

## Commenter 82 – Ed Anderson

Mesaba Energy Project, PUC Docket No. E6472/GS-06-668

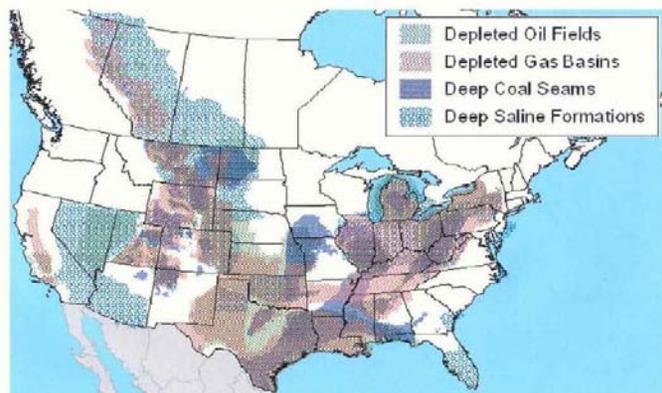
Comments on Draft EIS

Submitted by: Citizens Against the Mesaba Project

As you can see, Minnesota is about as far away as you can get from a potential CO<sub>2</sub> reservoir. Excelsior states they have been participating in the Plains CO<sub>2</sub> Reduction Partnership, yet PCORP has found a desired distance of less than 125 miles from carbon source to geologic sink for CO<sub>2</sub> sequestration. It is approximately 400 miles from Excelsior's proposed West Site to the nearest reservoir in North Dakota, and much further to actual sites of enhanced oil recovery in Canada.

The DEIS is accurate in that there is no viable way for the Mesaba Project to sequester CO<sub>2</sub>, and there is no economic way to capture the CO<sub>2</sub>. If the DOE really desires an IGCC project as part of its Clean Coal Initiative, CCS needs to be in the design. Without CO<sub>2</sub> capture and sequestration, the Mesaba Project is without merit and should not be allowed to continue forward.

### Potential CO<sub>2</sub> reservoirs: not a constraint most places.



Source: J. Dooley et al., "A CO<sub>2</sub> Storage Supply Curve For North America and its Implications for the Deployment of Carbon Dioxide Capture and Storage Systems," GHGT-7, September 6, 2004

 **Process Energy Solutions**  
Tomorrow's Value - Today

## Responses

### Comment 82-123

See responses to Comments 1-01, 4-01, 4-03, and 53-04, which address the same concerns.

82-123

Commenter 83 – Robert Evans  
**EXCELSIOR ENERGY INC.**

From the Office of  
Robert S. Evans II  
V P, Environmental Affairs

January 10, 2008

Mr. Richard A. Hargis, Jr.,  
NEPA Document Manager, M/S 922-178C  
U.S. Department of Energy  
National Energy Technology Laboratory  
P.O. Box 10940  
Pittsburgh, PA 15236-0940

Subject: Draft EIS Comments  
Mesaba Energy Project  
DOE/EIS – 0382D

Dear Mr. Hargis:

I am writing to provide a comment on the Mesaba Energy Project's DEIS and ask that the U.S. Department of Energy ("DOE") incorporate a response to this comment in the Final EIS. Section 4.3 of the DEIS presents an analysis of the Project's impacts on air quality and climate (including greenhouse gases). On page 4.3-27, in Section 4.3.6, the DEIS identifies the impacts of the No Action Alternative "would probably not involve introducing new emission sources" and therefore, "the No Action Alternative is projected to have *no* impact on the air quality either regionally or locally." We respectfully disagree with this statement.

The No Action Alternative could delay the commercialization and market penetration of IGCC technology in general and the E-Gas technology for IGCC applications in particular. Such a delay would likely result in greater cumulative emissions of criteria pollutants, mercury and carbon dioxide from both national and global perspectives. Although Excelsior has not attempted to quantify such potential increases attending a delay in the Project, we believe the U.S. DOE may have insight into such implications or know of such attempts that have been based on credible data. To the extent that such information is readily available, we would request that it be included in the Final EIS in the discussion of impacts of the No Action Alternative.

Thank you again for considering this request. Please contact me at (952) 250-2253 if you have any questions.

Respectfully,



Robert S. Evans II

cc William C. Storm, Minnesota Department of Commerce

11100 WAYZATA BOULEVARD  
SUITE 305  
MINNETONKA, MN 55305  
PHONE: 952.847.2360  
FAX: 952.847.2373



424 ROOSEVELT AVENUE  
P.O. Box 227  
COLERAINE, MN 55722  
PHONE: 218.245.1205  
FAX: 218.245.1604

**Responses**

**Comment 83-01**

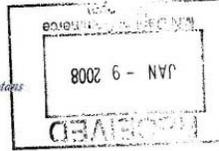
As a commercial-scale demonstration of the IGCC technology, the Mesaba Energy Project would be a key element in DOE's research and development effort for IGCC in conjunction with the CCPI Program. Based on an analysis by DOE using the National Emissions Modeling System of the U.S. Energy Information Agency, the No Action Alternative (equivalent to a "no-build" decision for Mesaba) would jeopardize potential benefits anticipated from the commercial implementation of IGCC. These benefits include more cost-effective CCS options, progress in reducing greenhouse gas emissions, and cost-effective reductions of emissions of criteria pollutants beyond levels required by regulatory caps in the utility sector. Text has been added to Section 4.3.3 (Volume 1) of the Final EIS to more completely describe these potential effects of the no-action alternative.

83-01

**Commenter 84 – John Linc Stine**



*Protecting, maintaining and improving the health of all Minnesotans*



January 7, 2008

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

Dear Mr. Storm:

This is in response to your request for comments on the Draft Environmental Impact Statement (DEIS) for the Mesaba Energy Project (PUC Docket E6472/GS-06-668). I have arranged my comments into two categories, general and specific.

**General Comments:**

The proposed West Range project might entail the discharge of cooling/blowdown water to the Canisteo Mine Pit Lake (CMP). As indicated in Sections 3.5.1.3 and 4.5.3.5 of the DEIS, the CMP is a potential source of recharge to aquifers that it penetrates. These aquifers include those tapped by the municipal wells for Bovey, Coleraine and Taconite. Bovey and Coleraine obtain their drinking water supply from wells completed in a buried glacial sand and gravel aquifer that is exposed in the southern wall of the CMP, whereas the City of Taconite obtains its drinking water from wells completed in the Biwabik Iron Formation bedrock aquifer that is also exposed in the CMP.

The Minnesota Department of Health (MDH) has been working on the development of a wellhead protection plan for these three communities for the past several years. The wellhead protection program is designed to protect sources of public drinking water by determining the recharge areas for wells and then protecting those areas to minimize the risk of contamination. Wellhead protection plans consist of two parts. Part 1 entails the delineation of the wellhead protection area (WHPA - the scientifically calculated well capture zone or recharge area), drinking water supply management area (DWSMA - the area bounding the WHPA that is based on readily identifiable physical features such as roads), and an assessment of the vulnerability of these areas to contamination. Part 2 consists of an inventory of potential sources of contamination within the delineated areas and strategies for managing those sources. Part 1 of the wellhead protection plans for the communities of Bovey, Coleraine and Taconite were completed in 2007. A copy of each report is included for your reference; additional copies are available upon request. The second part of the wellhead protection planning process for these communities has commenced and will likely continue for an additional two to three years. Wellhead protection plans must be renewed on a 10-year cycle. As a result, the WHPAs for the communities of Bovey, Coleraine and Taconite will likely be revisited on or before the years 2019-2020 (the actual date depends on the completion date of the original plan, which is still pending).

General Information: 651-201-5000 • Toll-free: 888-345-0823 • TTY: 651-201-5797 • [www.health.state.mn.us](http://www.health.state.mn.us)  
*An equal opportunity employer*

**Responses**

**Comment 84-01**

As stated in response to Comment 6-01, the planned use of an enhanced ZLD system at the West Range Site would eliminate all process and blowdown water discharges to surface waters including the CMP and Holman Lake. Furthermore, stormwater runoff would be collected for recycling and use within the plant systems (see response to Comment 105-49). Therefore, as stated in response to Comment 7-02, the elimination of these discharges would avoid the potential for impacts to hydrologically connected aquifers serving public and private wells.

84-01

## Commenter 84 – John Linc Stine

Mr. Bill Storm  
Page 2  
January 7, 2008

WHPAs are delineated based on a time-of-travel criterion over which the flow of groundwater to a pumping well must be simulated. Minnesota Rules, parts 4720.5100-5590, require that a WHPA be based on a minimum 10-year time-of-travel period. The WHPAs for Bovey, Coleraine and Taconite were determined using a 10-year time-of-travel criterion. The Bovey and Coleraine WHPAs were generated using a modified version of an existing groundwater flow model developed by the United States Geological Survey (USGS) to investigate groundwater relationships in the vicinity of the CMP. The report that describes the model and its results is entitled "Characterization of Ground-Water Flow Between the Canisteo Mine Pit and Surrounding Aquifers, Mesabi Iron Range, Minnesota". This publication is referenced in Section 3.5.1.1 of the DEIS and can be accessed on-line at <http://pubs.usgs.gov/wri/wri024198/>. The WHPA for the City of Taconite was determined using a volumetric calculation, consistent with MDH guidelines for fractured bedrock aquifers (2005).

The results of the Part 1 wellhead protection analysis show that the municipal wells for Bovey and Coleraine are expected to receive a significant amount of recharge from CMP water within the next 5 to 10 years if the water level in the pit remains at or above its current level, which is approximately 1,310 feet above sea level. As a result, the CMP and its surface watershed have been included in the WHPAs for the communities of Bovey and Coleraine. The vulnerability of the CMP area is considered very high, because the aquifer is exposed in the pit wall and is not protected by overlying geologic materials at that location. At this time it appears that the Taconite city wells are not likely to capture water from the CMP within a 10-year time period; however, there is considerable uncertainty in this analysis related to the complexity of groundwater flow simulations in fractured bedrock aquifers.

Because of uncertainty in future CMP water levels and modeling results, the MDH recommends that the communities of Bovey, Coleraine and Taconite implement a water sampling program at their wells. The sampling program will allow for a determination of whether pit lake water has reached their wells. This information, along with groundwater flow modeling results, can be used to make future revisions to the WHPAs. As a result, it is possible that the CMP could be added to the Taconite WHPA in the future, for example.

The Mesaba Energy DEIS indicates that the CMP water level would likely be maintained within an operating range of 1,290 to 1,300 feet above sea level. The USGS report (Jones, 2002) and subsequent modeling conducted by the MDH suggest that, at the least, the Coleraine city wells will likely continue to receive a significant contribution of CMP water even at a pit lake elevation as low as 1,300 feet above sea level. However, the travel time between the pit lake and the city wells will likely exceed 10 years at and below that pit water level. As a result, the CMP and its surface watershed could eventually be removed from the WHPAs for Coleraine and Bovey if pit lake elevations are maintained at or below 1,300 feet above sea level and the 10-year time-of-travel criterion is maintained.

Because of the connection noted between the CMP and the municipal water supplies for Bovey and Coleraine, it is important to ensure that the quality of the water in the pit lake is maintained so that seepage from it does not degrade adjacent aquifer quality. Although the DEIS indicates that the power plant effluent would consist primarily of pit water concentrated by evaporation, other potential sources are noted, such as 1) boiler feed water demineralizers, 2) stormwater from the oil/water separator, and

## Responses

84-01  
(cont'd)

## Commenter 84 – John Linc Stine

Mr. Bill Storm  
Page 3  
January 7, 2008

3) treated domestic wastewater (Alternative 1 - Section 4.5.3.3). In addition, the simple evaporative concentration of some natural CMP water parameters, including sulfate, hardness, and total dissolved solids (TDS), could result in exceedences of secondary drinking water standards (Section 4.5.3.2).

The MDH would support those mitigation options that eliminate power plant discharge to the CMP. Those include Mitigation Alternatives 1, 2B and 3 listed in Section 5.3.2.1. However, if discharge is to occur to the CMP, then the MDH recommends that any discharge permits related to this facility acknowledge the linkage between water contained in the CMP and that consumed by the residents of Bovey and Coleraine. We recommend that a stringent monitoring strategy be established that provides verification of water quality at several points. This would include "end-of-pipe" discharge where the power plant effluent enters the CMP, and several locations within the CMP to verify reduction in discharge parameter levels via processes such as mixing and dilution. It would be prudent to include a pit water monitoring station located near that portion of the CMP where the aquifer used by Bovey and Coleraine is thought to surface. Monitored parameters should include all potential contaminants in the discharge stream for which a primary or secondary federal drinking water standard exists.

We also recommend a contingency strategy to deal with water quality exceedences. For example, if contaminants were found to exceed federal primary or secondary drinking water standards in CMP water over successive monitoring periods, then groundwater quality monitoring in the Bovey-Coleraine aquifer should be triggered. This would be particularly important when pit water levels are relatively high (1,300 feet above sea level or more) because of the increased likelihood of capture by the city wells at higher pit water levels.

Groundwater monitoring should be accomplished via a small network of wells completed in the Bovey-Coleraine aquifer and situated between the CMP and the city wells along the corridor where groundwater seepage is expected, based on the modeling of Jones (2002). Monitoring wells should be placed far enough from the city wells so that, should water quality degradation be noted in the aquifer, sufficient time is allowed prior to impacting the city wells so that a remediation strategy can be employed. Such remedial strategies might consist of 1) decreasing the CMP water level to minimize leakage to the aquifer, 2) installation of a groundwater extraction well or wells that could provide a barrier to groundwater flow, 3) enhancement of municipal water treatment capabilities, or 4) replacement of existing wells with other sources, such as new wells completed in the deeper, Biwabik Iron Formation Aquifer. We recommend that the details of any monitoring or remedial strategy be agreed upon by the permittee, the permitting agency, and the municipalities that may be impacted.

### Specific Comments:

Sections 2.3.1.3 and 2.3.2.3 discuss the possibility of constructing an on-site water treatment facility to provide potable water to the Mesaba Generating Station (Alternative 2). This section correctly notes that the Mesaba Generating Station would likely be classified as a non-transient non-community public water supply system. As a result, the plans and specifications for any water treatment facility must be approved by the MDH prior to construction.

## Responses

### Comment 84-02

New text acknowledging that approval from MDH for any new water treatment facility is required prior to construction has been added to Sections 2.3.1.3, 2.3.2.3, and 4.14.3.2 (Volume 1).

84-01  
(cont'd)

84-02

## Commenter 84 – John Linc Stine

Mr. Bill Storm  
Page 4  
January 7, 2008

84-03

Sections 2.3.1.3 and 4.5.3.3 discuss the possibility of constructing an on-site wastewater treatment facility system, with possible discharge to CMP via the cooling tower blowdown pipeline. The MDH recommends against discharging wastewater effluent to the CMP because of the linkage with the Bovey and Coleraine drinking water supply, as noted above.

84-04

Section 3.5.1.1 discusses the location of modeled outflow between the CMP and Trout Lake and indicates that the wells used by the City of Coleraine are within this area. It should be noted that the well used by the City of Bovey is also within this zone.

84-05

Section 3.5.1.3 indicates that groundwater flow is directed toward mine pit complexes. The water flow relationship between a mine pit lake and adjacent aquifers is dependent on the difference in hydraulic head between these features at a given point in time. For example, outflow from the CMP to adjacent aquifers is expected to locally occur when pit water elevations exceed 1,292 feet above sea level, as indicated in Section 3.5.1.1.

84-06

Section 3.5.1.3 also states that groundwater recharge to the Biwabik Iron Formation is largely by vertical infiltration through Quaternary deposits where the formation is not covered by other bedrock. We add that a significant amount of recharge to this formation can occur where it is exposed in mine pits. Recharge potential in such settings will depend on the hydraulic head in the iron formation relative to that in the mine pit lake.

84-07

Section 3.5.1.3 also states that the wells used by the Cities of Bovey and Coleraine receive some recharge from Trout Lake. This was probably true for both communities when the CMP was dewatered for mining purposes, because the hydraulic head at Trout Lake would have greatly exceeded that of the CMP and forced groundwater flow towards it. More recent data suggests that the Coleraine city wells continue to receive some recharge from the lake, but the Bovey city well does not. This is a dynamic relationship that is prone to change depending on the stage of Trout Lake relative to that of the CMP.

84-08

A number of inaccuracies were noted in Section 3.5.1.3 with respect to well construction information, as currently understood by the MDH and Minnesota Geological Survey. These inaccuracies are as follows:

- The Coleraine city wells are numbered 1 (241430) and 4 (110457), not 1 and 3.
- Coleraine Well 1 is 121 feet deep and Well 4 is 120 feet deep, not 75 and 100 feet as indicated.
- The 2004 reported pumping volume for the City of Coleraine was 52.2 million gallons for both wells. The wells are not individually metered, but do operate on an alternating basis so the individual well output is essentially equivalent to the system total divided by two.
- Marble Well 1 (228842) is 500 feet deep, not 300 feet as indicated.
- Calumet Well 2 (228839) is 495 feet deep and Well 3 (228838) is 500 feet deep, not 155 and 203 feet deep as indicated.
- Taconite Well 1 (241489) was constructed in 1926, not 1936 as indicated.
- The City of Coleraine wells are not open to the Biwabik Iron Formation bedrock aquifer, as indicated in the final paragraph of page 3.5-13.

## Responses

### Comment 84-03

As stated in Section 2.3.1.3 (Volume 1), onsite wastewater treatment is not the project proponent's preferred method for management of sanitary wastewater generated by plant operators.

