comment 116-45

The visual impacts of the cooling tower plume are discussed in Section 4.2.2.2 of the Final EIS (Volume 1). The plumes from the cooling towers would consist of water vapor and are expected to be similar to small cumulus clouds and their presence will be dependent on the time of the year, the rate at which coal is being processed into syngas, and the rate at which syngas or natural gas is being consumed in the combustion turbines.

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**116-46** | 61. p. 4.3-18: The EIS states that there would be no significant visibility impact. However, in the comparison between the East Range site and the West Range site (p. 4.3-23), would the applicant consider visibility to be a factor in determining the least environmentally damaging practicable alternative?

62. p. 4.3-21, line 16: The EIS states that predicted CO<sub>2</sub> impacts are slightly lower for the East Range site, but elsewhere it says that emissions are independent of site, and on another page it says they are the same except for CO<sub>2</sub>. Please edit for consistency.

**116-47** | 63. p. 4.3-23 line 6: What is the USFS position relative to the estimate that on 40 to 60 days per year there will be greater than 10% reduced visibility in the BWCA post-project?

64. p. 4.3-29: was the Excelsior carbon capture plan included as an appendix?

**116-48** | 65. p. 4.3-30: The section on mercury deposition does not discuss any predicted human or environmental impact of the mercury emissions associated with the proposed project? Please include this discussion in the EIS.

### Geology (3.4/4.4)

66. p. 3.4-24: Does the CO<sub>2</sub> sequestration plan indicate whether it would be practicable to sequester CO<sub>2</sub> from the proposed project at the sites evaluated in the plan?

### Water Resources (3.5/4.5)

67. Please address the alternative of sending cooling tower blowdown to the local wastewater treatment plant.

68. Please address the alternative of treated wastewater as a water supply.

**116-49** | 69. Please address any fisheries impacts that may be associated with water withdrawals from the potential sources of water supply at both the West and East site.

70. Please provide equivalent information together to allow comparisons between sites. If equivalent information is not available, that should be stated. For example:

- a. Table 3.5-8 provides sustainable flow information for the east site (determined adequate for phase I and II), but this information is not provided in this section for the west site. It would be beneficial to place this table next to table 2.3-5. The sustainable flow information for the west site is located in the environmental consequences section at pages 4.5-8 and 9.
- b. A comprehensive list of water quality data for the west site is provided in table 3.5-4. This information is not provided in the section for the east site.

## Responses

### Comment 116-46

DOE's statement in the DEIS reflects DOE's understanding of the known conservatism in the FLAG 2000 guidance on modeling visibility impacts and the proponent's analysis of the actual meteorological circumstances attending times when significant visibility impacts were modeled.

Therefore, although the actual impacts in some circumstances are deemed to be insignificant because of natural conditions, the modeled impacts are not. Given that the FLMs will use modeling results on which to base their initial findings of an adverse impact to visibility, DOE expects that USACE which has the responsibility for making a LEDPA determination, will consider modeled visibility impacts as a factor. However, to respond to the specific question in this comment, DOE understands that Excelsior also considers visibility impacts a factor in determining the LEDPA.

### Comment 116-47

The USDA Forest Service considers the modeled visibility impacts to the nearby Class I areas described in the Draft EIS as significant. See responses to Comments 49-01 and 49-11, which address concerns from the MPCA and the Forest Service regarding the visibility modeling.

### Comment 116-48

Predicted human and environmental impacts of mercury emissions from the power plant are discussed in the Section 4.17, Safety and Health, of the EIS (Volume 1). The Final EIS was revised to insert a missing sub-section heading (in printed copies of the Draft EIS) "4.17.2.3 Human Health Risks" for the section that addresses human health risks associated with air pollutants (including mercury emissions) from the project.

### Comment 116-49

The following text has been added to Section 4.8 (Volume 1) to address potential effects of water withdrawals on fish populations:

"Large quantity water withdrawals for plant process water requirements could alter lake or stream temperatures and reduce the quality and quantity of aquatic habitat. Consequently, this could impact the lake or stream's ability to support certain types of fish, potentially leading to a decline in biodiversity in source waters for the project. Significant water level reductions could interfere with lake trout natural reproduction, as this species deposits eggs in the fall on boulder or cobble habitats in depths usually less than 40 feet and incubation lasts 4 to 6 months after spawning (Snyder and Oswald, 2005). Refer to Section 4.5, Water Resources (Volume 1), for surface water withdrawal predictions."