### Comment 84-04

Section 3.5.1.1 (Volume 1) has been updated to include the well used by the City of Bovey.

### Comment 84-05

The sentence in Section 3.5.1.3 (Volume 1) stating that local groundwater flow is directed toward the mine pits has been revised to indicate that the direction of flow can be influenced by the water levels in the mine pits as represented by hydrologic relationships between groundwater and the CMP.

### Comment 84-06

As discussed in responses to Comments 7-02 and 76-04, the proposed use of an enhanced ZLD system at the West Range Site would preclude potential impacts on groundwater wells attributable to the Mesaba Energy Project.

### Comment 84-07

As discussed in responses to Comments 7-02 and 76-04, the proposed use of an enhanced ZLD system at the West Range Site would preclude potential impacts on groundwater wells attributable to the Mesaba Energy Project.

### Comment 84-08

Section 3.5.1.3 (Volume 1) has been revised to correct the inaccuracies as noted in the comment.

## Commenter 84 – John Linc Stine

Mr. Bill Storm  
Page 5  
January 7, 2008

84-09

Sections 4.5.2.1 and 4.5.3.2 discuss possible water quality standards that might be applied to the discharge of TDS and sulfate. Because of the linkage between CMP water and the drinking water of adjacent communities, the MDH recommends that the more stringent, federal secondary drinking water standards of 500 mg/l and 250 mg/l be applied to these parameters. In addition, we would recommend that federal drinking water standards (primary or secondary) be applied for any potential contaminant that might be related to the power plant discharge.

84-10

Section 4.5.2.5 discusses stormwater management. It is stated that stormwater that could be contaminated with oil (such as parking lot runoff) would be routed to an oil/water separator and then on to the cooling tower blowdown sump. We would recommend against discharge of potentially contaminated stormwater into the CMP.

84-11

Section 4.5.2.6 indicates that no adverse impacts to groundwater resources are anticipated. Water quality degradation of the CMP could impact adjacent groundwater resources, depending on the stage of the pit water with respect to the hydraulic head in adjacent aquifers. While it is true that impacts would be unlikely at sufficiently low CMP water levels, consideration must be given to potential scenarios that could result in a groundwater impact. These include periods of relatively high pit water levels related to operational or climatic circumstances, or to post-closure scenarios.

Thank you for the opportunity to comment on this DEIS. If you have any questions about my comments, please contact Mr. Jim Walsh of my staff at 651-201-4654 or james.f.walsh@state.mn.us

Sincerely,



John Linc Stine, Director  
Environmental Health Division  
P.O. Box 64975  
St. Paul, Minnesota 55164-0975

JLS:JFW:kmc  
Enclosures  
cc: Doug Benson, MDH, Metro Office

## Responses

### Comment 84-09

Use of the enhanced ZLD system at the West Range Site would eliminate concerns regarding compliance with water quality standards. See response to Comment 6-01.

### Comment 84-10

With the use of an enhanced ZLD system at the West Range Site and collection of stormwater runoff for reuse, the CMP would not receive any stormwater discharges associated with the proposed facility (a detention pond would be conservatively sized to accommodate a 24-hr, 100-yr storm event that coincides with a plant outage). See response to Comment 105-49 for additional discussion on proposed stormwater management.

### Comment 84-11

See response to Comment 84-01, which addresses the same concern.

Commenter 85 – Colleen Blade



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



Name: Colleen Blade  
38572 Poplar Dr.

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

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

Address: 38572 Poplar Dr.  
Nashwanak, MN 55769

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

Comments:  
God gave us this earth and all that we  
needed to survive. People were content to have a warm  
home, food on the table, and clean air to breathe.

Then Greedy people came along and did all  
that they could to gain more wealth; even if it  
meant destroy the earth and his fellow man.

The Bible says to beware of the love of money.  
It will lead to the pathway to Hell.

You have read of Micheletti and Julie Jorgen-  
son and their criminal ways that led to death  
and destruction in California. We have people who  
are championing them because of money.

With these plants going in in N. Minnesota, the  
emission will kill us. Babies will be born mentally  
and physically disabled. In all my years of going to  
school and teaching school, I never saw a dyslexic  
child. Now they are in every town bring in burden  
to taxpayers and heartache to parents. For those

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

of you who do not care about  
people and environment, think  
of what you will say on the  
day you face God. How many  
deaths and heartaches will you cause by letting  
these plants be built?

Colleen Blade

85-01

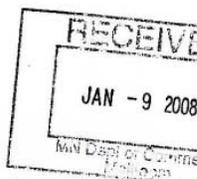
Responses

Comment 85-01

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

**Commenter 86 – David Dahl**

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



January 7, 2008

Dear Bill,

Thank you for the opportunity to comment on the draft Environmental Impact Statement for the proposed Excelsior Energy power plant. My comments concern two related issues.

First concern: The draft Environmental Impact Statement barely acknowledges the presence of lake trout at Canisteo, near Grand Rapids, and does not discuss nor describe the fishery in any meaningful detail. This error of omission (or commission?) has occurred in spite of direct testimony given during the EIS scoping process that pointed out the presence of the cold-water fishery and requested that the potential impact to the fishery be adequately evaluated.

**86-01**

Consider this: In our entire state only 122 lakes are managed for lake trout, and of the thousand-plus lakes in Itasca County only five support lake trout populations. Canisteo, which Excelsior wants to take from the public, is undoubtedly the most productive and accessible of those five water bodies. Why does the draft Impact Statement not adequately discuss or describe this cold-water lake trout fishery, and why does the draft EIS not discuss potential thermal, chemical or other impacts to the fishery? Why does the draft EIS not describe mitigation alternatives that would preserve the continued existence and health of the fishery? Is potential destruction of a major cold-water trout fishery not significant enough to address in the EIS?

Second concern: Excelsior Energy's proposal to eliminate public access to one of the State's largest lake trout fisheries is not adequately addressed and is simply appalling.

**86-02**

Canisteo ranks as the sixth largest lake trout fishery by size in the entire state, and its total acreage places it among the 250 largest recreational lakes in Minnesota. Excelsior's plan to close Canisteo to recreational boating and fishing, so that the water body can instead be used as a ditch to carry water to the power plant gets only cursory mention in the draft EIS. One would think that a proposal for the taking of a major public recreational water body and its conversion for exclusive private use would need much more thorough description, evaluation, critique and validation. To conduct such a major taking of a publicly accessible recreational resource without exploring all possible alternatives would be a shame.

**Responses**

**Comment 86-01**

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

**Comment 86-02**

See responses to Comments 7-02, 65-01, 76-04, and 76-07, which address the same concerns.

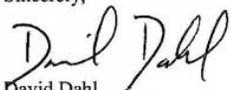
**Commenter 86 – David Dahl**

The draft EIS contends that Holman Lake will accommodate the loss of recreational, boating and fishing activities on the five mile long, 330 feet deep, 1,300+ acre Canisteeo water body. I find it hard to imagine how that will be possible. Water clarity at Canisteeo is rated at a phenomenal 43 feet, lake trout growth is listed at 115% above the statewide average, and natural reproduction of lake trout is occurring. By contrast, Holman Lake has no lake trout habitat and is about one tenth the acreage.

Would we close Burntside Lake for the sake of 100 jobs? For the sake of another 100 jobs would we shut down the aquatic recreational opportunities at lakes Calhoun, Harriet, Cedar, Nokomis, Hiawatha and Lake of the Isles, whose combined acreage is less than that proposed to be closed by Excelsior?

The Canisteeo water body is a tremendous asset to Itasca County and to Minnesota. Let's acknowledge that. Revise the draft EIS to thoroughly inform decision-makers about potential environmental impacts to the Canisteeo cold-water fishery and the recreational resource. Keep the water cold and clean, the fishery healthy, and maintain public access to this gem. If Excelsior can propose to build a 400-mile pipeline to carry carbon dioxide to North Dakota, then surely its water intake pipe from the Prairie River can bypass the Canisteeo, and the plant's warm water discharge can be sent to some more appropriate, less vulnerable water basin. If Canisteeo is so uniquely critical to the power plant plan, then Excelsior should make at minimum a 2:1 replacement of the recreational and cold-water fishery loss.

Sincerely,



David Dahl  
9016 Lahti Road  
Hibbing, MN 55746

Enclosures:

1. Page printed from the MnDNR web site regarding trout fishing.
2. 2005 narrative report from the MnDNR web site describing the Canisteeo fishery.

**Responses**

**86-02  
(cont'd)**

## Commenter 86 – David Dahl

Trout lakes: Minnesota DNR

Page 1 of 2



> [MN DNR Home](#) > [Outdoor activities](#) > [Fishing](#) >

### Trout lakes



There are two types of trout lakes. One mainly contains lake trout. These are called **lake trout lakes**. The other mainly contains stream trout (rainbow, brook, brown, and a hybrid of lake trout and brook trout called splake). These are called **stream trout lakes**.

Trout lakes are primarily in northeastern Minnesota, though some are as far south as Rochester. These lakes are extremely popular with anglers, who like trout for their beauty, fight, and taste—not to mention the fact that many trout lakes are amidst some of Minnesota's wildest, most scenic settings.

Anglers looking for information on specific trout lakes can find it in the [trout lake list](#). This shows the trout species present for all trout lakes, listed by county. And it includes links to lake information such as stocking, map, fish consumption advisory, and water quality.

[Back to top](#)

© 2007 Minnesota Department of Natural Resources.  
[Copyright Notice](#).  
[Web site policies](#): [Accessibility](#), [Linking](#), [Privacy](#)  
[North Star](#) | [Minnesota Veterans One Stop](#)



[Trout lakes](#)

[Main page](#)

[Trout lake fishing regulations](#)

[Fishing tips](#)

[Management](#)

[List](#)

[Trout streams](#)

[Trout biology & management](#)



[http://www.dnr.state.mn.us/fishing/trout\\_lakes/index.html](http://www.dnr.state.mn.us/fishing/trout_lakes/index.html)

12/11/2007

## Responses

## Commenter 86 – David Dahl

Lake information report: Minnesota DNR

Page 3 of 4

[Consumption Advice](#) pages at the Minnesota Department of Health.

### Status of the Fishery (as of 08/15/2005)

This population assessment was conducted during mid August using lake survey gill nets, which were set in 40 to 80 feet of water to target lake trout. Temperature and dissolved oxygen levels measured during the survey indicated that suitable lake trout habitat where water temperatures were less than 54 °F and dissolved oxygen levels were above 6.0 ppm was present below 35 feet. Lake trout have been stocked annually since 1996 with both yearlings and larger broodstock sometimes both in the same year. All yearling fish and larger brood stock had a fin clipped that could be used to designate the year class for future evaluations. The use of a specific fin clip associated with a known year class and strain, allows ageing of individual lake trout captured at a later date with some certainty without using boney structures (scales or otoliths).

A total of 25 lake trout were captured which yielded a catch rate 1.7 fish/set, which is similar to the catch rate of 1.9 fish/set from the previous 2000 assessment. Fin clip examinations on 22 captured lake trout revealed that twelve fish had fins removed. Nine of these fish had their left pelvic fin removed and three fish had their right pelvic fin removed. Those lake trout with their left pelvic fin removed had originated from either the 1993 or 1998 year classes and ranged in lengths from 19.3 to 31.5 inches. Although assignment of these fish to a specific year class was uncertain for fish in the middle size range, five fish that exceeded 29.5 inches in length were presumed to be from the 1993 year class (age-12 fish) and three of the smaller fish with individual lengths of 19.3, 22.6, and 25.2 inches were presumed to be from the 1998 year class (age-7 fish). There were also three fin clipped lake trout in the catch with a right pectoral fin removed indicating they were from the 1995 or 2000 year class. Since these lake trout ranged from 28.7 to 31.5 inches in length they were presumed to be from the 1995-year class (age-10 fish).

Determining growth and survival for individual lake trout in the catch was difficult since lake trout from year classes, 1993, 1995, and 1998 were stocked at various sizes and ages. For example, lake trout from the 1993-year class were stocked several times in the late 1990's at various ages and sizes while fish from the 1995-year class may have originated from yearlings stocked in 1996, or as larger fish in 1997, or 2004. The 1998-year class was stocked as yearlings in 1999 and again as larger fish in 2002 and 2004. The only thing that can be surmised from correlating the fin clips of captured fish with the stocking records was that five of the largest fish with a left pelvic fin clip had survived for at least seven years since this year class had last been stocked in 1998.

The presence of 10 unclipped lake trout in the catch indicates that natural recruitment is occurring. The possibility of fin regeneration was discussed with personnel from the state trout hatchery, which provided the fin clipped lake trout. The regeneration of clipped fins was quickly dismissed as a possible explanation as hatchery staff have rarely observed any fish raised to adults for gamete production that have regenerated their clipped fins. These 10 unclipped lake trout ranged in size from 15.0 to 25.2 inches and aging from scale samples indicated that these fish were from ages 2 through 5. These fish appear to be fast growing after attaining age-1 as their back-calculated means exceeded the statewide averages by more than 115%.

Several other species were caught with trap nets in relatively low abundance and included small bluegill (mean weight=0.2lbs), black crappie, largemouth and smallmouth bass, and rock bass.

<http://www.dnr.state.mn.us/lakefind/showreport.html?downum=31128200>

12/11/2007

## Responses

**Commenter 87 – Nathaniel Hart**

1 of 2

January 6, 2008

To: The Minnesota Public Utilities Commission  
Ref: Excelsior Energy Mesaba IGCC Plant

From: Nathaniel Hart,  
15 South Street  
Morris, MN 56267



Thank you for the opportunity to comment on the environmental impact of the proposed Excelsior Energy Mesaba IGCC plant. I do so as a citizen of the State of Minnesota, having lived here for more than 50 years. I know the state well and have lived in various regions of Minnesota including Minneapolis, St. Paul, the Arrowhead, and Morris. I served my entire professional career as a university teacher here in Minnesota, and now, in retirement, I continue my life-long interest in the environment.

I am asking you to reject the permits for Mesaba IGCC plant on the following grounds:

**87-01**

1. As proposed, the Mesaba plant would be environmentally harmful. It will increase Minnesota's CO2 emissions at a time when we should be reducing them.

2. The Carbon Capture and Sequestration (CCS) technology, which the Mesaba plant is supposed to use, is not proven effective.

A. It is estimated that CCS consumes as much as 20% of the energy produced by an IGCC plant and will add 20-50% to the cost of the electricity.

B. Although CCS is being used in some places, it is not a proven practice. No one knows if sequestered CO2 will stay where it is put or what the effects of storage or leakage may be.

It is reported that CO2 can react with elements in the earth to create acids that might be harmful and could possibly contaminate aquifers.

CO2 escaping in quantity is known to be lethal and, of course, would defeat the purpose of sequestration with respect to global warming.

The Massachusetts Institute of Technology 2007 report "The Future of Coal" notes there are no standards for measuring or monitoring captured CO2 and no agreement on how long a time monitoring should be continued. Our general ignorance of the effectiveness and the consequences of CCS is born out by the testimony of Dr. Robert C. Burress, Research Geologist, Energy Resources Team, U.S. Geological Survey, U.S. Dept. of Interior, before the Subcommittee on Science, Technology, and Innovation, Senate Committee on Commerce, Science and Transportation Hearing on Carbon Sequestration Technologies, November 7, 2007.

**87-02**

The earth beneath us is not inert. Millions of microorganisms exist in complex relationships of which we humans have very little or no knowledge. Having already upset the ecological stability of life on earth, it would be an act of extraordinary and inexcusable hubris for us to precipitously expand our destructive dominion over subterranean regions any more than we already have with our extractive industries.

One of the leading experts on global warming, NASA's James Hansen, said in 2006, that we had just 10 years to reduce greenhouse gases to avert a global warming catastrophe. He stresses the need to phase out existing coal-fired power plants,

**Responses**

**Comment 87-01**

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

**Comment 87-02**

See responses to Comments 1-02, 4-01, 4-03, 19-03, and 75-13, which address the same concerns.

**Commenter 87 – Nathaniel Hart**

2 of 2

**87-02  
(cont'd)**

prohibit any increase in CO2 emissions, and reduce all fossil fuel emissions. The Mesaba plant violates these criteria.

Minnesota, however, is well positioned to successfully carry out a strategy embraced by our neighbors to the north, in Ontario: namely, to adopt a policy and develop a plan and timetable for phasing out all coal-fired plants in the state (or at least 70% of CO2 emissions). That would set an example for other states and be consistent with the positive leadership role for which Minnesota is known.

I enclose a copy of a newspaper article I wrote raising questions about CCS. While the norm for newspaper columns does not admit documentation, I can assure you that the details in the article are supported by reliable sources.

Respectfully yours,



Nathaniel Hart

Enclosure: "On This Earth: A site out of sight"

**Responses**

## Commenter 87 – Nathaniel Hart

### On This Earth: A site out of sight

Morris Sun Tribune Published Saturday, January 05, 2008

By Nathaniel Hart

The United States may be the last government in the world to acknowledge the fact of human-induced global warming, but the coal energy industry has come up with a solution to it: Too much CO2 being pumped into the atmosphere? Simple: From now on, just bury it!

For more than 200 years, mainly because of coal-fired energy sources, the industrialized nations of the world have released large amounts of CO2 into the atmosphere. Only now do we recognize the devastating consequences this practice has for life on earth.