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71. Refer to Table 3.5-1. Regarding mercury FCA impairment: It should be stated here and elsewhere, that surface water bodies not listed as impaired simply may not have been tested. This is particularly important considering the prevalence of mercury fish consumption advisories in the immediate area and regionally.

72. Page 4.5-1, Method of Analysis. The determination or evaluation of whether a “significant impact” will occur is based on subjective and vague terms or conditions. This section needs attention.

- a. “Substantially change capacity”. How is this measured? A challenge for siting the plant was finding adequate water sources. At the west site, it is not clear there will be available sources for phase I and II. It has not been determined if this will substantially affect water withdrawal opportunities for future users?
- b. “Contaminate surface waters” such that water quality no longer meets applicable water quality standards. Would this include an evaluation of compliance with the state’s non-degradation standard? It is suggested the statement be reworded to, “modify surface waters”.
- c. “Change stormwater discharges affecting drainage patterns...” It is difficult to describe a human caused disturbance that does not have this effect.
- d. “Contaminate... listed protected water bodies”. We are unsure what this “list” might include. However, the Canisteo Mine Pit contains lake trout with documented natural reproduction. A waterbody with status as a “lake trout water” might receive special protection in MN law and regulations. For example, it is understood MN is reviewing their water quality standards and have proposed modifications to the phosphorous and mercury standards. The most stringent standards would be applied to lake trout waters. It is recommended you change “contaminate” to “modify”.

73. p. 4.5-1: The Region of Influence for surface water resources should be appropriate sized subwatershed basin(s) encompassing the project site and right of ways.

74. 4.5-3, line 3. It is stated that the impaired status of waterways, due to mercury, is a result of levels found in the surface water. It should be clarified that impairment is a result of levels found in fish flesh.

75. 4.5-3, line 11. Explain in detail why an increase in the concentration of phosphorous and mercury has no deleterious effects. Explain how this is acceptable under the state nondegradation water quality standard.

76. 4.5-3, line 15. The west site requires the development of a water management plan to ensure the facility will maintain compliance with mercury water quality standards and to manage phosphorous levels. A brief conceptual plan should be included in the document to allow a prediction of effects to the aquatic environment.

## Responses

### Comment 116-49 (cont’d)

Potentially affected fisheries are the CMP and Prairie River on the West Range and Colby Lake and White Water Reservoir on the East Range. Withdrawals from the Prairie River may not be necessary and would be less than the state limit of 25 percent of 7Q10 flows, which is set to protect the river from excessive withdrawals (see response to Comment 82-43). As part of the water appropriation permit process, the project proponent would be required to provide further hydrologic modeling to ensure that the Mesaba Generating Station would not result in any significant adverse impacts to regional water resources at both the West Range Site and East Range Site. New text has been added to Sections 4.5.3.1 and 4.5.4.1 (Volume 1) which discusses potential impacts on water level fluctuations as a result of water appropriation during the proposed facility’s operation at the West and East Range Sites, respectively.

### Comment 116-50

As discussed in response to Comment 116-13, the enhanced ZLD system at the West Range Site would not discharge any process-related wastewaters or non-contact cooling tower blowdown and, therefore, eliminates the concerns regarding discharge of pollutants posed by this comment.