But the coal energy industry, understandably eager to protect its investments, talks about "clean coal" and the possibility of capturing CO2 emissions and storing them deep in the earth or under the ocean or in saline aquifers or depleted oil- and gas-fields much as the nuclear industry once dreamed of safely storing nuclear waste underground.

The coal energy industry proposes that for the next 200 years, instead of sending CO2 into the atmosphere, we inject it into the earth using a technique called Carbon Capture and Storage or CCS.

If energy is produced by a process called coal gasification (IGCC), the CO2 can be captured before it enters the atmosphere. Subjected to high temperature and pressure, the captured CO2 becomes fluid and can be pumped to storage sites-- huge cavities or porous and permeable mineral formations deep below the earth's surface. The sites, when full, will be "capped" or sealed and then monitored for leaks, presumably for eternity.

Carbon Capture and Storage is used now in at least three projects in different parts of the world. Engineers do know how to capture the CO2 and inject it below the earth's surface. But no one knows for certain if the CO2 will stay where it is put or what the effects of storage or leakage may be.

Will the CO2 migrate to the surface through crevices and fault lines? Will it seep into groundwater or deep fresh-water aquifers? Will it react with other minerals and organic compounds to create harm? What is the ecological role of saline aquifers and how will CO2 storage change it? What will be its effect on subterranean bacteria and microorganisms?

The sheer mass of CO2 is staggering, beyond human imagination. A single coal-fired electric plant may produce more than 13,000 tons of CO2 per day or millions of tons in one year. The U.S. emits 2.8 billion tons of CO2 annually. What will it mean to pump

## Responses

## Commenter 87 – Nathaniel Hart

even a fraction of this CO2 into the earth?

Recent scientific studies suggest that the natural processes of carbon absorption may already be slowing: Forests, grasslands, soil, and oceans may not be absorbing as much CO2 as scientists earlier had estimated. Nature's carbon repositories, not just the atmosphere, seem to be negatively influenced by the excess of CO2.

Because Carbon Capture and Storage (CCS) is not a proven technology and the cost is high, the coal industry has come up with the reassuring phrase "capture ready": Let us build coal gasification plants that are "capture ready," that will capture CO2 at some future time when we find a safe and economical way of doing it. Until then, the CO2 will spew into the atmosphere.

The public is not buying it.

Washington state, for example, recently refused to approve a "capture ready" power plant when the energy company admitted that CCS was neither technologically nor economically feasible. Two such plants in Florida and one in Arizona also have been cancelled.

In Minnesota, Excelsior Energy wants to build a "capture ready" coal-gasification plant on the Iron Range, but it is reported that two administrative law judges advised the Minnesota Public Utilities Commission against approval because the cost of the electricity would be too high and because a "capture ready" plant without actual capture provides no immediate environmental benefit. (Note: \*The Minnesota Public Utilities Commission is not obliged to follow the administrative judges advice, but they are accepting public comment until Friday, Jan. 11, 2008. Written comments on the Excelsior Energy Mesaba plant's environmental impact can be sent to Bill Storm via email at [bill.storm@state.mn.us](mailto:bill.storm@state.mn.us), or the Minnesota Department of Commerce, 85 7th Place, Suite 500, St. Paul, Minnesota 55101-2198.)

A coal-gasification plant can be built in three years, but perfected technology for using CCS remains at least 10 and perhaps 20 years into the future, too late to avert catastrophic global warming.

Far from being a practical solution to the serious and immediately present threatening consequences of global warming, CCS may be an invitation to disaster--prolonging our dependence on "dirty coal," perpetuating mountain top removal of coal in the east and strip mining in the west, diverting resources away from renewable energy, and delaying the necessary phase-out of coal-fired energy plants. CCS may just be an acronym for Corporate Coal Spin.

Copyright 2008 Nathaniel Hart. A retired teacher, Nat Hart divides his time between the Minnesota prairie and the Oregon coast, observing and writing about the environment.

## Responses

Commenter 88 – Chad Karjala



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

Name: Chad Karjala Representing: \_\_\_\_\_  
\_\_\_\_\_  
Email: \_\_\_\_\_  
Address: P.O. Box 7 Tel: \_\_\_\_\_  
Howey, Mn. 55709  
\_\_\_\_\_

Comments:

The Minnesota DNR submitted numerous scoping comments related to water discharge and mercury deposition. The DNR has also maintained a strong interest in the Caribou Mine Pit Lake trout fishery, as well as in restoring water flow to Trout Lake (and therefore improving Trout Lake water quality) from the CMP watershed. Why does it appear these comments have not been taken into consideration?

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 88-01

See responses to Comments 6-01, 7-02, and 76-07, which address the same concerns. Appendix C (Volume 2) of the Final EIS has been updated to provide further justification of the speciation of mercury emissions.

88-01

Commenter 89 – Willard Karjala



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

Name: Willard Karjala Representing: \_\_\_\_\_  
\_\_\_\_\_  
Email: \_\_\_\_\_  
Address: P.O. Box 7 Tel: \_\_\_\_\_  
Bowyer, Mn. 55709  
\_\_\_\_\_  
\_\_\_\_\_

Comments:  
The Draft Environmental Impact Statement outlines an ambitious emissions reduction program by Minnesota Power(MP), and states that these reductions would potentially offset visibility impacts related to the Mesaba Energy Project. Why should we allow Excelsior Energy to offset an improvement in our local air quality?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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 89-01  
See response to Comment 3-02, which addresses the same concern.

89-01

Commenter 90 – Glenn Perry



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

Name: Glenn Perry Representing: \_\_\_\_\_  
\_\_\_\_\_  
Email: \_\_\_\_\_  
Address: 26439 Birch Dr. Tel: \_\_\_\_\_  
Boyer, Mn. 55709  
\_\_\_\_\_  
\_\_\_\_\_

Comments:

~~Carbon Capture and Sequestration (CCS) is the main potential advantage of IGCC technology. In a Herald-Review article, Bob Evans Excelsior's Vice President of Environmental Affairs stated the project provides a plan to minimize greenhouse gases. The Draft Environmental Impact Statement states that "Excelsior has not established a detailed design for carbon capture and sequestration", and goes on to say that CCS is not feasible or economically viable for the Mesaba Energy Project. Why allow this project to go forward when it has no hope of using the main potential advantage of the technology?~~

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 90-01

See responses to Comments 1-02, 4-01, 4-03, 19-03, and 75-13, which address the same concerns.

90-01

Commenter 91 – Darrell White



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

Name: Darrell White Representing: \_\_\_\_\_  
\_\_\_\_\_  
Email: \_\_\_\_\_  
Address: 22710 Co. Rd. 70 Tel: 218-245-3979  
Boyer, Mn. 55709  
\_\_\_\_\_  
\_\_\_\_\_

Comments:  
Excelsior stated that the Mesaba Plant will not contribute additional  
mercury discharge to the water discharge. The reality is that the  
discharge water will carry high concentrated levels of mercury, sulfates,  
and dissolved solids into the Camisteco Mine Pit and/or Holman Lake and  
the Mississippi River. The Mississippi River is used for drinking water  
in MPLs. Even if they have test wells they should check all wells 75  
miles around the plant, private and commercial. People should get a  
copy of the report and it should be done every 6 mo. This will make  
them accountable. It may be costly but they may possibly be polluting  
our drinking water. This has merit to me.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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 91-01

See responses to Comments 6-01, 7-02, and 84-01, which address the same concerns.

91-01

Commenter 92 – Delores White



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

Name: Delores White Representing: \_\_\_\_\_  
\_\_\_\_\_  
Email: \_\_\_\_\_  
Address: 22710 Co. Rd. 70 Tel: 218-245-3979  
Bovey, Mn. 55709  
\_\_\_\_\_

Comments:  
Excelsior Energy's plan is to close Canister Mine Pit to recreational  
use. The original Joint Permit Application outlined how this clear  
trout fishery would be ruined by concentrated discharge of cooling  
tower blowdown water. The West Range Site is not in the Lake Superior  
Watershed which makes it possible to discharge more mercury into local  
water. The DEIS shows the CTB water may be discharged to Holman Lake  
and Swan River but it depends on their ability to obtain permits for  
the water discharge. Why should we allow Excelsior Energy to take a  
rare lake trout fishery away from the public and why should we allow  
them to pollute our local water when technology exists to prevent this  
pollution completely? Excelsior's Vice President of Environmental Affairs  
Bob Evans said in a Grand Rapids Herald-Review article Nov. 7, 2007 that  
IGCC technology reduces environmental impacts "by dramatically cutting  
criteria pollutant and mercury emissions, significantly reducing water  
usage and completely eliminating discharges of process waters."  
They should be held accountable to do what they say this technology  
is capable of doing from day one. This has merit to me.

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 92-01

See responses to Comments 6-01, 7-02, and 76-04, which address the same concerns.

92-01

**Commenter 93 – Dr. Gregory Chester**

6312 164<sup>th</sup> St. NW  
Cass Lake, MN 56633

January 8, 2007

Mr. Richard Hargis

Mesaba Energy Project, PUC Docket No. E6472/GS-06-668

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

Comments on Draft EIS

Dear Sir,

Coal vs. Wind Generated Electricity - Taconite Plant

Regarding the coal fired power plant proposed for Taconite, MN, there are many questions about its viability: economic, environmental, social, and political. Let us focus on the economic issues, more specifically opportunity costs. The simple question is, is coal gasification the best way to spend our limited money resources to produce electricity? The project, if completed, would cost at least \$2.1 billion. However, when one factors in other costs such as increased labor, material, and interest costs over the ten years projected before the first watt is produced and the additional costs railroad extensions and other related projects as well as the cost of coal to fuel the plant it will likely be much more expensive. Can we spend this money more effectively?

We can use the large wind generator built several years ago at the University of Minnesota at Morris for a comparison. It is designed to produce enough electricity for 550 homes. The Morris wind generator cost \$1.6 million. If we spend that \$2 billion on wind generators we could build 1,250 wind turbines, which could serve 684,500 homes.

The proposed coal burning plant, on the other hand, is designed to produce 600 megawatts or enough electricity for 600,000 homes. Wind would provide electricity for an additional 84,500 homes for the same money and the wind is free! Coal costs. Furthermore, it will be necessary to use a significant amount of that electricity to reduce the toxic pollution and later to sequester the CO2.

The coal cost will be significant as the plant would require a coal train each day to keep operating. This would cost a lot of money and it will come out of the electric customers' pockets. Also this money would go out of state, as we have no coal in Minnesota and lost to our economy. The wind is free so that no money will be spent on energy, thus that money for will stay in our communities and our pockets. We can use that saved money to buy what we need and to create local jobs. The wind generators can also be dispersed and provide well-paying jobs for many communities in our region for skilled people.

93-01

**Responses**

**Comment 93-01**

See response to Comment 37-01 which addresses the same concerns.

93-01  
(cont'd)

### Commenter 93 – Dr. Gregory Chester

Another example is the Flat Rock Wind Power, FRWP (LLC) in Northern New York. They have built 195 wind generators in West Lowville, NY in the past 2 ½ years. They cost about \$500 million and can produce 320 mw of electricity. \$2 billion could build four times this number of wind generators that could produce 1280 mw of electricity. That is more than double what this proposed coal fired plant would produce. Flat Rock built them in less than 2 ½ years and they are now producing electricity and both paying off the debt and paying fees to local farmers and the local communities and school districts. On the other hand, the Taconite plant would require at least 10 years to build before it produces its first watt.

The opportunity costs of this project need to be factored in up front. Do we want to spend \$2 billion on a dinosaur system that will produce less than half of the electricity of wind generators for the same cost? Furthermore, the wind fuel is free? The coal plant would cost more to build and operate and will produce less.

Two additional advantages of wind generators are that they are quick to build and will create more jobs for people already living in our region. Wind generators can be erected in only a few days and will begin producing electricity and income shortly thereafter. It will take at least ten years to complete the coal fired plant and it may take a while after that before it begins producing electricity and income. In the meantime the borrowed money will be generating interest debt that must be paid.

During the ten years it would take to construct the proposed plant many of the wind generators could have been producing electricity and making money for their investors and the local communities! The wind generators will create many more jobs locally for local people for the skills needed to maintain them are not as complex and specialized as those required to operate and maintain a large coal fired plant. Lastly, because the construction, operation, and maintenance of the coal fired plant will require specialized skills the plant owners will most likely bring in the skilled construction crews and technicians from other states.

When one views the opportunity costs, wind wins hands down. Why are we even thinking of coal fired plants, which are dinosaur technologies in our modern age? In 10 or 20 years they may be forced to shut down because of environmental factors and their basic costs to operate. They will not have had time to pay off their debt and we the public may have to absorb it. Wind makes sense; dollars and cents!

Thank you for your attention to these facts and observations.

Sincerely,

Dr. Gregory Chester

### Responses

**Commenter 94 – William A. Hanson**

**From:** W4A3H [mailto:taconite43@jetemail.net]  
**Sent:** Thursday, January 10, 2008 10:48 PM  
**To:** Bill Storm  
**Subject:** Mesaba Energy Project, PUC Docket No. E6472/GS-06-668

Mesaba Energy Project, PUC Docket No. E6472/GS-06-668  
DOE Draft EIS for the Mesaba Energy Project (DOE/EIS-0382D)  
Comments on Draft EIS

Dear sir:

I am writing in support of Excelsior's Mesaba Energy Project. I find this project not only a well planned creative energy project, but one that compliments both the needs for electrical energy in the near future in the mining industry but also the needs of this area for industry and job development.

I have also researched the two groups who oppose this project, and find that unlike their published complaints, their real issue is the gas line or power line crossing their property (CAMP), or the railroad crossing or being in close proximity to their property (MN Coal Gas Plant). I have also researched the size of the active membership of both groups, and neither has more than a dozen active members who attend organizational meetings. Please keep in perspective the obvious logic that their opposition using the real reasons would not find support, so they have tried to use scare tactics with the general population and unfounded pollution complaints.

I am familiar with the proposed location near Taconite. It is an area well suited to industrial development, the area at Taconite is in a buffer zone for the counties mining zone. This area where the plant would locate would not interfere with future mining and yet is in an area where development of residential uses would be unwise due to

**Responses**

**Comment 94-01**

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

94-01

**Responses**

**Commenter 94 – William A. Hanson**

future mining. I spent over 12 years in the local mining industry and realize the resources that exist for future use in this area.

In my opinion, on a national level we need to address the current best resources for energy as we now fully realize they have limitations.

The use of coal in what would be one of the most modern power plants seems logical and also will be a needed step in the advancement of new cleaner technology to make practical use of the coal resources.

In my opinion, this is a win win development, good for the State of Minnesota and the development of more environmental friendly use of coal in the production of electrical energy. I have spent my life working or teaching in the field of electronics. When I started in this field in the early sixties, if I had told engineers at Control Data, the company I was employed with, that I would have a computer larger than their largest computer of that time sitting on my desk, they would have said I was crazy and it could never happen. If creative people had not pushed the envelope of development beyond what the naysayers said was possible, we would not have the modern computers of today.

In closing, please consider all the positive aspects of this project, and the time and development spent by Excelsior Energy to create this possibility of state of the art technology for northern Minnesota.

Sincerely yours,  
William A. Hanson  
POB 91  
Taconite, MN 55786-0091  
(218) 245-1488  
[taconite43@jetemail.net](mailto:taconite43@jetemail.net)

94-01  
(cont'd)

**Commenter 95 – Frank R. Weber**

Mr Storm,

Attached are my questions and comments noted in the review of the Draft EIS for the Excelsior Project.

- 95-01** | 3.5.1.1 “As most of the taconite mining in the area has ceased,” only Butler was a taconite mine and ceased operations in 1985
- 95-02** | 3.5.7 Prairie River....Flow data collected 1967 to 1983 and 2001 to present? DNR was installing flow metering in August of 2007 Mean annual flow was established to be 319 ft3 per second using the old data so it would allow 2,468 gpm to be withdrawn? DEIS states water will be taken below Prairie Lake dam, approximately 8 miles from the site. No mention of pipe line, power line, pumping stations needed to move the water to the power plant site. Figure 3.15-1 shows West Range Site at KELLY LAKE????
- 95-03** | 3.16-2 cites 2 closed landfills, doesn't mention Nashwauk or Nashwauk Township sites.
- 95-04** | 3.15.1.1 cites commercial airport in Grand Rapids (ceased operations three years ago, **iron ore** being shipped out of Duluth and a four lane highway system (still not completed across the Range).
- 95-05** | 3.14.2.1 During high groundwater or rainfall, the main wastewater pump station in Taconite cannot handle the additional flows, creating a need to bypass untreated wastewater into a natural pond system. Draft makes no mention of correcting the problem before additional waste will be added to the problem.
- 95-06** | 3.13.4.1 School Districts, does not include Bug-Oh-Nay-Sha, Hill City or Big Fork.  
3.11 Socioeconomics for West Range were based on Iron Range Township, City of Taconite, AND SEVERAL OTHER JURISDICTIONS? What “jurisdictions”? Does this include everything from Hibbing to Grand Rapids.....what is usually referred to as the “West Range”.
- 95-07** | Table 3.11-1 shows Itasca County population has increased since 1980? Range population was at a high point when the 1980 census was completed. Drop started early in 1981 when part of Butler was not called back after shutdown.....big drop came when Butler shut down in 1985. Current population is 700 above the 1980 level and does not include seasonal additions which more than doubles Itasca's population.
- 95-08** | 3.5.1.3 Site is potentiometric high? Groundwater flow is firmly established to be north to south due to the Giant's Ridge Batholith. Surface contamination due to handling, storage of coal, storage of waste products (especially during road restrictions and while water is too solid to control dust), rainfall/snowfall en route to the surface,.
- 95-09** | 3.9.2.1 Has Native American burial mound at Big Sucker Lake been examined yet?
- 95-10** | 3.10.5 Publicly owned lands....cites parcels that would be used for corridors.....60% Itasca County, 34% State. Is the remaining 6% private?