116-50

**Commenter 116 – Robert J. Whiting**

Mesaba PDEIS Comments  
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- 116-51** 77. 4.5-3, line 20-33. Evaporative losses of water are approximately 3,500 gpm for each phase (7,000 gpm total). Explain the overall effect of this water loss in the subwatershed. Provide a discussion of the water balance impacts, diversions, long-range trend and effects, anticipated or projected hydrological effects to downstream waterways, wetlands, and potential subsequent impacts to biota.
- 116-52** 78. 4.5-6, line 30. The west site is preferred because of “abundant sources of water”. However, it does not appear that the status of available and sustainable water supplies at the west is fully determined (inflow rates/volumes to the mine pits is not clearly known). Additionally, the western site water source includes withdrawals from the Prairie River, which will result in an aquatic resource impact. Provide a discussion of the overall water balance and impacts at the west site.
- 116-53** 79. 4.5-6, it is not clear what effects the withdrawal will have on water levels in the pits or the withdrawal impact to biota and recreation. Provide commentary on maximum withdrawal allowances or anticipated restrictions.
- 116-54** 80. 4.5-6, use of ZLD at the west site would significantly reduce water needs and would possibly reduce the need to withdraw from the Prairie River. More dramatically, this eliminates the discharge of mercury and phosphorous to surface water. Please discuss.
- 116-55** 81. 4.5-15 indicates a transfer of water from the CMP to Holman Lake is necessary to control water level and/or to maintain water quality standard compliance for solids. Previous information indicates that facility water usage would control the water level (is the Prairie River needed as a water source?) in the CMP. In addition, this indicates there will be a reliance on groundwater inflows to the pit to control or “dilute” the buildup of solids. ZLD would eliminate this requirement and would not modify water quality for solids, phosphorous or mercury. 4.5-15 indicates the discharge to CMP will require a mixing zone to comply with TDS and conductivity limits. Will the pit water quality degrade over time for TDS and conductivity, and will that affect the mixing zone or the effluent limits? The current water quality in the CMP for TDS (solids) and conductivity is well below the water quality standard (Table 3.5-4). What is the anticipated level of degradation that will occur in the pit? (anticipated effluent limits in table 4.5-6)
- 116-56** 82. p. 4.5-15: Regarding the transfer of water from one waterbody to another (e.g. CMP to Holman Lake, Prairie River to CMP), provide a discussion regarding the potential adverse effects of biota transfer or the controls that will prevent it.
- 116-57** 83. 4.5-17, line 9. The mass is the same, but concentration will increase. How does this relate to the non-degradation standard?
84. 4.5-25, line 27. This statement indicates water in the lake is suffering from “stagnation” and would benefit from flushing. Previously, Holman Lake has been described as meeting all applicable standards (i.e. is not impaired). The lake has no

**Responses**

**Comment 116-51**

Regarding impacts to water resources resulting from use of mine pit waters, for the West Range Site, new text has been added to subsection *Water Levels and Water Balance During Operations* (under Section 4.5.3.1, Volume 1). The new text also addresses pumping estimates for the CMP and potential impacts to Holman Lake (no discharge to Holman Lake would occur during normal operating conditions). In general, use of the enhanced ZLD system at the West Range Site would eliminate discharges and decrease water demand and, thus, reduce most of the water quality and quantity concerns discussed in the Draft EIS.

**Comment 116-52**

The quantity of water available within the West Range mine pits and the Prairie River is described in Section 3.5.1.1 of the Final EIS (Volume 1). The inflow rates used by the project proponent for the CMP are based on MNDNR monitoring that was conducted when water elevations in the pit were at relatively high levels. Although this method produces a net inflow rate, it produces a measurement that is, in the case of the CMP, considered to be conservatively low. Inflow rates for the HAMP Complex were determined on the same basis and provided to the proponent by the MNDNR. The basis for these computations is included as Appendix E to the Water Appropriation Permit Application.

Flow estimates for the LMP and the Prairie River were determined on a different basis and are discussed in Section 3.5.1.1 of the Final EIS (Volume 1). More information regarding the flow calculation for the LMP can be found in Table 1.12-15 of the project proponent’s Environmental Supplement. In general, with the exception of the spring snow melt or torrential rains, the LMP continually overflows to the Prairie River. Available flow measurements include one measurement taken in the summer of 2005 and one taken in the winter of 2005; both measurements produced essentially identical flows.

Calculation of the 7Q10 for the Prairie River is provided in the project proponent’s Water Appropriation Permit Application to MNDNR (Appendix F in the application) and discussed in subsection *Prairie River Intake* (under Section 4.5.3.1 [Volume 1]). While the status of water sources would not be ‘fully determined’ until a Water Appropriation Permit is issued, the amount of available water has been estimated on the conservative bases described above (i.e., the water sources are likely to be more abundant than these conservative assumptions indicate). New text has been added to subsection *Water Levels and Water Balance During Operations* (under Section 4.5.3.1, Volume 1),