**Responses**

- Comment 95-01**  
See response to Comment 82-42, which addresses the same concern.
- Comment 95-02**  
See responses to Comments 82-43 and 82-44, which address the same concerns.
- Comment 95-03**  
See response to Comment 82-45, which addresses the same concern.
- Comment 95-04**  
See response to Comment 82-46, which addresses the same concern.
- Comment 95-05**  
See response to Comment 76-01, which addresses the same concern.
- Comment 95-06**  
The Itasca County school districts named in Section 3.13.4.1 (Volume 1) are those listed by the Minnesota Department of Education (see reference MDE, 2006).
- Comment 95-07**  
See responses to Comments 82-49 and 82-50, which address the same concerns.
- Comment 95-08**  
See response to Comment 82-51, which addresses the same concern.
- Comment 95-09**  
See response to Comment 82-52, which addresses the same concern.
- Comment 95-10**  
See response to Comment 82-53, which addresses the same concern.

**Commenter 95 – Frank R. Weber**

- 95-11** | 3.10.3 Land Use Planning: Objectives of the Comprehensive Land Use Plan for Itasca County, Paragraph 1 “The plan also recommends the use of tax incentives to encourage private lakeshore owners not to develop, subdivide, or plat undeveloped lakeshore or environmentally sensitive areas.” One family on Lower Lawrence Lake with 400 feet of lakeshore saw an increase of \$800. 00 this past year?
- 95-12** | 3.8.2 Aquatic communities.....There are fish in every pit. Accepted spelling is Oxhide Lake, not Ox Hide
- 95-13** | 3.8-13 Second paragraph: None of the waterways or water bodies in the area is considered to be cold water due to the lack of naturally reproducing trout populations Paragraph five: In past years the Canisteo Pit was stocked with lake trout, and the population has become self-sustaining.
- 95-14** | 3.8-1 “Disturbed habitat from recent clear-cutting was widespread and was the primary reason for the diminished quality in wildlife habitat” Then. 3.8-2 Last paragraph states “The most common forested terrestrial habitat onsite is characterized as the northern mesic hardwood forest”.
- 95-15** | 3.8-8 “An unnamed designated trout stream drains into Swan Lake (east of Pengilly) This is Pickerel Creek.....The Minnesota Steel Project is going to eventually eliminate it anyway
- 95-16** | 3.8.1 Listed animal species expected to inhabit the site do not include deer, bear, rabbits, grouse, red and gray squirrels, beaver, muskrat, otter, mink, herons, wolf, fox, coyote
- 95-17** | 3.7-11 Type 7 Wooded Swamp: third paragraph, last sentence: These large complexes provide much of the natural drainage through the site and are hydrologically connected to other upstream and downstream resources outside the project area. They know this flow will contaminate the water bodies to the south.
- 95-18** | 3.7-8 Last paragraph: The majority of wetlands identified have a connection to interstate commerce. What is the meaning of this statement?
- 95-19** | 3.7.4.1 desktop review A soil survey has not been completed for St Louis County.....why not?
- 95-20** | 3.7.2 Regulatory Framework...first paragraph The MPCA currently performs Section 401 water quality certifications for the state. In 2007, the MPCA added an additional 287 lakes to list of “Impaired waters” 3.6.2 Local hydrology Features: Watersheds.....to the north and west of site, The Prairie River drainage system actually starts in St Louis County and is much larger than the 300+ square miles quoted.
- 95-21** | Appendix  
5.1 Land use: “The site is currently unoccupied by any residential dwellings and has no direct access”. How does this fit requirement for Infrastructure in place or section 3.8-1 of the Draft?
- 95-22** | Page 6 Estimates on chromium based on Wabash River Project? Wasbash is using petcoke and doesn’t run fulltime.

**Responses**

- Comment 95-11**  
Thank you for your comment. It has been noted and will be included in the administrative record for this EIS.
- Comment 95-12**  
See response to Comment 82-54, which addresses the same concern.
- Comment 95-13**  
See response to Comment 82-55, which addresses the same concern.
- Comment 95-14**  
See responses to Comments 14-02, 14-03, and 59-01, which address the same concerns.
- Comment 95-15**  
The stream name has been added to Sections 3.8.1.1 and 4.8.3.2 (Volume 1).
- Comment 95-16**  
The only Federally protected species in the project area is the Canada lynx. Potential impacts to the Federally threatened Canada lynx have been analyzed in a Biological Assessment (Appendix E [Volume 2]), and whose findings at the West Range Site have been concurred with the USFWS. In the event that the East Range site would be selected for the Proposed Action, DOE would resubmit the Biological Assessment for the East Range.
- Comment 95-17**  
See response to Comment 82-59, which addresses the same concern.
- Comment 95-18**  
See response to Comment 82-60, which addresses the same concern.
- Comment 95-19**  
See response to Comment 82-61, which addresses the same concern.
- Comment 95-20**  
This comment refers to text that was revised before publication of the Draft EIS; no longer relevant.
- Comment 95-21**  
See response to Comment 82-62, which addresses the same concern.
- Comment 95-22**  
See response to Comment 82-34, which addresses the same concern.

**Commenter 95 – Frank R. Weber**

- 95-23** | Page 18 Mercury loading of Diamond Lake estimated to be .08 g/yr??? From Excelsior but 16.51 g/yr from BACKGROUND??? How does this apply to D.1 Federal requirements for “cumulative impact” IRT MSI, Keetac, Evtac, Hibbtac, etc, etc
- 95-24** | D.4.1 Impacts of train traffic on regional communities between Grand Rapids and Hibbing.....what about the rest of Minnesota’s communities that are along the proposed travel route?
- 95-25** | D.6.3 Mercury Deposition and bioaccumulation.....info we will get from Excelsior? RIGHT!!!
- 95-26** | D.6.4 Air Toxins.....Please read....we will depend on Excelsior for information Nice witch’s brew of known toxins that “**may potentially** contribute other hazardous air pollutants”???????
- 95-27** | D.6.5 Water supply....Partridge River is East Range site.
  
- 95-28** | Cumulative air quality impact analysis section.....no page numbers Sec. 2 Read paragraph that starts “Mercury emissions were modeled only for sources for which emissions data were available”.....leaves a lot of room for error?
- 95-29** | And 4.1 Mesaba Project contributions to total cumulative impacts are small relative to total expected concentrations. Already bad so let’s add JUST a little more?? What is this saying about MSI?
  
- 95-30** | D.6 Trains Mesaba 1 and 2 are listed under East Range? But 4 trains per day (two in, two out) is not the four or five per week that has been discussed at the public meetings. Local train traffic from GR to Superior would likely resume..... This could accommodate MSI’s needs of 70-90 cars per day (10 incoming, the balance outgoing) How do the cars get there?

**Responses**

- Comment 95-23**  
The MCPA guidelines set the ambient (i.e., background) mercury deposition rate that occurs in Minnesota to be used in the analysis (see MPCA Mercury Risk Estimation Method for the Fish Consumption Pathway at <http://www.pca.state.mn.us/publications/aq9-16.pdf>). This guidance applies to the whole state and represents deposition that is occurring in Minnesota from all global man-made and natural sources. Note that use of the enhanced ZLD system at the West Range Site eliminates wastewater discharges, including effluent with mercury. Refer to Sections 4.3 and 4.17 (Volume 1) which discuss impacts from mercury emissions.
- Comment 95-24**  
See response to Comment 82-63, which addresses the same concern.
- Comment 95-25**  
See response to Comment 82-64, which addresses the same concern.
- Comment 95-26**  
The list of air toxins provided as potentially emitted from the IGCC Power Station are typical of existing coal-fired power plants. The air toxins emissions from the IGCC Power Station are expected to be less than conventional coal-fired power plants because of the IGCC technology that would be used. See response to Comment 1-01, which addresses the pollution prevention concepts inherent to the E-Gas™ based IGCC technology used in Phase I and Phase II of the Mesaba Energy Project.
- Comment 95-27**  
Correct; the cumulative impacts analysis in Appendix D addressed both the West Range and the East Range Sites.
- Comment 95-28**  
As stated in responses to Comments 49-12 and 57-05, the emissions inventory for the Mesaba cumulative impacts analysis included all source data that MPCA could provide at the time. Note that since publication of the Draft EIS, Sections 4.3 and 5.2.2 (Volume 1) and Appendices B and D1 (Volume 2) have been revised based on the latest modeling protocol, which includes a more comprehensive listing of regional sources.
- Comment 95-29**  
See responses to Comments 49-01, 49-12, and 75-14, which address the same concern.

**Commenter 96 – Edward and Susan Stish**

>>> "sue stish" <[sues1@uslink.net](mailto:sues1@uslink.net)> 1/11/2008 2:06 PM >>>  
DOE/EIS-0382D

- 96-01 These comments are focused on the West Range site. The socioeconomic comparison is based on the seven county Arrowhead Region. Koochiching and Aitkin county statistics have always shown a lower growth economy. These counties were included to skew the “need” factor. Carlton County has never been included in the Arrowhead Region. With rising costs in gasoline and auto expenses, employable persons will not make the 100 mile plus trek for a job from Kooch, Aitkin, Carlton, Cook or Lake Counties. Conversely, much of the environmental data report includes only a tiny 3 kilometer radius. This 3 KM radius includes old mining lands and few people. To make a true comparison for the environmental section of the EIS, the 7 county Arrowhead Region should be considered.
- 96-02 The maps of the West range site that Excelsior Energy has presented have put the plant site toward the northern edge of the maps. The hundreds of lakes that are located to the north of the site aren’t even shown. The corresponding data provided by Excelsior suggests that all there is to the north is old spent mining lands. Not true.
- 96-03 A twenty mile radius would create a fairer view. Most of the rural population of Itasca County lives in this 20 mile circle. Over 75% of the lakes in Itasca County and hundreds of miles of streams and rivers which ultimately feed into the Mississippi River and will be impacted by the Mesaba Project are in this boundary. Unfortunately, many already suffer from mercury damage and carry fish advisories. This 20 mile boundary includes nearly all the designated (MN DNR) trout lakes and streams in Itasca County.
- 96-04 Eight of ten of the highest valued per-foot frontage lakes in Itasca County are in this 20 mile radius. Trout Lake in Balsam Township, the highest valued lakeshore in Itasca County, at \$1700/ foot, lies to the northwest a mere 11 miles away. Spider, Turtle, Sugar, Pokegama, Deer, Wabana and Bluewater Lakes with values from \$1050 to \$1500 per foot lie in this 20 mile circle (data from Itasca County Assessors office, assessor lake history 2007). These are all stunningly beautiful lakes. Landowners and users of these natural gems will not appreciate the air, water and environmental quality damage caused by the Mesaba Project.
- Excelsior Energy’s Mesaba Project combined with “foreseeable future” projects will seriously impact the environment with additional mercury, particulates and CO2 emissions. Air, water, wildlife, and humans will suffer daily the effects from this project. This electric generating facility will only add to the ultimate poisoning of our lakes and air.
- Every day we read about the serious implications of global warming. Efforts are being made toward lowering greenhouse gasses in local industry. State and federal laws are being written to curb and lower CO2 emissions. How can this

**Responses**

- Comment 95-30**  
See response to Comment 82-66, which addresses the same concern. Refer to Section 5.2.7 (Volume 1) and Appendix D6 (Volume 2), which discuss the planned rail use by Minnesota Steel and Excelsior.
- Comment 96-01**  
See responses to Comments 16-01 and 80-05. The 7 counties in the Arrowhead Region (Northeast Region 3) are defined by the Minnesota Department of Employment and Economic Development:  
<http://www.deed.state.mn.us/lmi/regional.htm> (see reference DEED, 2006a).
- Comment 96-02**  
The map illustrations in the EIS are specifically provided to best depict features and infrastructure associated with the Mesaba Energy Project. The EIS did not intend to minimize the importance of abundant natural resources located to the north of the West Range Site. Data presented in the EIS are intended to describe resources that may be most impacted by the project. The numerous lakes located north of the West Range Site would experience impacts no greater than the impacts described for the closest surface water bodies depicted on the maps.
- Comment 96-03**  
See Section 4.2.3.2 (Volume 1), which discusses aesthetic impacts within a 20-mile radius. See response to Comment 6-01, which discusses the use of the enhanced ZLD system at the West Range Site that would eliminate wastewater discharges, and thus, eliminates the potential for mercury to be discharged into any water body. See response to Comment 42-01, which discusses the impacts analysis for mercury emissions. See Section 4.11.3.2 (Volume 1), which discusses the potential impacts to property values at the West Range Site.
- Comment 96-04**  
See response to Comment 12-02, which addresses the same concern.

**Commenter 96 – Edward and Susan Stish****Responses****96-04  
(cont'd)**

project go forward when it has never been designed to sequester CO<sub>2</sub>? At a previous hearing, a leading scientist in the field stated that the necessary equipment to sequester isn't even included in the blueprint and would take a mammoth effort to retrofit the finished project for ANY future sequestration. Excelsior Energy officials say they will sequester when the law requires it. We all know there will be great resistance to change this plant once it is built. Coal is not a clean way to create electricity. The Mesaba Project has been sold as "a way to keep America free from our dependence on foreign oil". The generation of electricity has absolutely nothing to do with foreign oil use! Many other clean and proven ways can be used to generate electricity. It is not patriotic to pollute and contaminate our earth for our children and future generations. No one should have to be a part of an "experimental project" that could easily have a life span of over 50 years. This is a wasteful use of public funding to enhance a questionable private enterprise.

**96-05**

Enough research has not been presented about the potential damage to be done by the pipeline, railroad, and transmission lines that will continue to fragment our environment. This tangled network of "infrastructure" will destroy wetlands that filter groundwater and support a vast wildlife population.

**96-06**

The rail traffic count through the central downtown area of Grand Rapids is false. Recently the Outdoor Farmers Market in Grand Rapids relocated to an in-town site near the railroad. Train traffic was questioned when market members met with the downtown business association. "About 9 trains a day" was the figure given at that meeting. Excelsior reports that there are only 4 trains per day. Four additional trains a day will seriously impact traffic patterns through Grand Rapids.

**96-07**

Emergency response times in Grand Rapids will become a serious problem. Half of the town of Grand Rapids lies on the north side of the Mississippi River and half lies to the south. Grand Rapids has only 2 bridges that cross the Mississippi only 6 blocks apart. The rail line in Grand Rapids parallels the River less than 2 blocks away. The main fire and ambulance stations are north of the rail line and the river. Medical facilities are south of the river. In an emergency, the nearest bridges are 5 and 20 miles out of town and involve traveling miles of country roads

**96-08**

At the Taconite site there is a concern about local emergency response. Small, sometimes understaffed volunteer fire departments from around the area provide mutual aid for Iron Range Township. Costly training will be needed for these volunteer fire departments to adequately and safely deal with fire, coal, electricity, and hazardous substances in the event of fire and /or medical emergencies. These are our relatives, friends and neighbors who will be called on to risk their lives.

In conclusion, this EIS was hard to read and understand. Foolish facts and figures were included to confuse and baffle the reader. The appendix seemed to be written with no direction and didn't offer a table of contents or index. It appeared to be all that extra "stuff" that couldn't be categorized so it was just

**Comment 96-05**

Additional references to fragmentation were reviewed and their findings have been incorporated in the EIS. One reference, "Edge effect on nesting success of ground nesting birds near regenerating clearcuts in a forest-dominated landscape" (Manolis et. al, 2002), is available at [http://findarticles.com/p/articles/mi\\_qa3793/is\\_200210/ai\\_n9140045/pg\\_1](http://findarticles.com/p/articles/mi_qa3793/is_200210/ai_n9140045/pg_1). Another reference, "Evaluation of Ecological Impacts from Highway Development" (EPA, 1994b), is available at <http://www.epa.gov/compliance/resources/policies/nepa/ecological-impacts-highway-development-pg.pdf>. Wetlands impacted as a result of the project would be mitigated for and replaced with wetlands of the same value and function so as not to create detrimental effects to water quality of the affected watershed. Also see responses to Comments 14-02, 14-03, and 59-01, which address the same concerns.

**Comment 96-06**

Sections 3.15.3.2 and 5.2.7 (Volume 1) of the Draft EIS stated that approximately six trains currently pass through the city of Grand Rapids in Itasca County each day and was based on the most recent data available provided by the Federal Rail Administration at the time of the writing of the Draft EIS (<http://safetydata.fra.dot.gov/OfficeofSafety/publicsite/crossing/crossing.a.spx>). The EIS estimated that the time for a train to cross a road intersection would be 9 minutes, which is considered a conservative estimate as it assumes the train's speed would be 10 mph. Even under this worst-case scenario, the potential train crossing time falls under the state limit. However, DOE recognizes that although the delay times would be below the state limit, there could be negative effects on road traffic. Section 5.2.7 (Volume 1) addresses baseline rail traffic and potential cumulative impacts for the West Range Site. Note, as discussed in the response to Comment 82-66, the rail impacts analysis in the EIS assumed a very conservative number of two proposed daily roundtrip deliveries (instead of 1.25) as a result of the project.

**Comment 96-07**

See responses to Comments 53-10 and 96-06, which addresses the same concern on potential impacts to emergency response vehicles from proposed rail use.