## Commenter 116 – Robert J. Whiting

Mesaba PDEIS Comments  
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- 116-57 (cont'd)** residences but has a public park and recreational beach. Is it possible the discharge might have an adverse impact, including water quality degradation?
- 116-58** 85. 4.5-26, line 30. Indicates mercury concentrations in process water will be allowed to rise until such time it approaches the standard (limit), and then will be discharged. Is this problematic in terms of non-degradation requirements?
- 116-59** 86. Without the water management plan (discussed at 4.5-3, line 15), it is unclear how, when and why discharge points 001 and 002 will be operated.
- 116-60** 87. p. 4.5-33, process water alternatives: Where is the discussion of the impact of water level fluctuations on the affected water resource(s)?
- 116-61** 88. 4.5-34. Mercury water quality standard in GL basin is 1.3 ng/L, at the west site, it's 6.9 ng/L. However, MN also uses a human health based 0.2 mg/kg fish flesh level to assess water quality impairment. MN has proposed to establish a WQ standard based on the fish flesh criteria. Compliance with one mercury standard will not assure compliance with the other. (The Swan River is already impaired for mercury in fish flesh. It is not clear that the CMP, HAMP, Holman Lake, Panasa Lakes have actually been tested.)
- 116-62** 89. 4.5-35, line 7. This points out that the ZLD system is practicable.
- 116-63** 90. p. 4.5-35, line 12: The EIS states that there would be a significant cost increase associated with the ZLD on the East Range site. Does the applicant consider this a factor in the practicability of this site?
- 116-64** 91. 4.5-35, line 25. ZLD eliminates all direct pollutant discharges to surface waters with the exception of domestic wastewater. This suggests ZLD treatment is an essential component of the LEDPA, at the east or west site.
- 116-65** 92. 4.5-38, line 10. This indicates there would not be any restrictions or controls on reducing water levels at the east site.  
a. Are there any implications to aquatic life resources in the east site pits?  
b. Are there any implications to competing water users?  
c. Does this imply there would be restrictions on water levels in the CMP, HAMP, at the west site?
- Wetlands (3.7/4.7)**
- 116-66** 93. Please address the potential for reducing wetland impacts by running the rail loop around the plant instead of off to the side.
94. Wetlands community types should be discussed generally regarding the functions they provide. Types of functions provided by wetlands include flood storage, water quality, habitat and recreation. Methodologies, such as MNRAM (*Minnesota Routine Assessment Method for Evaluating Wetland Functions*), provide a basis for assessing

## Responses

### Comment 116-52 (cont'd)

which discusses impacts to water resources from use of the mine pit waters.

### Comment 116-53

It is anticipated that withdrawal from the CMP would be restricted if water levels reached the 1,250 feet msl elevation range.

### Comment 116-54

See response to Comment 116-50, which addresses the same concern.

### Comment 116-55

See response to Comment 116-50, which addresses the same concern.

### Comment 116-56

See response to Comment 116-50, which addresses the same concern. New text has been added to Section 4.5.3.2 (Volume 1) regarding new analysis on phosphorous levels in the CMP.

### Comment 116-57

As discussed in response to Comment 116-13, the enhanced ZLD system at the West Range Site would not discharge any process-related wastewaters or non-contact cooling tower blowdown and, therefore, eliminates the concerns regarding discharge of pollutants posed by this comment. The section, *MPCA NPDES/SDS Permit for Cooling Tower Blowdown*, in which this statement was located has been revised and reference to "stagnation" of Holman Lake has been deleted.

### Comment 116-58

See response to Comment 116-50, which addresses the same concern.

### Comment 116-59

As explained in responses to Comments 6-01, 76-01, 76-02, and 76-13, the proposed use of an enhanced ZLD system at the West Range Site would eliminate the need for outfalls 001 and 002. MNDNR has proposed construction of an overflow device to regulate water levels in the CMP that would eliminate the need for the Mesaba Energy Project to provide an emergency outfall from the CMP pumping station to Holman Lake as initially discussed in the Draft EIS.

### Comment 116-60

New text has been added to subsection *Water Levels and Water Balance During Operations* (under Section 4.5.3.1, Volume 1), which discusses impacts to water resources from use of the mine pit waters.

### Comment 116-61

See response to Comment 116-50, which addresses the same concern.

## Commenter 116 – Robert J. Whiting

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these functions. MNRAM includes characteristics for landscape features and criteria such as wetland integrity and diversity that are used to evaluate wetland functions. Wetland resources should be assessed using MNRAM. Given the difference in acreage impacts of the two alternatives, a functional assessment by community type is necessary to assess which alternative is the least damaging.

95. P. 3.7-1: The wetland definition from the CWA, as shown on this page, is different from the wetland definition provided in the glossary.

96. P.3.7-1/20: Suggest adding MPCA to list of regulatory agencies, since they are responsible for CWA Section 401 certification.

97. Section 3.7.3 Wetlands were classified under the USFWS Circular 39 system. The Corps of Engineers uses a system that classifies wetlands by wetland plant community type (Eggers and Reed, 1997- *Wetland Plants and Plant Communities of Minnesota and Wisconsin*). Please incorporate this classification system into the EIS.

98. p. 4.7-1, line 29: Please update the definition of fill.