**Responses**

**Comment 96-08**

See response to Comment 24-01, which addresses the complexity of the EIS. The Appendix (Volume 2) contains supporting documents and materials that are referenced within the body of the EIS. These materials are generally summarized within the EIS text but provided in the Appendix for use by individuals interested in reviewing the full documentation. The Appendix is not otherwise intended to be a stand-alone document.

Data used in the EIS was acquired from available sources with emphasis on the most up-to-date information for issues of principal concern in keeping with the CEQ regulations 40 CFR 1501.7.

**Commenter 96 – Edward and Susan Stish**

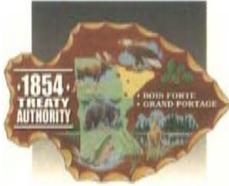
**96-08  
(cont'd)**

thrown together. Throughout the report, much of the statistical information presented by Excelsior is old and outdated. The 10 to 30 year old data is no longer adequate and should not be accepted.

Thank you

Edward and Susan Stish  
Balsam Township, MN

**Commenter 97 – Darren Vogt and Dave Woodward**



**1854 Treaty Authority**

4428 HAINES ROAD • DULUTH, MN 55811-1524  
218.722.8907 • 800.725.8799 • FAX 218.722.7003  
[www.1854treatyauthority.org](http://www.1854treatyauthority.org)

January 11, 2008

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: Mesaba 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 Mesaba Energy Project.

The 1854 Authority is an inter-tribal natural resource management organization governed by the Bois Forte Band and Grand Portage Band of Lake Superior Chippewa, both federally recognized tribes. The organization manages the off-reservation treaty rights of these bands in the 1854 Ceded Territory. Please note that these comments are submitted by 1854 Treaty Authority staff with the understanding that member reservations may submit comments from their own perspective.

Band members continue to exercise rights to hunt, fish, and gather guaranteed under treaty with the United States. Resources must be available and safe to utilize for the exercise of these rights. While we are not opposed to pursuing energy and economic development opportunities, we believe that such development should only proceed when all safeguards to protect the environment are ensured. Industrial operations should avoid or minimize negative impacts to the natural resources and utilization of these resources. Our focus is on projects within or affecting resources of the 1854 Ceded Territory which encompasses all of Lake and Cook counties, most of St. Louis and Carlton counties, and portions of Pine and Aitkin counties in northeastern Minnesota.

Carbon Capture and Sequestration

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

*A consortium of the Grand Portage and Bois Forte Bands of the Lake Superior Chippewa*

**Responses**

**Comment 97-01**

DOE recognizes its obligation to ensure that the EIS has addressed issues of importance to the 1854 Treaty Authority and Native American tribes and bands with existing and historic affiliation to northeastern Minnesota. Sections 1.6.1.3 and 1.8 (Volume 1) of the Final EIS summarize the efforts made by DOE to ensure that Native American concerns have been addressed.

**Comment 97-02**

See responses to Comments 1-02, 4-01, and 67-01, which address the same concerns. Native American tribes would be consulted in conjunction with any future EIS pertaining to the construction of pipelines for CCS.

97-01

97-02

**Commenter 97 – Darren Vogt and Dave Woodward**

**Responses**

97-02  
(cont'd)

Manitoba, hundreds of miles away. A specific and detailed design for carbon capture, transport, or sequestration has not been developed.

It is our understanding that one value of innovative power generation is reduced emissions. However, proposed releases of carbon dioxide from this project appear inconsistent with efforts to reduce releases of greenhouse gases. Carbon dioxide emissions have a significant impact on global climate and are the primary driving force behind increases in global temperature. Regionally, we are beginning to see or have seen the effects of climate change including impacts to plant and animal species. We are highly concerned about climate change and its effects on natural resources and related treaty rights in the region, and the project as planned contributes to the problem. The issue of carbon capture and sequestration should not be avoided, and should be built into the project up front.

97-03

Regional Haze and Visibility

Modeling results indicate that visibility impacts are significant for class I areas including 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 visibility 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 made, and mitigation plans to offset any impact should then be developed. We have concerns over haze and visibility issues, and support the Minnesota Pollution Control Agency position and issues raised by federal land managers outlined late in 2007.

97-04

Mercury

Emissions from the project include up to about 54 pounds of mercury per year. As a new source, 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 by 93% from 1990 levels to annual emissions of 789 pounds per year, an increase of 54 pounds per year is significant. Additionally, the preferred project location is in the vicinity of Minnesota Steel which is also projected to emit mercury. We question how permitting would be handled for yet another facility that increases mercury releases.

Of primary concern to us is mercury in fish, and ultimately potential human health effects. Tribal members can be an at risk population due to increased levels of fish consumption. A human health risk assessment to estimate risk to subsistence fishers was conducted and referenced in the draft EIS. Results indicated an incremental increase in health risks from ingestion of fish due to mercury from plant emissions. Although the document states that such a risk would be within the acceptable risk quotient, uncertainty exists (especially impacts to local waters where "hotspots" may exist) and we are concerned about any increase to mercury contamination of fish.

97-05

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

**Comment 97-03**

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

**Comment 97-04**

Minnesota is currently in the process of determining how to implement the statewide mercury TMDL, which set an annual air emission target of 789 lb by 2025. However, no rules have yet been finalized nor have draft rules been placed on notice for public review. In May 2008, a stakeholder group recommended a set of strategies to MPCA for implementing the TMDL (<http://www.pca.state.mn.us/publications/wq-1w1-19.pdf>). Three recommendations were made for new sources: (1) achieve best controls; (2) complete applicable environmental reviews; and (3) acquire offsets by 2025, preferentially from in-state sources. Excelsior has proposed mercury emission control consistent with a minimum removal rate of 90 percent, which meets or exceeds best available controls (see subsection *Clean Air Mercury Rule* under Section 4.3.2.6). Applicable environmental reviews were conducted in the AERA according to MPCA guidance (see Appendix C). A mercury offset program has not yet been established and any offset project that Mesaba might implement would depend on the specifics of that program, which are not known at this time. Mesaba would be subject to applicable future requirements as final rules are promulgated. Demonstration of this IGCC technology and widespread commercialization as a replacement for conventional coal-fired power plants would contribute to a state-wide and nationwide reduction in mercury emissions and deposition over the long term.

According to MPCA, the mercury in Minnesota's fish comes almost entirely from atmospheric deposition, with approximately 90 percent originating outside the state. MPCA estimates that 58 percent of the mercury emissions from Minnesota sources are from electrical power plants. As discussed in Section 4.8 (Volume 1), the operation of the proposed Mesaba Generating Station at either location would have minimal impact on aquatic species and their prey caused by the bioaccumulation of heavy metals. As discussed in Section 5.2.2.2 (subsection *Deposition of Mercury*) (Volume 1) and Appendix D1 (Volume 2) of the Final EIS, the maximum increase in ambient elemental mercury concentrations in Class I areas resulting from Mesaba would be 0.11% at the West Range Site and 0.28% at the East Range Site. Furthermore, since virtually 100% of Mesaba's mercury emissions would be in elemental form, which has a deposition rate orders of magnitude lower than the ionic forms of mercury that are present in other sources' emissions, the impacts of Mesaba's mercury emissions on Minnesota's fish are expected to be very small.

**Commenter 97 – Darren Vogt and Dave Woodward**

**Responses**

**97-05  
(cont'd)**

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. Evidence suggests that sulfate may contribute to the methylation of mercury and thus be a factor in fish contamination issues. The draft EIS states that Excelsior would have to apply for a waiver if parameters are expected to exceed water quality standards. We have concern over this type of approach and question if it is even allowable under water quality regulations. Water quality standards must be met, and in a situation of a variance, a specific plan and timeline to meet standards must be developed. Variances are time-limited and can only be allowed when the standard can ultimately be attained.

Cumulative Impacts and Site Location

A considerable number of projects exist, are 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, fisheries, wildlife, etc.) must be clearly understood and identified.

**97-06**

In our review of the project, we primarily focused on the preferred West Range Site. Analysis in the draft EIS also 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 Site including available water supply, greater distance from class I air areas, and location outside of the Lake Superior Basin. Cumulative impacts at the East Range Site (St. Louis River watershed, along with the Partridge River and Embarrass River watersheds) are potentially high due to the number of current or proposed projects directly 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.

Cultural Resources

The potential for negative impacts to cultural resources is of concern to the bands. Existing sources of information about the project area have been adequately reviewed for the location of known heritage sites within the project area. The bands support further project specific Phase I surveys within the project area to identify heritage sites. Access roads, transmission lines, and rail lines all have the potential to negatively affect heritage sites both through direct disturbance and indirectly by providing access to these areas for looting. In addition to the historic resources in the project area, areas that may contain traditional importance and use need to be identified through consultation with band members. Because the project is a federal undertaking, consultation is required under the National Historic Preservation Act. Further and ongoing consultation with tribes should occur on cultural resource issues as additional survey work is planned and implemented.

**97-07**

Project Need

The project has been exempted from demonstrating need because it has qualified as an "innovative energy project" under Minnesota statute. The EIS states that issues such as need, size, or type of facility are excluded from the scope of the process. However, we find it difficult

**97-08**

**Comment 97-04 (cont'd)**

Note that based on agency comments on the Draft EIS, additional AERA modeling was conducted that, in general, increased the level of conservatism in the analysis (the results are incorporated in Section 4.17 and detailed in Appendix C). As indicated by the latest health risk analysis, both the cancer and non-cancer total risks (due to the ingestion of contaminated fish tissue), remain below the acceptable MPCA health risk levels. See also response to Comment 38-01, which concerns the risks from mercury emissions and the response to Comment 1-01, which identifies the pollution prevention concepts and technological approach used to reduce mercury emissions to extremely low levels. See also response to Comment 105-27, which discusses Excelsior's consultation with MPCA regarding how to permit the Mesaba Energy Project while working within the framework of evolving guidelines being established for new and expanding sources.

Note that a new modeling protocol was used for which impacts on air quality and visibility in Class I areas were analyzed. A discussion on the findings of the latest air impacts analysis and mitigation of such impacts (where mitigation was deemed appropriate) is included in Section 4.3 and 5.2.2.2 of Volume 1 and Appendices B and D1 of Volume 2.

**Comment 97-05**

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

**Comment 97-06**

The Cumulative Impacts section (Section 5.2 [Volume 1]) of the Mesaba EIS has been updated to reflect the latest preferred footprints and access alignments, and also reviewed to verify the accuracy of data, correct discrepancies, and incorporate any more recently available data as appropriate. Section 5.2 also includes new text on findings from revised cumulative air and health risk modeling efforts (see Appendix D [Volume 2] for more detailed updates to various cumulative analyses, including impacts to air quality and health risk). The Final EIS has also been updated to provide information for the East Range Site as comparable to the West Range Site.

**Comment 97-07**

DOE recognizes that cultural resources impacts are of a particular interest to the tribes. Section 1.6.1.3 (Volume 1) in the Final EIS has been updated to discuss additional coordination by DOE and MDOC with the tribes. See also response to Comment 48-03, which addresses concerns about archaeological resources. DOE will continue to work with the tribes to ensure that their concerns are addressed in the ROD.

**Commenter 97 – Darren Vogt and Dave Woodward**

**97-08  
(cont'd)**

to accept such a determination when considering potential impacts to the resources. While we support the exploration of innovative technologies, this should not be the overriding justification for a project. 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. Furthermore, estimates of economic impact and the number of jobs to be provided seem to be declining or are unclear at best. Along with our concerns over environmental impacts, we question if there is a need for this project or if it is the right fit for our region, and believe it is an issue that must be addressed.

Sovereignty and Treaty Rights

Finally, I remind you that both the federal and state governments have the responsibility to work with Indian bands 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 bands and the rights retained by treaty with the United States. This must be put into practice, and also needs to be more clearly addressed in the draft EIS. Possible locations include section 3.8 to include that treaty rights and tribal management also exist; section 3.9.4 to include that the East Range Site is within the 1854 Ceded Territory where treaty rights exist; section 3.17.4.1 to include tribal uses as a sensitive receptor; and chapter 6 to include that the Treaty of 1854 also retained rights to hunt, fish, and gather in the 1854 Ceded Territory.

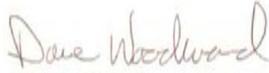
**97-09**

The 1854 Treaty Authority would like to remain informed on this project if or when the process moves forward. Thank you.

Sincerely,



Darren Vogt  
Environmental Director



Dave Woodward  
Cultural Resource Specialist

cc: Corey Strong, Bois Forte Department of Natural Resources  
Curtis Gagnon, Grand Portage Trust Lands and Resources

**Responses**

**Comment 97-08**

As stated in the responses to Comments 37-01 and 63-01, Section 1.4.1 (Volume 1) of the Final EIS explains that 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. Section 1.2.1 (Volume 1) of the Final EIS explains the objectives of the U.S. Congress and DOE in establishing the CCPI Program, which is only one of DOE's programs evaluating innovative energy solutions for the nation. Section 2.1.1.2 (Volume 1) describes the reasonable alternatives considered by DOE. Because the U.S. Congress established the CCPI Program with the specific goal of accelerating commercial deployment of advanced coal-based technologies, other technologies (such as wind, solar, or conservation) that cannot carry out these goals are not reasonable alternatives in this EIS. However, DOE conducts various other programs that support those technologies. As explained in Section 1.2.2 (Volume 1), the Mesaba Energy Project, as an innovative energy project under Minnesota Statutes 216B.1694, is exempt from the requirement for a Certificate of Need. MDOC supports PUC in the permitting process by preparing an EIS and holding a contested case hearing. In accordance with state regulations, and after considering the potential impacts, the PUC has the responsibility either to approve the project and issue permits on the applicant's preferred or alternative site and corridors or to disapprove the permit application. See also response to Comment 16-01 regarding the potential effects of the Mesaba Energy Project on the regional economy and employment.

**Comment 97-09**

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 the 1854 Treaty Authority and Native American tribes with existing and historic affiliation to northeastern Minnesota. Also, in response to this comment: Additional information about the agencies' coordination with Native American tribes has been added to Section 1.6.1.3 (Volume 1); a statement regarding treaty rights and tribal management of biological resources has been added to the first paragraph in Section 3.8; Section 3.9.4 has been updated to indicate that the East Range Site is within the 1854 Ceded Territory where treaty rights exist; tribal uses have been indicated as a sensitive receptor in Section 3.17.4.1; and Chapter 6 has been updated to include the Treaty of 1854, by which tribes retained the rights to hunt, fish, and gather in the 1854 Ceded Territory.

**Commenter 98 – Brandy Toft**



**Leech Lake Band of Ojibwe**

*George Goggeys, Jr., Chairman*  
*Archie LaRose, Secretary/Treasurer*

District I Representative *Robbie M. Howe*      District II Representative *Lymon L. Losh*      District III Representative *Donald "Mick" Finn*

115 6<sup>th</sup> Street NW, Suite E, Cass Lake, MN 56635  
(218) 335-8200 \* Fax (218) 335-8309

January 11<sup>th</sup>, 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: Department of Energy's Draft Environmental Impact Statement for the Mesaba Energy Project DOE/EIS-0382D**

Mr. Hargis and Mr. Storm,

The Leech Lake Band of Ojibwe (Band) is providing comments on Department of Energy's Draft Environmental Impact Statement (DEIS) for the Mesaba Energy Project DOE/EIS-0382D in part as official involvement in the permitting process. However, of greater consequence is the Band's sovereign status and our obligation and ability to protect our people and our environment today and for generations to come.

The Leech Lake Reservation is a federally recognized Reservation located in north-central Minnesota encompassing 865,000 acres, serving 8,050 members, and 12,000 Reservation residents. The Reservation is characterized by an abundance of lakes and rivers (approximately 300,000 acres of surface waters), wetlands (163,000 acres), and forests (over 300,000 acres). The Leech Lake Band of Ojibwe (Band) retained and exercise their inherent right to hunt, fish, and gather for subsistence purposes in the 1855 Treaty with the United States government. Resources must be available and safe to utilize for the exercise of these rights. Protection of the Reservation's environment and trust resources is

**Responses**

## Commenter 98 – Brandy Toft

crucial for the health and welfare of the Reservation population and the traditional, cultural and spiritual well being of the Band.

98-01

While the Band is not opposed to pursuing energy and economic development opportunities, we believe that such development should only proceed when all safeguards to protect the environment are ensured. The project has been exempted from demonstrating need because it has qualified as an “innovative energy project” under Minnesota statute. The DEIS states that issues such as need, size, or type of facility are excluded from the scope of the process. However, we find such a determination troubling considering potential impacts, location, and cumulative impact to the resources.

### Best Achievable Control Technology - BACT

In a letter dated July 2006, the Minnesota Pollution Control Agency (MPCA) explained that it does not consider Excelsior’s BACT analysis to be complete for a variety of reasons. We understand that Region V EPA has been requested to review and provide a determination as to what constitutes BACT for the gas turbine sulfur dioxide (SO<sub>2</sub>) and nitrogen oxide (NO<sub>x</sub>) emissions. The Band would like to add our support to the MPCA’s arguments that Selexol constitutes BACT for SO<sub>2</sub> and that Selective Catalytic Reduction (SCR) constitutes BACT for NO<sub>x</sub>. The following support our position and the position of other governments commenting on the permit.

98-02

Leech Lake agrees with the MPCA’s position in its October 18, 2007 letter to Excelsior that it is inappropriate to compare BACT for pulverized coal boilers to BACT for an IGCC plant since the two technologies are different. According to the EPA’s October 1990 New Source Review (NSR) Workshop Manual, this does not follow the approved procedure for determining BACT. Page B.31 of the NSR Manual states “Cost effectiveness (dollars per ton of pollutant reduced) above the levels experienced by *other sources of the same type* and pollutant, are taken as an indication that unusual and persuasive differences exist with respect to the source under review”. This indicates that cost comparisons between dissimilar sources are not to be considered in the BACT analysis.

Through our participation with the Central Regional Air Planning Association Policy Oversight Group, the cost to remove these haze-causing pollutants does not seem unreasonable or extraordinary. The Band does not believe the estimate control costs to remove SO<sub>2</sub> by Selexol (\$7,663/ton removed) to be excessive and supports the MPCA’s assertion that BACT for SO<sub>2</sub> from Mesaba is Selexol with an emission limit of 0.010 lb/mmBtu. These costs are further justified as MPCA has proposed a Concept Plan to address regional haze in Northern Minnesota that calls for a cap on SO<sub>2</sub> and NO<sub>x</sub> emissions to position Minnesota on the “glide path” for meeting regional haze requirements. The cost is justified and may avoid the potential for Excelsior to take regional haze mitigation measures in the near future.

## Responses

### Comment 98-01

As stated in response to Comment 1-01, DOE considers the IGCC technology proposed for the Mesaba Energy Project to represent an advanced coal utilization technology that is environmentally cleaner, and in many cases, more efficient and less costly than conventional coal-utilization processes. Although the project has been exempted from a Certificate of Need, as stated in Section 1.2.2 (Volume 1), the project proponent provided a statement of need in Appendix F1 (Volume 2) at the request of USACE. The project has also been subjected to the environmental review requirements of both NEPA and the Minnesota Power Plant Siting Act.

### Comment 98-02

See response to Comment 49-01, which addresses the same concerns.

## Commenter 98 – Brandy Toft

## Responses

98-02  
(cont'd)

We further echo the MPCA's analysis that because this technology has not been installed on another IGCC sources does not mean that it is technically infeasible for Mesaba. Excelsior's claim that SCR technology should be classified "unavailable" simply because it has yet not been applied to an IGCC plant is a stretch of logic. Although the gas stream from an IGCC unit has more sulfur than the gas stream from a natural gas unit, Excelsior has not presented a case that this makes SCR technically infeasible for use at an IGCC plant. This technology has been used extensively to control SO<sub>2</sub> from coal-fired units, which also have emissions of sulfur far more concentrated than emissions from natural gas plants. This technology has been proposed in permits for at least two other plants.

### Regional Haze

The Band has concerns regarding visibility the close Class I areas of the Boundary Waters Canoe Area (BWCA) and Voyageurs National Park (VNP). Keep in mind that the Class I areas should be the center of the analysis, not Mesaba. Table 5.2.2-4 shows that there could be noticeable effects (a change in visibility of exceeding 0.5 deciviews) at these Class I areas on numerous days per year. The DEIS tries to account for this by stating that: 1) the modeling analysis is overly conservative; and 2) that the days that potential impacts occur are days where natural visibility is poor.

98-03

The reason that maximum allowable emissions are used in visibility modeling is to provide a safety factor. In some sectors, particularly the energy sector, average actual emissions and maximum actual emissions can vary by as much as 20% over the course of a year. Allowing the use of actual emissions could underestimate reality by a large degree. It is also perfectly possible that all sources affecting visibility of the Class I areas could potentially be operating at maximum capacity at the same time. Conservative assumptions need to be made as there is no practical way to ensure that this scenario won't occur. Therefore, we do not believe it is true that the modeling analysis is too conservative.

98-04

Second, the Band believes the visibility analysis performed in Section 5.2 of the DEIS is incomplete. While tables showing analyses for increment (Table 5.2.2-2, page 5.2-4) and Minnesota Ambient Air Quality Standards/National Ambient Air Quality Standards (Table 5.2.2-3, page 5.2-5) concentrations are included, and Table 5.2.2-4 (page 5.2-6) shows some visibility impacts data, there is no information on the expected maximum changes in the daily extinction coefficient resulting from the construction of this source for the BWCA or VNP. We believe this information is required in order for the Federal Land Managers (FLM's) of these Class I areas to complete their analysis. The Federal Land Managers' Air Quality Related Values Workgroup (FLAG) Phase I Report (December 2000) states in Section A.1. that a single-source contribution to a change in extinction of greater than 10% will likely lead to FLM objections to the source's air permit as a predicted change that falls into the range of 2-10% prompts FLM interest. While

### **Comment 98-03**

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

### **Comment 98-04**

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

## Commenter 98 – Brandy Toft

98-04  
(cont'd)

no data as to the expected maximum changes in the daily extinction coefficient due to the construction of this project is shown, the fact that Table 5.2.2-4 shows that this project is predicted to have potentially noticeable visibility impacts on at least 189 days per year leads us to believe that the daily extinction coefficient could be affected often enough to cause FLM objections.

Stating that the number of potential impact days is related heavily to the weather conditions is unreasonable as “potential impact days” were shown to occur at least 189 days per year or 52% of the time. The highest predicted number of “potential impact days” was 245 days per year, which is 67% of the time. The Band does not believe that the results shown in this table can be blamed on low temperatures, fog, or precipitation alone. The Forest Service also feels this is irrational analysis as stated in their December 17<sup>th</sup>, 2007 letter to the Department of Energy.

98-05

Finally, DEIS is incomplete with regard to regional haze in that it does not take responsibility for Mesaba’s potential effects on visibility in local Class I areas and offers no design for mitigating these effects. In a recent air quality permitting action, Minnesota Steel accepted permit requirements from the State of Minnesota for pursuing control technology, purchasing emissions credits, and using green power in the scenario that the control technology alone did not work to be an effective enough control for its haze-causing pollutants. We suggest that Mesaba take a similar approach, along with re-examining BACT requirements.

98-06

We are very perplexed regarding page 5.2-2 of the DEIS where the document states that “...mining sources that emit primary particulate matter less than 10 microns (PM<sub>10</sub>) were not included in the cumulative modeling” for purposes of regional haze. The DEIS states that “Nearly all such sources are at ground level and far from Class I areas, and would not likely cause significant air quality impacts in the Class I areas”. We do not see the rationale for this bold statement and request further explanations as to why PM mining emissions were not included and what supports their exclusion from this modeling. Larger particles do have a tendency to settle out near the emission point. However, smaller particles and massive disturbance of particles from mining operations, along with the amount of mining facilities in the northeastern region of Minnesota create a unique situation we feel must be properly and wholly modeled.

Furthermore, we believe that the cumulative modeling results are incomplete as detailed in Table 5.2.2-1 (Page 5.2-3). This table is setup to show existing and future emissions from various facilities that were used in modeling for cumulative air quality impacts. However, existing emissions for several sources that are currently in operation and continued future operations appear to have been left out with no reasoning. One such example was SO<sub>2</sub>, PM<sub>10</sub> and mercury emissions from US Steel – Minntac, both existing and future, which are shown as

## Responses

### Comment 98-05

The omission of mining sources of PM<sub>10</sub> was based, in part, on the recommendation of MPCA modeling staff, who provided the regional emissions data. It is believed that this assumption is reasonable because mining sources emit PM<sub>10</sub> near ground-level, and such emissions are not expected to remain airborne for long distances.

Data in U.S. EPA publication AP-42: Compilation of Air Pollutant Emission Factors, indicate that PM<sub>2.5</sub> emissions from mining activities are on the order of 5 to 15 percent of total particulate matter and PM<sub>10</sub> emissions. Thus, the great majority of mining emissions are large enough to quickly settle out of the atmosphere. But even PM<sub>2.5</sub> particles are removed by sedimentation and deposition on vegetation. Since mining emissions are limited to very low altitude, most will be removed from the atmosphere before traveling distances of 50 kilometers or more. Numerous modeling and source apportionment studies have demonstrated that long-range pollutant transport impacts are predominantly due to tall stack sources. The only important exceptions are large urban areas, forest fires, or dust storms that can generate particle clouds at higher altitude.

See response to Comment 3-02 regarding purchasing of emissions credits. See response to Comment 7-03, which addresses the main source of fine particulate matter from coal-fueled power plant stacks. See responses to Comments 49-01 and 49-11, which address the issue of the BACT analysis.

### Comment 98-06

For visibility/regional haze analysis, the maximum permitted 24-hour facility emissions were used instead of the average or actual emissions, in accordance with EPA guidance. Assuming maximum emissions alone may not be adequate and may be overly conservative. Additionally, the air modeling and visibility impacts calculations include many conservative assumptions; therefore, the overall analytical process is likely to overestimate actual impacts on visibility. See responses to Comments 49-12 and 57-05, which address the same concerns.

## Commenter 98 – Brandy Toft

98-06  
(cont'd)

blanks in the table. These emissions need to be included in the cumulative modeling and the modeling redone to include the missing facilities.

98-07

Table 5.2.2-5 on page 5.2-7 shows that maximum total cumulative deposition rates from all sources. Results show that deposition rates for nitrogen and sulfur in the BWCA and the VNP exceed the deposition analysis threshold of 0.01 kg/ha-year established for United States Forest Service Class I areas, specifically for the BWCA. No deposition values have been set for United States Park Service areas, such as VNP. The DEIS does not go on to explain what this means or what changes will need to be made to emissions of these pollutants to ensure that the BWCA will not be adversely affected. Based up this reason alone, the DEIS is insufficient as the deposition values in the table are several orders of magnitude greater than the deposition analysis threshold.

### Mercury

Mesaba is projected to emit 54 pounds of mercury per year. As a new source, the project is inconsistent with Minnesota's total maximum daily load (TMDL) goal of reductions in mercury releases. Minnesota has a goal to reduce anthropogenic sources of mercury 93% from 1990 levels to a total of annual emissions of 789 pounds per year. An increase of 54 pounds per year would equate to 7% of the total statewide emissions alone coming from this source. A number we do not think that can be adsorbed into the TMDL.

98-08

The Band greatly concerned about any additional mercury in our waters, fish, and other resources. Tribal members are an at risk population due to increased levels consumption. A human health risk assessment to estimate risk to subsistence fishers was conducted and referenced in the DEIS. Results of that assessment by the Excelsior indicated an incremental increase in health risks from ingestion of fish due to mercury from plant emissions. Although the document states that such a risk would be within the acceptable risk quotient we question aspects of the assessment and what they determined acceptable.

### Water Quality

Though this letter mainly covers aspects of air quality we do not want to disregard the important aspects and interplay with 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

98-09

## Responses

### **Comment 98-07**

See an updated discussion in subsection *Terrestrial and Aquatic Impacts* under Section 5.2.2.2 (Volume 1), which discusses the impacts from sulfur and nitrogen deposition. The highest Mesaba deposition relative to total cumulative deposition ranges from 1.8 percent for the East Range Site's sulfur impacts in the BWCAW to 0.6 percent for the East Range Site's nitrogen impacts in the BWCAW. Table 5.2.2-3 (Volume 1) indicates that total sulfur and nitrogen deposition, including background, would be within the acceptable Green Line criteria for the BWCAW and RLW. For VNP and IRNP, total deposition levels exceed the DAT criteria. It should be noted, however, that the analysis is considered very conservative as it uses worst-case emissions and 100 percent operation. Furthermore, the background values presented likely include the current impacts of some of the modeled sources considered in this analysis.

### **Comment 98-08**

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 risks associated with air pollutants emitted by the project. Additionally, see response to Comment 97-04, which addresses the same concerns.

### **Comment 98-09**

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

**Commenter 98 – Brandy Toft**

**Responses**

**98-09  
(cont'd)**

conductivity. The DEIS states that Excelsior would have to apply for a waiver if parameters are expected to exceed water quality standards. This approach is troubling. Water quality standards must be met, and in a situation of a variance, a specific plan and timeline to meet standards must be developed.

Consultation

**98-10**

Finally, we want to remind all parties involved in the Mesaba Energy Project that federal and state governments have the responsibility to work with Tribes on a government-to-government basis. Tribes are sovereign governments and must be treated as such. Notification and proper 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 the Tribes and the rights retained by treaties with the United States government. This must be more clearly addressed in the DEIS, in future dealings regarding the Mesaba Energy Project, and other future projects.

Thank you for your consideration of the Leech Lake Band of Ojibwe's comments. The Leech Lake Band requests to remain informed on this project if or when the process moves forward. If you have any questions or comments please contact me at 218-335-7429 or by email at air@lldrm.org.

Sincerely,



Brandy Toft  
Air Quality Specialist  
Division of Resource Management  
Leech Lake Band of Ojibwe

CC: Leech Lake Tribal Council  
Rich Robinson, Division of Resource Management Director  
Shirley Nordrum, Environmental Department Director  
US Senator Amy Klobuchar  
US Senator Norman Coleman  
US Representative James Oberstar  
US Representative Collin Peterson  
US Representative Dale Kildee, Co-Chair Congressional Native American  
Caucus, House Resources Committee  
Senator Byron Dorgan, Chair Indian Affairs Committee  
Senator John McCain, Vice Chair Indian Affairs Committee  
Minnesota Senator Mary Olson  
Minnesota Representative Frank Moe  
File

**Comment 98-10**

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).

Commenter 99 – Wayne Dupuis

# Fond du Lac Reservation

## Resource Management

1720 Big Lake Road  
Cloquet, MN 55720  
Phone (218) 878-8001  
Fax (218) 879-4854



Administration  
Conservation  
Environmental  
Fisheries  
Forestry  
Natural Resources  
Wildlife

January 11, 2008

Public Comment Contacts:

Richard Hargis DOE [hargis@netl.doe.gov](mailto:hargis@netl.doe.gov)  
Bill Storm MN Dept. of Commerce [bill.storm@state.mn.us](mailto:bill.storm@state.mn.us)  
PUC webpage  
<http://energyfacilities.puc.state.mn.us/Docket.html?id=16573>

Reference PUC Docket: E6472/GS-06-688

Comments to MN PUC and US DOE

Fond du Lac Band of Lake Superior Chippewa response to the Mesaba Energy Project Draft Environmental Impact Statement

Dear Mr. Storm and Mr. Hargis

The Fond du Lac Band of Lake Superior Chippewa ("the Band"), a federally recognized tribe, is obligated to respond to the Minnesota Department of Commerce and the US Department of Energy regarding the Mesaba Energy Project DEIS. The proposed project has two alternative locations; the Taconite site is outside of ceded lands, while the Hoyt Lakes site is within the 1854 Ceded Territories to which the Band is a signatory and has usufructuary rights (Figure 1).

The Band has serious concerns regarding the substantial industrial 'footprint' of this project, the permitting of a significant new source of mercury, the cumulative impact to tribal trust resources, and the effect on a Class I area, in addition to several existing, expanding, and new regional projects.

The major environmental concern with this project is that it keeps energy consumers squarely on the road of increased fossil fuel consumption with real increases of CO<sub>2</sub> and their related emissions and effluents.

The Band is aware that this venture is driven by, and benefits, the vested interests with the most to lose as U.S. energy needs are met by alternatives to fossil fuels.

Our review of this project addresses both general and specific issues; this cover letter and technical attachment explain our environmental assessment.

It is understood that the Department of Energy is mandated to pursue energy projects that will secure the nation's energy needs in a cost effective and environmentally sound manner. It is also understood that the DOE Office of Fossil Energy is responsible for reviewing and partnering with Excelsior Energy for the Mesaba coal fired Integrated Gasification Combined Cycle (IGCC) power plant as part of the Clean Coal Power Initiative (CCPI).

99-01

## Responses

### Comment 99-01

See response to Comment 12-02, which addresses the same concerns. See also response to Comment 75-05 pertaining to the need for power. As stated in response to Comment 46-01, the PUC has the responsibility either to approve the project and issue permits on the applicant's preferred or alternative site and corridors or to disapprove the permit application. Disapproval of a permit would have the same result as a no-action (no-build) alternative.

As stated in Section 1.2.1 (Volume 1), DOE expects clean coal technologies emerging from the CCPI Program to contribute toward satisfying national technological and environmental initiatives, but the Clear Skies Initiative is not among them as it was never passed into law.

## Commenter 99 – Wayne Dupuis

## Responses

However, it is the Band's view that the pursuit of the Mesaba Energy Project (MEP) with its inherent negative contributions to the environment, through the CCPI, cannot be legitimized by building a power plant:

- Where the electrical demand does not exist and consequently the success of the plant is dependent on forcing a power purchase agreement on a current regional electrical producer and their consumers.
- By justifying the technology as a significant advance when much of the technology cited in the draft are referenced within the draft, are not feasible at this time, are years away from commercial viability, or when implemented, said technologies are negated by increased costs and decreased efficiency (2-22, 2-23).
- Under terms which appear to force construction of the power plant regardless of any environmental inadequacies: "MDOC will not, as part of its environmental review, consider whether a different size or different type of plant should be built instead, nor can the MDOC consider the "No Build" option."
- That contributes to increased fossil fuel consumption rather than conservation, with increased unregulated, CO<sub>2</sub> emissions, as well as all other emissions and effluents associated with fossil energy.

The goal of the project as stated in Section 1.2 of the DEIS is to "help meet the challenging environmental objectives for America embodied in the *Clear Skies Initiative*, *Global Climate Change Initiative*, *FutureGen*, and the *Hydrogen Initiative*." The "Clear Skies Initiative to cut nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), and mercury (Hg) emissions by 70 percent over the next 15 years."