99. p. 4.7-34, line 14: Corps Regulatory staff evaluate wetland loss by function, and therefore give much attention to wetland impacts by type. In determining necessary compensation for unavoidable wetland impacts, Corps staff often use an acreage-surrogate. Please revise this paragraph accordingly.

100. p. 4.7-35, line 14/19: As stated previously, Corps Regulatory staff evaluate wetland loss by function, and therefore give much attention to wetland impacts by type. Wetland mitigation ratios often due vary by wetland type impacted, particularly for losses of forested wetland that require decades to establish. Please revise this paragraph accordingly.

101. p. 4.7-35, line 20: At this time, the Corps cannot concur in the statement that the "proposed action has been designed to minimize impacts to wetlands wherever feasible."

102. p. 4.7-35, line 25: The EIS implies that mitigation for temporary impacts would not be required. Mitigation is often required for temporal wetland impacts.

103. p. 4.7-37, line 1: In this paragraph, the EIS indicates that mitigation is dictated by wetland value. As stated previously, Corps Regulatory staff evaluate wetland loss by function, and wetland mitigation ratios often due vary by wetland type impacted, due to lost functions. Please revise this paragraph accordingly.

### Biological Resources (3.8/4.8)

104. Section 3.8/4.8 It does not appear that the EIS includes the following: a discussion of fishery or aquatic species resources or key habitat features in surface waters

## Responses

### Comment 116-62

See response to Comment 116-50, which addresses the same concern.

### Comment 116-63

See response to Comment 116-50, which addresses the same concern.

### Comment 116-64

See response to Comment 116-50, which addresses the same concern.

### Comment 116-65

The East Range mine pits are on private property to which the public is not allowed access and the waters therein are not protected under Minnesota Law. As a result, no fishery has been encouraged or established within the pits. See response to Comment 76-31 and new text in Section 4.5.4.1 (Volume 1) on competing water users at the East Range Site.

Water levels in the CMP and Hill-Annex Mine Pit Complex would be controlled as discussed in Section 4.5.3.1 (Volume 1). Water levels in the CMP and Hill-Annex Mine Pit Complex would be controlled as discussed in response to Comment 76-12.

### Comment 116-66

As noted in response to Comment 116-28 this alternative has, as have other rail alternatives, been evaluated and discussed in the Final EIS.

### Comment 116-67

In response to this comment in February 2007, DOE revised Section 4.7.7.1 of the Draft EIS (Volume 1) as published. DOE has further revised paragraph 2 of Section 4.7.7.1 of the Final EIS to read as follows: "Special or protected wetlands as discussed above are not known to occur within the West Range Site or the East Range Site IGCC Station Footprint and Buffer Land or utility and transportation corridors. However, areas of tamarack and spruce bogs are located within the facility site and the utility and transportation corridors (Excelsior, 2006b). USACE regulatory staff evaluates wetland loss by function, and therefore gives much attention to wetland impacts by type. In the absence of more definitive information on the functions of a specific wetland site, a minimum one-to-one acreage replacement may be used as a reasonable surrogate for no net loss of functions. Wetland mitigation ratios often vary by wetland type impacted, particularly for losses of forested wetland that require decades to establish. Therefore, a more detailed analysis of wetland loss by function and actual mitigation ratios is addressed in this section."

116-67

116-68

116-69

116-70

**Commenter 116 – Robert J. Whiting**

Mesaba PDEIS Comments  
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**116-70  
(cont'd)**

(lakes, mine pits, streams/rivers) in and around the project areas; a discussion of invertebrate populations and habitat features in and around the project areas; an assessment of impacts to fishery resources or aquatic species habitat; an assessment of the potential for impacts such as mercury bioaccumulation in fish, the potential for biota transfer between water sources in the west range site or impacts to recreational fishing/angling activity.

105. Section 3.8/4.8: Discussions of biological resources, especially wildlife habitat should be based on an association of habitat community types and species use or reliance on habitats. Land cover types depict vegetative coverage and may not associate a habitat type and species use. The project areas should be described using an ecosystem classification system and assessed using methodology such as gap analysis. Gap analysis could be used to identify major habitat types or ecological features in the area and then add information regarding species occurrence. Focus could be placed on important critical habitats or species occurrences and potential impacts.

**Section 5.2.5 Wetland Cumulative Impacts**

106. As noted previously, Corps staff would like to discuss the wetland analysis with the DOE and EIS preparers.

**116-71**

107. The DOE cumulative impact analysis should be compared to the wetland cumulative impact analyses that have been prepared for the proposed MSI and Polymet mining projects located near the proposed Mesaba sites.