### Clear Skies Initiative

The Clear Skies Initiative has not made it out of committee at this time, however if it were to pass, according to the Sierra Club, the "Clear Skies" initiative expands the pollution trading system so some communities will get cleaner, but many communities will lose out on cleaner air. The two-stage plan isn't even fully in place for another 15 years. Even if the plan caused some net reductions in pollution, many communities would still be threatened by more pollution."

- Mercury: The Clean Air Act would have limited "mercury pollution to 5 tons per year by 2008" while the original Clear Skies proposal would have "weakened the limit to...26 tons by 2010... this piece of the proposal was split away from the initiative and was put into place as the Clean Air Mercury Rule in 2005" which allows cap and trade with target emissions of 15 tons per year by 2018, specifically from US coal-fired power plants.
- Nitrogen Oxide (NO<sub>x</sub>): The Clean Air Act program's target levels for NO<sub>x</sub> were "1.25 million tons by 2010 while 'Clear Skies' would increase NO<sub>x</sub> to 2.1 million tons by 2008 - an increase of 68 percent more NO<sub>x</sub> pollution."
- Sulphur Dioxide (SO<sub>2</sub>) would increase Clean Air Act program goals of 2 million tons by 2012 to 'Clear Skies' allowances "to 4.5 million tons of SO<sub>2</sub> by 2010 - a staggering 225 percent increase of SO<sub>2</sub> pollution."
- Clear Skies would also create "a loophole exempting power plants from being held accountable to the Clean Air Act's New Source Review (NSR) standards and from being required to install cleanup technology (best available retrofit technology or BART). NSR standards require new power plants and upgraded plants to comply with

FOND DU LAC RESOURCE MANAGEMENT

99-01  
(cont'd)

**Commenter 99 – Wayne Dupuis**

**Responses**

99-01  
(cont'd)

modern federal emissions limits. BART protects communities from persistent haze and other air quality problems by reducing the pollution emitted from antiquated power plants."

- 'Clear Skies' would delay "the enforcement of public health standards for smog and soot until the end of 2015."
- The plan would restrict "the power of states to call for an end to pollution from upwind sources in other states. The plan prohibits any petitions of this sort from even being implemented before 2012."

The Band cites these figures because we want to emphasize those changes in the calculation method shift the burden of reducing these wastes which results in a net increase of domestically produced emissions. These emissions would increase with the addition of the Mesaba Energy Project.

The DEIS refers to the "*Global Climate Change Initiative to cut greenhouse gas intensity 18 percent by the year 2012.*" To clarify this reference, according to the Pew Center Global Climate Change analysis, greenhouse gas intensity is the ratio of greenhouse gas (GHG) emissions to economic output expressed in gross domestic product (GDP). To quote the Pew Center, "The Administration's target - an 18 percent reduction in emissions *intensity* between now and 2012 - will allow actual emissions to increase 12 percent over the same period. Emissions will continue to grow at nearly the same rate as at present." Also reference GAO-04-146R Greenhouse Gas Emissions Intensity. This policy contradicts any intention of GHG reduction.

The DEIS cites to the "*Hydrogen Fuel Initiative to reverse the growing dependency on foreign oil by developing the technologies and infrastructure to produce, store, and distribute hydrogen*" Although this generating plant may reduce dependency on foreign oil, hydrogen can be isolated relatively pollution free using wind and other alternate power sources.

The DEIS also refers to the "*FutureGen Initiative to establish the technical feasibility and potential economic viability of coproducing electricity and H2 fuel from coal while capturing and sequestering carbon dioxide (CO2) and greatly reducing other air emissions.*"

The Band recommends cutting this reference from the DEIS since does not apply to this project. This project has no real relationship to FutureGen. FutureGen is based on the permanent sequestration of carbon dioxide and zero/near zero emissions. From FutureGen Alliance: "Climate change and other energy concerns have created a pressing need to move coal-to-energy technologies onto a development pathway toward near-zero emissions. FutureGen, with its goal of demonstrating successful, permanent sequestration of CO2, is a linchpin of that pathway."

FutureGen **already** has a Final DEIS and is not dependent on the MEP to demonstrate it's potential and in this regard, the Minnesota Statute allowing exemption is suspect: "*exempted this facility from demonstrating need and that this facility qualifies as an 'innovative energy project,' issues related to the need, size, or type of the facility are excluded from consideration by the MDOC-EFP staff.*"

The following references and comments from the DEIS and DOE demonstrate why this plant is not able to capture carbon, nor run on hydrogen as envisioned by the "Hydrogen Initiative". The DEIS asserts that "*The process is also amenable to future upgrading for removal of greenhouse gases like carbon dioxide.*" Yet, in Section 2, Proposed Actions and Alternatives, Potential Carbon Capture Retrofit, the DOE says, "Carbon capture and sequestration is not feasible for the MEP." The DEIS continues: "*Based on an analysis of the commercial*

99-02

99-03

99-04

**Comment 99-02**

See response to Comment 37-01, which addresses the same concern. See response to Comment 99-01 regarding the applicability of these initiatives to the Mesaba Energy Project.

**Comment 99-03**

As supported in response to Comment 99-01, reference to the FutureGen Initiative is made in this EIS to indicate that clean coal technologies are expected to support other national initiatives, including the goals of the FutureGen Project. The comment is correct in noting that the FutureGen Project is not, however, reliant upon the Mesaba Energy Project.

**Comment 99-04**

See responses to Comments 1-02 and 1-03, which address the potential application of CCS during Mesaba commercial operation, and Comment 19-03, which addresses carbon capture and storage estimates in the EIS.

**Commenter 99 – Wayne Dupuis**

**Responses**

99-04  
(cont'd)

*readiness of carbon capture and sequestration presented in Appendix A2, CCS is not considered technically or economically feasible for the MEP at this time. While both carbon capture and carbon dioxide transport are technically feasible, the technical feasibility of carbon sequestration for the MEP cannot be validated in the near-term until extensive field tests are conducted to fully characterize potential storage sites and the long-term storage of sequestered carbon has been demonstrated and verified through ongoing efforts conducted under the DOE Carbon Sequestration Program.*

*Furthermore, commercially available combustion gas turbines envisioned for this project cannot operate on carbon monoxide-depleted syngas where the hydrogen concentration approaches 100 percent. With regard to economic feasibility, imposition of CCS on the project would increase the cost of electricity such that the MEP would not be economically viable without an order from the PUC that incorporates the costs associated with CCS within the power purchase agreement." And then an immediate contradiction, "However, the design and construction of the facility would be compatible with future implementation of any of the carbon capture and sequestration options currently being considered." Appendix A2 also states that "Carbon capture, advanced turbines will not be available by the Mesaba in-service date. Even if turbines were available, it would result in substantial capital cost, reduce plant efficiency and increase cost of electricity by as much as 40 percent."*

*To continue, "Without mitigation or capture/storage (Section 5.1.2.1), the plant would emit approximately 9.4 to 10.6 million tpy of CO<sub>2</sub>; thereby adding to the approximately 2.3 billion metric tpy of CO<sub>2</sub> from electric power sources nationwide." Again, as stated in the DEIS, only 30% of the CO<sub>2</sub> generated can be captured, a percentage that matches the DOE Energy Information Administration statement that IGCC with Carbon Capture will increase the cost of the plant by 30%. The Union of Concerned Scientists also comments in regard to CCS that "Efficiency losses of 10-20% with currently available separation technologies result in higher fuel input per unit of delivered energy. Energy penalties of this magnitude are particularly serious if safe, long-term underground carbon storage cannot be assured"*

*A comment in regard to the Plains CO<sub>2</sub> Reduction Partnership (PCOR), whose efforts hope to sequester CO<sub>2</sub> from fossil fuel "by capturing and storing CO<sub>2</sub>, a gaseous by-product of energy generation" points again to the continuation of and the increased use of fossil fuel by vested interests. PCOR is in its preliminary stages and although Phase III has received funding, according to the PCOR press release: "The test will last up to 10 years and help demonstrate the safety and effectiveness of using the technology to manage greenhouse gases." The Mesaba plant will be half way through its engineered life cycle.*

*No estimates have been provided to account for energy expenditures tied to building pipelines or transporting the CO<sub>2</sub> from either site to any destination.*

*A complete life cycle analysis should be completed with all projects in the modern era, including the mothballing and retirement of the plant regardless of potential upgrades.*

*No estimates have been provided to account for the energy or the environmental costs for mining and transporting the coal to the project site.*

*In reviewing this project and the DOE's purpose in the program that fostered the Mesaba Energy Project; "Technologies capable of producing any combination of heat, fuels, chemicals, or other use byproducts in conjunction with power generation were considered; however, coal is required to provide at least 75 percent of the fuel for power generation. Other technologies that cannot serve to carry out the goal of the CCPI Program (e.g., natural gas, wind power, conservation) are not relevant to DOE's decision of whether or not to provide cost-shared funding support for the MEP, and therefore, are not reasonable*

FOND DU LAC RESOURCE MANAGEMENT

**Comment 99-05**

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

**Comment 99-06**

The Draft EIS contained the major components of a life cycle analysis, with the exception of analysis of impacts from production of materials of construction, impacts of production of fuel for the plant, and site restoration. As stated in response to Comment 12-01, the Mesaba Energy Project does not aim to change mining techniques and, for the proposed project, DOE has no decisions that would affect coal mining techniques. The primary fuel for the Mesaba Energy Project would be Powder River Basin Coal, and the project would cause an incremental increase in the use of this coal by approximately 1.5%. The effects of increased transportation of this coal are described in Sections 4.3.2.2 and 4.15.2.2 (Volume 1), and the contribution to greenhouse gases is described in Section 2.2.3.1 (Volume 1). Section 5.1.2 (Volume 1) discusses the future commercial operation of the Mesaba plant, including the potential salvaging of components in the event of an unsuccessful demonstration for DOE.

**Comment 99-07**

See responses to Comments 12-01 and 21-01, which address the same concerns.

**Comment 99-08**

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

Commenter 99 – Wayne Dupuis

Responses

99-08  
(cont'd)

alternatives" proves this to be self-serving, self-reinforcing program that rationalizes its existence under a appealing title "Clean Coal Power Initiative." The program is carefully worded so it does not allow admission that "Clean Coal" is not a solution to climate change and in that, fossil energy is a no-win energy strategy.

The DOE itself projects coal to be a reduced part of the over energy mix in the future, therefore, instead of digging coal out of the ground, transporting it hundreds of miles to be gasified and burned in the hopes of learning how to gasify it better, and, hopefully, so carbon can be captured and returned, *somewhere*, deep into the earth, perhaps the coal should be left there while DOE pursue environmentally feasible projects.

Again, with or without carbon capture this project keeps energy consumers squarely on the road of increased fossil fuel consumption and increased release of CO<sub>2</sub> and related emissions and effluents. The Band concludes that this venture is driven by the vested interests that do have the most to lose as U.S. energy needs are met by alternatives to fossil fuels.

Additional air and water resource technical comments are enclosed. If you have any questions regarding this letter, please contact Nancy Schuldt (878-8010), Joy Wiecks (878-8008), or Mary Munn (878-8012) of my staff.

Sincerely,



Wayne Dupuis

Fond du Lac Environmental Program Manager

MM/mm  
Enclosures

- c.c. Fond du Lac Reservation Business Committee Members
- Dennis Peterson, FDL Legal Counsel
- Dan Cozza, EPA Region V- Water Division
- Ben Giwojna, EPA Region V – Air and Radiation Division
- Anna Miller, EPA Region V- NEPA
- David Thornton, Assistant Commissioner, Air Policy - MPCA

*Replace must Hard copy per request - Mary Munn  
(Signature Page) attached*

FOND DU LAC RESOURCE MANAGEMENT

**Commenter 99 – Wayne Dupuis**

**Responses**

**Comment 99-09**

See response to Comment 49-01, which addresses the same concerns.

Air Quality Concerns

In a letter dated July 2006, the Minnesota Pollution Control Agency (MPCA) explained that it does not consider Excelsior's Best Available Control Technology (BACT) analysis to be complete for various reasons listed in the letter. A December 17, 2007, letter from the US Forest Service indicates that the Federal Land Manager (FLM) in this area does not agree with Excelsior's BACT proposal, either. The Band has recently learned that the MPCA and Excelsior have been unable to come to an agreement, and that EPA - Region V has been asked to review the available information and provide input or help make a determination as to what constitutes BACT for the gas turbine sulfur dioxide (SO<sub>2</sub>) and nitrogen oxide (NO<sub>x</sub>) emissions. The Band would like to add our support to the MPCA's and the FLM's arguments that Selexol constitutes BACT for SO<sub>2</sub> and that Selective Catalytic Reduction (SCR) constitutes BACT for NO<sub>x</sub>. The following paragraphs support our position.

The Band agrees with the MPCA's assertion in its October 18, 2007, letter to Excelsior that it is inappropriate to compare BACT for pulverized coal boilers to BACT for an IGCC plant, because the two technologies are different. According to the EPA's October 1990 New Source Review (NSR) Workshop Manual, this does not follow the approved procedure for determining BACT. Page B.31 of the NSR Manual states "Cost effectiveness (dollars per ton of pollutant reduced) above the levels experienced by other sources of the same type and pollutant, are taken as an indication that unusual and persuasive differences exist with respect to the source under review". This indicates that cost comparisons between dissimilar sources are not to be considered in the BACT analysis.

The Band does not believe the estimate control costs to remove SO<sub>2</sub> by Selexol (\$7,663/ton removed) to be excessive (see attached guidance document from Nebraska Department of Environmental Quality). In the personal experience of FDL staff members, this cost seems feasible and approvable for BACT. Therefore, the Band supports the MPCA's assertion that BACT for SO<sub>2</sub> from Mesaba is Selexol with an emission limit of 0.010 lb/mmBtu (on a heat input to gasifier basis). These costs may be further justified in light of the fact that the MPCA is working to control regional haze in the northern half of Minnesota. The MPCA has proposed a Concept Plan to address regional haze in Northern Minnesota that calls for a cap on SO<sub>2</sub> and NO<sub>x</sub> emissions in certain counties based on reductions needed to put Minnesota on the glide path to meeting regional haze requirements. Based on our review of the expected regional haze effects of this source and because SO<sub>2</sub> and NO<sub>x</sub> (the pollutants at issue in the BACT determination) are both haze-causing pollutants, some extra cost may be justified and may help prevent the need for Excelsior to take regional haze mitigation steps later on. Through the Band's experience on the Policy Oversight Group of the Central Regional Air Planning Association, a Midwest regional haze organization, a cost of \$7663/ton to remove haze-causing pollutants does not seem unreasonable.

On page B.20, the NSR Manual states, "A demonstration of technical infeasibility is based on a technical assessment considering chemical, physical and engineering principles and/or empirical data showing that the technology would not work on the emissions unit under review, or that irresolvable technical difficulties would preclude the successful deployment of the technique". The Band does not feel Excelsior has met this standard in claiming that SCR technology will not work in reducing NO<sub>x</sub> emissions. We support the MPCA's analysis that just because this technology has not been installed on

FOND DU LAC RESOURCE MANAGEMENT

99-09

**Commenter 99 – Wayne Dupuis**

**Responses**

**99-09  
(cont'd)**

another IGCC sources does not mean that it is technically infeasible for such a source. Excelsior's claim that SCR technology should be classified "unavailable" simply because it has yet not been applied to an IGCC plant is a stretch of logic. SCR controls have been available for commercial purchase and have been used at electric generating facilities for decades.

Although the gas stream from an IGCC unit has more sulfur than the gas stream from a natural gas unit, Excelsior has not presented a case that this makes SCR technically infeasible for use at an IGCC plant. This technology has been used extensively to control SO<sub>2</sub> from coal-fired units, which also have emissions of sulfur far more concentrated than emissions from natural gas plants. This technology, while not actually put into place on other IGCC plants, has been proposed in permits for at least two plants. These facilities obviously did not have unsurmountable concerns about the use of this technology.

**99-10**

In a description of cooling tower emissions, the DEIS states that water from the pits will be used in the cooling tower, resulting in emissions of particulate matter from the cooling tower. What sort of analysis will be required to ensure that the particulate coming from the pit water will not contain excessive amounts of metals?

**99-11**

In Table 3.3-5 – Pertinent Air Quality Regulations of the DEIS (page 3.3-11), there is a curious statement applying to the Acid Rain Program, as follows: "Requirements under this program would be considered mitigation measures to reduce emissions from the IGCC power plant source". Please explain further what is meant by this statement. Acid rain reductions are a requirement under federal law, and may not be used for mitigation purposes. If Excelsior is suggesting purchasing acid rain credits and retiring them, then please make this statement clearer. It is also unclear what purpose would be served by mitigating. Improving visibility? Again, please clarify.

**99-12**

On page 4.3-11, the DEIS states that Excelsior didn't specifically quantify or model PM<sub>2.5</sub> emissions but instead gives a range of multiplier values that could be used. Which value was chosen for the multiplier and on what technical basis?

The Band has concerns regarding visibility at the Boundary Waters Canoe Area (BWCA) and Voyageurs National Park (VNP). Remember that the parks themselves should be the center of the analysis, not the facility. Table 5.2.2-4 shows that there could be noticeable effects (a change in visibility of exceeding 0.5 deciviews) at these locations on numerous days per year. The DEIS tries to explain these away by stating that: 1) the modeling analysis is overly conservative; and 2) that the days that potential impacts occur are days where natural visibility is poor, anyway. Our objections to these arguments are listed below.