108. We are not familiar with Circular 39 types 80 and 90.

**Responses**

**Comment 116-68**

See response to Comment 116-67, which addresses the same concern.

**Comment 116-69**

This comment relates to a preliminary (prepublication) version of the Draft EIS; the text has subsequently been revised. See response to Comment 116-67.

**Comment 116-70**

Additional information has been added to Sections 3.8 and 4.8 (Volume 1) regarding fisheries and potential impacts to fisheries around the project areas. Information on invertebrate populations around the project area has been added to Section 3.8. Mercury bioaccumulation in fish is discussed in Section 4.8.2.2, as well as Sections 4.3 and 4.17 (Volume 1). A reference to Sections 4.3 and 4.17 is included in Section 4.8.2.2 to direct the reader for additional information regarding bioaccumulation of mercury. As discussed in Sections 4.5 and 4.8, the intake structures for process water pumping stations at the various mine pits would be designed to prevent the entrainment of fish species, which would preclude the transfer of live fish between surface waters. Impacts to recreational activities are discussed in Section 4.13 (Volume 1).

**Comment 116-71**

See response to Comment 116-25, which addresses the same concern.

Commenter 117 – Janet L. Brandon



Public Comment Sheet  
Mesaba Energy Project  
PUC Docket No. E6472/GS-06-668

Name: Janet L. Brandon Representing: \_\_\_\_\_  
Address: 26252 Co. Rd 51  
Bovey MN 55798 Email: \_\_\_\_\_  
Tel: \_\_\_\_\_

Comments: Vote no to Mesaba Recrafication Plant  
Why is it when the phrase, "It will create  
more jobs," is heard so many people hop on the  
band wagon? Even when there are numerous  
problems with the business proposal and the  
problems have not been researched thoroughly.  
The problems that bother me the most  
and the one we, the public are being asked  
to overlook is - what happens to the CO2? Exclusion  
officials say they intend to develop carbon capture  
eventually. I don't believe they ever intend to  
do that. The United States and China are the  
biggest air polluters in the world & we are  
talking of adding more. Shame on us!!  
Please check on why Saskatchewan of Canada  
has decided not to build a 450 megawatt coal plant.

117-01

117-02

Please submit comments to meeting moderator or send to:  
William Cole Storm  
Department of Commerce  
85 7<sup>th</sup> Place East, Suite 500  
St. Paul, MN 55101-2198.  
Tel: 651-296-9535.

Janet L. Brandon  
26252 Co. Rd 51  
Bovey MN 55709

»»If mailing, fold along dotted lines and tape closed ««

Responses

**Comment 117-01**  
Thank you for your comment. It has been noted and will be included in the administrative record for this EIS.

**Comment 117-02**  
See responses to Comments 1-02, 4-01, and 67-01, which address the same concerns.

Responses

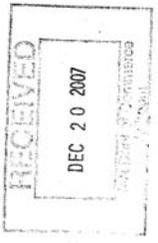
Commenter 117 – Janet L. Brandon

Comments Continued:

*The US Dept. of Energy with Minn. Dept. of Commerce has put out a book on the Mesaba Energy Project MN PUC Docket # E64721 G5-06-668  
It's thick! It's worth looking through.*

(Fold here)

Staple/Tape here



William Cole Storm  
Department of Commerce  
85 7<sup>th</sup> Place East, Suite 500  
St. Paul, MN 55101-2198.

5510124013 0016

(Fold here)

**Commenter 118 – Concerned Individual**

12/03/07

118-01

To whom it may concern - I can't say that I agree with your idea for the new plant - although having this new plant would help lower pollution rates a great deal it does however still pollute at least to some extent.

118-02

I strongly feel and know that I am not alone in this - and your idea to capture carbon is not a permanent solution either - and you didn't even state whether you planned to do that - but even if you did eventually you would run out of places to put it and storing it in the earth where we live will eventually have consequences and there is nobody who can say for sure that it wouldn't, because nothing is for certain.

118-03

So being that this new plant would be at best a temporary solution why go through with it at all. What we really need not only around here but every where is a clean and totally non polluting renewable power source, and when we do get a new plant it should be one that can supply us with that not only in MN but also to the rest of the world.

Signed, a concerned individual



**Responses**

**Comment 118-01**

See responses to Comments 1-01, 12-02, 82-37, and 95-26, which address the same concerns.

**Comment 118-02**

See responses to Comments 1-02, 4-01, 19-03, and 78-03, which address the same concerns.

**Comment 118-03**

See response to Comment 37-01. DOE oversees numerous projects that are investigating and supporting a wide variety of renewable energy generation technologies, such as wind, solar, and hydro power.

## Commenter 119 – Ly Her

I am submitting my comments/questions pertaining to the Mesaba Energy Project:

- 119-01** | - How will the added pollution affect the fish in local area lakes?
- 119-02** | - Will this change the fish advisory consumption?
- 119-03** | - How will this affect the health of deer that may be taken during hunting and ultimately the human consumption of the deer meat that has been exposed to multiple exposure to the coal dust from trains?

Thank you.

Concerned citizen,

Ly Her  
6407 377th St  
North Branch, MN 55056

---

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## Responses

### Comment 119-01

See responses to Comments 38-01 and 59-12, which address the same concerns.

### Comment 119-02

As stated in Section 4.12.4 (Volume 1), as much as 98 percent of the mercury in Minnesota lakes and rivers comes from the atmosphere. Mercury deposition to Big Diamond Lake from the Mesaba plant was determined to be less than 1 percent of the background deposition rate. Therefore, although the incremental increase in health risk from ingestion of fish posed by mercury from plant emissions would be below state thresholds, the plant would not eliminate existing fish consumption advisories.

### Comment 119-03

The ingestion of meat from deer exposed to coal dust from trains or power plant emissions was not determined to be a risk pathway of concern for the AERA protocol.

**Commenter 120 – Larry Johnson**

I would like to submit my comment for the record of the Draft EIS for the Mesaba Energy Project. In table 2.4-1 I find that the DEIS does not fully explain the social effects of the statement:

**Water Sources and Discharges:** Security requirements for process water intake facilities may necessitate terminating access to Canisteo Mine Pit for recreational boating.

I feel that the EIS should disclose who would make that decision and what controlling factors would dictate their decision. I also feel the DEIS is lacking in that it makes no mention that the Canisteo Mine Pit is currently managed by the Mn DNR as a viable Lake Trout fishery. Fisherpeople use this resource not only in the summer months but also during the winter trout season which runs from mid January to mid March.

Enclosed is a photo of the recreational opportunities that will be lost if this resource is closed for public use.

Sincerely,

Larry Johnson

25159 Trout Lake Acres Road

Bovey, Mn 55709

218 245-3528

**Responses**

**Comment 120-01**

See responses to Comments 7-02, 111-08 and 116-49, which address the same concerns.

120-01

**Responses**

**Commenter 120 – Larry Johnson**



**Commenter 121 – MEHHED**

From: MEHHED ([mehhed@peoplepc.com](mailto:mehhed@peoplepc.com))  
To: Bill.Storm

Regarding the proposed Mesaba Energy Project - PUC Docket #E6472/GS-06-668:

I am opposed to any government funding for this project. Even "new" coal energy production technology is really "old" school energy production.

Any public funds proposed for this project should be channeled to clean alternative energy resource development - sun and wind - and energy conservation/efficiency projects.

It is time to start thinking further along the energy production road than only tomorrow.

Thank you.

---

PeoplePC Online  
A better way to Internet  
<http://www.peoplepc.com>

**121-01**

**Responses**

**Comment 121-01**

See response to Comment 37-01. DOE oversees numerous projects that are investigating and supporting a wide variety of renewable energy generation technologies, such as wind, solar, and hydro power.

**Commenter 122 – Bob Tammen**

PO Box 398  
Soudan, MN 55782  
November 28, 2007

I'm Bob Tammen from Soudan, Mn. 55782. I'd like to address the job creation aspect of this project. Not everyone has the job they want where they want it but we don't appear to have a severe unemployment problem in Northern Minnesota.

I'm a retired electrician and as a condition for drawing a pension I had to quit electrical work. This fall I received a letter from my pension fund authorizing me to return to electrical work while I drew my pension. (Exhibit I) Apparently our economy does not have an adequate supply of electrical workers.

We've also been told about all the spin off jobs this project will create to keep our young people in Northern Minnesota. A few months ago I was reading the want ads and saw that a Hibbing company was advertising for electrical and hydraulic technicians. I suppose that's good news. The bad news is, I was reading a South Dakota newspaper. (Exhibit II) Our fine Iron Range employers are already going to a low wage non-union state for employees. How many more projects can we build before our employers go to the next logical step and bring in illegal immigrants?

If you look at the numbers, this project is going to produce exorbitantly priced electricity in our back yard. It's a liability for Northern Minnesota.

122-01

**Responses**

**Comment 122-01**

See response to Comment 30-01, which addresses the same concerns.

**Commenter 122 – Bob Tammen**

*Exhibit 1*

**NOTICE TO ALL RETIREES  
RECEIVING A NORMAL OR EARLY RETIREMENT PENSION BENEFIT  
CONCERNING A TEMPORARY RETURN TO WORK AMENDMENT TO  
THE PLAN OF BENEFITS FOR THE NEBF**

The Trustees of the National Electrical Benefit Fund (NEBF) and the National Employees Benefit Board have approved a temporary Return to Work Amendment to the Plan of Benefits for the NEBF that **permits certain eligible retirees to return to covered and contributory employment for a period of time without a loss of pension benefits from the NEBF.** Please read the following notice carefully, as this amendment does not apply to all retirees or to all electrical employment.

As you are aware, the rules of the Plan generally provide for a suspension of benefits for a retiree who returns to employment in the electrical industry for forty (40) or more hours per month. This temporary Return to Work Amendment changes the suspension rules for certain eligible retirees. Following are the features of the amendment:

1. The temporary amendment is effective from **September 1, 2007 through December 31, 2007.**
2. All normal and early retirees with a pension effective date of August 2007 or earlier will be permitted to return to covered and contributory employment only and will be permitted to work for up to 600 hours during the above period without a loss of NEBF benefits (In order to receive benefits from other funds it will depend on the rules of those funds).
3. Once an individual has worked for 600 hours in covered and contributory employment during the term of the temporary amendment, the individual will no longer be able to take advantage of this amendment and the normal rules (permitting work in the electrical industry for less than forty (40) hours per month without a suspension of benefits) will apply.
4. Disability pensioners are not eligible (the existing rules applicable to disabled pensioners remain in effect).
5. Only retirees who return to NEBF covered and contributory employment will be able to take advantage of this amendment – this amendment will not apply to persons who work for covered employers where no NEBF contributions are required or to persons who work for non-covered employers in the electrical industry.

September 1, 2007



**Responses**

Commenter 122 – Bob Tammen

December 24, 2006  
Exh. B. I II



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Requires a high school diploma and at least 2-4 years experience in the field or in a related area. Must have a valid driver license and be willing to obtain a CDL. Welding and electrical/electronics experience preferred. Computer literate.

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If interested please forward resume/cover letter/ salary history to [jtkyle@crimson-fire.com](mailto:jtkyle@crimson-fire.com)

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New Competitive Wage Scale!

We currently have the following positions open:

- PT UAP Wing Attendant- 11pm-7am (every other weekend)
- PT Wing Attendant- 6am-5pm every Mon. and Fri.
- Dietary Assistant- 4pm-7pm (every other weekend)
- Dietary Assistant- 8:30am-1:30pm (every other weekend)

Please call 605-332-6013 for inquiries or stop in to fill out an application at

146 N. SYCAMORE

We look forward to hiring caring and compassionate people



**P&H MinePro Services** is a global leader in the design, manufacturing and service of some of the largest machinery in the world for the surface mining industry. Due to continued growth, we have an opening for a:

**Service Specialist**

The Service Specialist will be responsible for the installation, assembly, commissioning and troubleshooting of P&H equipment. This position will perform duties such as repairs for Alliance products such as haul trucks, loaders and other mining equipment. Intensive travel required.

Candidates should possess three to five years' experience in electrical and hydraulic troubleshooting. An Associate's Degree in electronics or related field preferred. Excellent organization, communication (written and verbal), leadership and computer skills are essential. Candidate should possess working knowledge of mechanical, hydraulic, electrical, field measuring and welding techniques on mining and industrial equipment. Must understand and have experience with PLC's, ladder logic and troubleshooting of them. Candidate must be able to read electrical, pneumatic and hydraulic schematics. Must be available for overnight call outs and weekend work. IISHA certification a plus.

P&H MinePro Services offers an excellent benefit package including 401(k), profit sharing, medical, dental, vision, life, tuition reimbursement and more. Qualified candidates should send their resumes to:

**P&H MinePro Services**  
Attn: Human Resources  
3621 15th Avenue East  
Minneapolis, MN 55425

Fax: (763) 285-5283  
E-mail: [recruitment@phmining.com](mailto:recruitment@phmining.com)

Equal Employment/ Affirmative Action Employer

[www.phmining.com](http://www.phmining.com)

Responses

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