**99-13**

First, the reason that maximum allowable emissions are used in visibility modeling is to provide a safety factor. In some sectors, particularly the energy sector, average actual emissions and maximum actual emissions can vary by as much as 20% over the course of a year. Allowing the use of actual emissions could underestimate reality by a large degree. It is also perfectly possible that all sources affecting visibility in the area could potentially be operating at maximum capacity at the same time. There is no practical way to ensure that this scenario won't happen, therefore conservative assumptions need to be made. Therefore, we do not believe it is true that the modeling analysis is too conservative to cause alarm.

Second, the Band believes the visibility analysis performed in Section 5.2 of the DEIS is incomplete. While tables showing analyses for increment (Table 5.2.2-2, page 5.2-4)

**Comment 99-10**

See response to Comment 38-01, which addresses the same concerns. The AERA considered all air emissions from the proposed plant, including cooling tower evaporation. Cooling tower drift generally does not contain harmful levels of metals. No chromium-based water treatment chemical would be used in the cooling tower system.

Additionally, based on water quality testing of the mine pits, which is the source of water for the cooling tower, the levels of metals in the water that would be used in the cooling tower are very low. See Section 3.5 (Volume 1) of the Final EIS for the water quality data from sources for both the West and East Range Sites.

**Comment 99-11**

See response to Comment 49-10, which addresses the same concern.

**Comment 99-12**

As explained in response to Comment 9-01, the standard for PM<sub>2.5</sub> was established more recently by EPA; estimates were derived for PM<sub>2.5</sub> concentrations when measurements were not available. Research indicates that multipliers in the range of 0.06 to 0.11 can be used to infer or approximate near-field PM<sub>2.5</sub> concentrations based on PM<sub>10</sub> data. To consider the maximum near-field impacts, a multiplier of 0.11 was used in the EIS. The EPA technical document containing this information is referenced in the EIS as USEPA, 2005. Far-field PM<sub>2.5</sub> impacts are estimated by assuming 100% of PM<sub>10</sub> is present as PM<sub>2.5</sub>.

**Comment 99-13**

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

**Commenter 99 – Wayne Dupuis**

**Responses**

99-13  
(cont'd)

and Minnesota Ambient Air Quality Standards/National Ambient Air Quality Standards (Table 5.2.2-3, page 5.2-5) concentrations are included, and Table 5.2.2-4 (page 5.2-6) shows some visibility impacts data, there is no information on the expected maximum changes in the daily extinction coefficient resulting from the construction of this source for the BWCA or VNP. We believe this information is required in order for the FLM's of these Class I areas to complete their analysis. The Federal Land Managers' Air Quality Related Values Workgroup (FLAG) Phase I Report (December 2000) states in Section A.1 that a single-source contribution to a change in extinction of greater than 10% will likely lead to FLM objections to the source's air permit (a predicted change that falls into the range of 2-10% prompts FLM interest). While no data as to the expected maximum changes in the daily extinction coefficient due to the construction of this project is shown, the fact that Table 5.2.2-4 shows that this project is predicted to have potentially noticeable visibility impacts on *at least* 189 days per year leads us to believe that the daily extinction coefficient could be affected often enough to raise objections from the FLM's.

As far as stating that the number of potential impact days is related heavily to the weather, this is somewhat ridiculous, as "potential impact days" were shown to occur *at least* 189 days per year, or 52% of the time. The highest predicted number of "potential impact days" was 245 days per year, which is 67% of the time. The Band does not believe that the results shown in this table can be blamed on low temperatures, fog, or precipitation alone. From a December 17<sup>th</sup>, 2007 letter from the Forest Service to the Department of Energy, it appears that the FLM agrees.

99-14

Finally, DEIS is incomplete with regard to regional haze in that it does not take responsibility for Mesaba's potential effects on visibility in local Class I areas and it offers no ideas for mitigating these effects. In a recent air quality permitting action, Minnesota Steel accepted permit requirements for pursuing control technology and purchasing emissions credits and using green power if that control technology did not turn out to be effective enough to control its haze-causing pollutants. We suggest that Mesaba take a similar approach, along with taking another look at BACT requirements. Perhaps additional controls for SO<sub>2</sub> and NO<sub>x</sub> could resolve some of these problems.

99-15

Table 5.2.2-1 (Page 5.2-3) shows existing and future emissions from various facilities that were used in modeling for cumulative air quality impacts. This table is puzzling, as "existing" emissions for several sources appear to have been left out with no explanation. There are several blank spaces in the table for sources that are currently operating and plan to do so in the future. One example would be SO<sub>2</sub>, PM<sub>10</sub>, and mercury emissions from US Steel – Minntac, both existing and future, which are shown as blanks in the table. The Band is not sure what point is being made, please explain. These emissions need to be included in the cumulative modeling. If they have not been included, then the modeling results are incomplete.

99-16

On page 5.2-2 of the DEIS, the document states that "...mining sources that emit primary particulate matter less than 10 microns (PM<sub>10</sub>) were not included in the cumulative modeling" for purposes of regional haze. The DEIS states that "Nearly all such sources are at ground level and far from Class I areas, and would not likely cause significant air quality impacts in the Class I areas". Please explain more clearly why mining sources were not included and what threshold or regulation exists to support their exclusion from this modeling. While it is true that larger particulate emissions from mining are expected to settle out on-site, PM<sub>2.5</sub> is too small to settle out in this manner.

FOND DU LAC RESOURCE MANAGEMENT

**Comment 99-14**

See responses to Comments 3-02, 49-01 and 49-11, which address the same concerns.

**Comment 99-15**

See responses to Comments 49-12 and 57-05, which address the same concerns.

**Comment 99-16**

See response to Comment 98-05 (second paragraph), which addresses the same concern.

**Commenter 99 – Wayne Dupuis**

**Responses**

99-17

Table 5.2.2-5 on page 5.2-7 shows that maximum total cumulative deposition rates from all sources. Results show that deposition rates for nitrogen and sulfur in the BWCA and in VNP exceed the deposition analysis threshold (DAT) of 0.01 kg/ha-year established for United States Forest Service Class I areas, specifically for the BWCA. No deposition values have been set for United States Park Service areas, such as the VNP. The DEIS does not go on to explain what this means or what changes will need to be made to ensure that the BWCA will not be adversely affected. For this reason, the DEIS is insufficient, as the deposition values in the table are several orders of magnitude greater than the DAT.

**Mercury:**

In 1991, the governments surrounding the Lake Superior Basin entered into an agreement (A Binational Program to Restore and Protect the Lake Superior Basin) to eliminate the discharge and emissions of mercury from the Lake Superior Basin by 2020, with an interim goal of an 80% reduction from 1990 levels by 2010. More recently, the state of Minnesota submitted a statewide mercury TMDL (Total Maximum Daily Load) study under the Clean Water Act §303, which was subsequently approved by the EPA. Implementing the TMDL will require a 93% reduction in mercury air emissions by 2018, for a total of 789 lbs/year of mercury air emissions from all sources. Although the TMDL process, a regulatory program under the Clean Water Act, is supposed to allocate allowable levels of contaminant loadings to impaired waters, and provide a margin of safety and room for expansion when applied to water quality permitting, this unique TMDL rests almost exclusively on draconian reductions to mercury air emissions across all sectors. It is not clear how a new source of mercury, projected at 54 lbs/year, can be permitted and still remain consistent with the TMDL. There is simply no "excess capacity" or future allowance for additional sources of mercury.

99-18

**Comment 99-17**

See response to Comment 98-07, which addresses the same concerns.

**Comment 99-18**

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

**Commenter 99 – Wayne Dupuis**

**Responses**

**Comment 99-19**

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

99-19

**Water Quality and Quantity Issues**

There are substantial differences between the two alternative sites, East Range and West Range, with regard to water quality standards for the receiving waters. The East Range site is subject to the more stringent water quality standards and criteria of Minnesota Rules Chapter 7052, Lake Superior Basin (GLI or Great Lakes Initiative standards), including the general antidegradation requirements and no allowable mixing zones (for diluting the concentration of bioaccumulative contaminants of concern, or BCC's) at the point of discharge.

The draft EIS states that "wastewater generated from the gasification and slag processing operations containing levels of heavy metals and other contaminants from the feedstocks would be treated in a ZLD (zero liquid discharge) system", which would recover distilled water for reuse and concentrate the heavy metals and other contaminants into a solid waste stream. This material would need to be disposed of at a hazardous waste facility. Process water discharged at the West Range site would be composed of cooling tower blowdown (running 3-8 cycles of concentration of constituents of the water supply sources), heat recovery steam generator (HRSG) blowdown, reject water from the boiler feed demineralizers and treated stormwater from plant drains. The DEIS does not examine or discuss treatment of this combined process water discharge, and FDL is concerned about any potential permitting for untreated wastewater into receiving waters at either of the proposed sites. This wastewater contains constituents (dissolved salts and minerals) that are orders of magnitude above ambient water quality characteristics, and are potentially harmful to aquatic organisms in the receiving waters even though they are not classified as "toxic" pollutants.

The GLI regulatory requirements (no mixing zones, more stringent criteria) become particularly important with the East Range site with respect to mercury, since the ambient concentrations in supply water sources for the East Range site are 0.75 ng/l, the applicable criterion is 1.3 ng/l, and the operational design for recycling the blowdown water would be severely restricted. The draft EIS states that Excelsior's preferred approach for overcoming these operational constraints would be to expand the ZLD technologies to treat all process water streams, significantly increasing costs. If Excelsior can consider utilizing the ZLD technologies at the East Range site to treat process wastewater contaminants, then they should be required to consider ZLD or other treatment options (for example, reverse osmosis) for their West Range wastewater discharges. The Band would adamantly oppose any NPDES permit application for untreated industrial wastewater discharges.

As proposed, the wastewater discharges from the facility are expected to exceed the applicable water quality standards for total hardness, total dissolved solids, sulfate, and conductivity in the Canisteo Mine Pit and Holman Lake. The DEIS states that "Excelsior would have to apply for a waiver to exceed standards for these parameters and be granted a waiver by the MPCA during the permitting process in order to operate the generating station." The Band would strongly oppose any NPDES permit application that included a request for a variance, as the Clean Water Act and state water quality regulations require that the applicable water quality standards must be met. Variances are only warranted on a temporary basis, with the explicit permitting condition of needing to develop a specific plan and timeline to meet the water quality standards. The DEIS seems to consider the "waiver" to be a permanent solution to their problem of noncompliance.

FOND DU LAC RESOURCE MANAGEMENT

**Commenter 99 – Wayne Dupuis**

**Responses**

99-20

The discussion of stormwater management for this proposed project is extremely deficient in detail required for a thorough analysis of environmental impacts. Although the critical elements required to develop a stormwater pollution prevention plan (SWPPP) are defined in Section 4.5.2.5, a well-drafted DEIS should actually include the SWPPP for the Preferred Alternative in the appendix section.

99-21

Water supply issues are critical for an industrial project of this scale. While the DEIS makes a case for the 'synergy' of using mine pit water at its East Range site, providing other mining operations some relief for their dewatering permit conditions, it also notes that Colby Lake is a potential supplemental source of process water. SDI (Mesabi Nugget) is already permitted for a significant water withdrawal from Colby Lake, which also serves as the public drinking water supply for the city of Hoyt Lakes.

**Cumulative Impacts**

99-22

A significant number of industrial (mining) projects exist, are under development, or are proposed in the region. While the Band does not seek to inhibit regional economic development, we are committed to protecting the environment, natural, and cultural resources. Our exercise of treaty-guaranteed usufructuary rights relies upon the existence and persistence of these resources. The cumulative impact from all industrial projects on the Range – essentially within the 1854 Ceded Territories - is a vital issue that has not been adequately addressed in this DEIS or any of the others that have been released in recent years. Attached is a protocol developed by the U.S. EPA, with input from tribes in Region 5, which lays out a more appropriate approach for a true, comprehensive cumulative impacts analyses from a Native American perspective. The Band urges the agencies to refer to this protocol in their determination of the adequacy of this part of the EIS review. Results from the human health risk 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.

Since the DEIS noted in multiple instances that the West Range site was preferred, the analyses generally focused on this site and related impacts. For many issues, the DEIS didn't include nearly as much 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 with its more restrictive water quality permitting requirements. Cumulative impacts from multiple existing and planned mining operations near the East Range Site are potentially high, impacting the St. Louis River, Partridge River, and Embarrass River watersheds. We are concerned that the East Range site may become the preferred location, because of the scenario described in Section 4.5.4 whereby the perceived benefits or 'synergy' of this project's use of other mines' process wastewaters would influence the site selection: "This feature could integrate well with the proposed industrial mining activities to be located on (Cliffs Erie) properties by eliminating wastewaters that would otherwise represent new discharges to impaired waters downstream. Further, the MPCA must cope with the existing rules to license and permit such projects, recognizing the socioeconomic benefits they would bring". In that case, we would request a supplemental EIS and an opportunity to further evaluate impacts to the environment.

**Comment 99-20**

See response to Comment 84-01, which addresses a similar concern. A Storm Water Pollution Prevention Plan (SWPPP) is typically prepared during the detailed engineering and design process. As part of the stormwater permitting process, the SWPPP would be submitted to the MPCA for approval prior to submitting an application for the NPDES/SDS General Stormwater Permit.

**Comment 99-21**

See response to Comment 76-31, which addresses the same concerns.

**Comment 99-22**

See response to Comment 97-06, which addresses the same concerns.



**Commenter 100 – Darin Steen**



Mr. Richard Hargis Jr., NEPA Manager  
U. S. Department of Energy  
National Energy Technical Laboratory  
PO 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

**Subject: Mesaba Energy Project (DOE/EIS-0382D)**

Dear Mr. Hargis and Mr. Storm:

Thank you for the opportunity to provide comment on the joint state/federal Draft Environmental Impact Statement (EIS) for the Mesaba Energy Project being proposed by Excelsior Energy, Inc. The Mesaba Energy Project involves the design, construction, demonstration, and operation of a two-phased Integrated Gasification Combined Cycle (IGCC) coal-fired power plant with 1,212 MWe of total estimated electricity production. Two proposed project locations have been identified and evaluated within the Iron Range of northeast Minnesota: (1) West Range site consisting of ~1,260 acres north of Taconite in Itasca County and (2) East Range site consisting of ~825 acres near Hoyt Lakes in St. Louis County. After thorough review and analysis of the draft EIS and many other technical documents, reports, and comment letters from a variety of sources (U. S. Environmental Protection Agency (EPA); U. S. Department of Agriculture/Forest Service; U. S. Army Corps of Engineers; Minnesota Pollution Control Agency (MPCA); Minnesota Department of Natural Resources (DNR); Minnesota Public Utilities Commission (MPUC); and others), there are many serious risks and concerns and **general widespread opposition to the Mesaba Energy Project.**

Native American Indian Tribes are sovereign governments with unique and special rights reserved under treaties with the U. S. government. Tribal members regularly exercise their rights to hunt, fish, and gather natural resources and depend on clean land, air, and water to insure that those rights and the resources are adequately protected. We offer the following comments regarding the Mesaba Energy Project and strongly encourage you to evaluate and incorporate tribal comments into the EIS process as specifically required under federal laws and executive orders on government to government consultation.

5344 Lakeshore Drive | Box 16 | Nett Lake, MN 55772 | 218-757-3261 | 800-221-8129 | FAX 218-757-3312

Kevin W. Leecy    David C. Morrison, Sr.    Ray Villebrun, Sr.    Mark E. Drift, Sr.    Ray Toutloff  
Chairman        Secretary/Treasurer    District I Representative    District I Representative    District II Representative

**Responses**

**Commenter 100 – Darin Steen****Responses**

100-01

**Purpose and Need for the Project**

Although there is a great deal of federal interest and incentives for promoting “Clean Coal Power”, northern Minnesota is one of the worst places in the United States to propose an IGCC demonstration power plant. First, the coal fuel source must be transported considerable distance to the plant which is costly, inefficient, and has other associated environmental and economic risks. A demonstration IGCC plant would be much better suited closer to the fuel source. Second, northern Minnesota’s geology is not well-suited for carbon capture and sequestration, purportedly one of the primary benefits of IGCC technology. Mesaba Energy Project proposes to emit 10 million tons of carbon dioxide per year, potentially one of the largest pollution sources in Minnesota. Minnesota has aggressive plans for reducing greenhouse gas emissions and goals of increasing the use of truly clean and renewable energy such as wind, solar, and biomass. If carbon sequestration is not feasible or economically viable at this demonstration site, then the project should not be considered based on the merits of “clean coal” technology.

100-02

Finally, although the Minnesota Legislature exempted the Mesaba Energy Project from meeting “Certificate of Need” requirements, Excelsior Energy has yet to prove there is even a need or demand for this power plant. The fact that the MPUC denied the Power Purchase Agreement between Excelsior Energy and Xcel Energy is a clear indication that the even the highest utility regulatory authority in Minnesota has serious concerns about long-term environmental, economic, and financial risks. Minnesota Power and Xcel Energy have each expressed their own similar concerns regarding financial and business risks associated with the Mesaba Energy Project. The lack of properly describing and documenting the “Purpose and Need” is a serious flaw in the EIS process and should be one of the major fundamental reasons for pursuing this type of demonstration plant. The financial interests of the developers and the federal interests in promoting “clean coal power” should not be pursued at the expense of the pristine quality and character of northern Minnesota. Furthermore, Mesaba Energy should not be granted special exemptions from demonstrating need or any other due diligence requirements.

100-03

**Economic and Financial Impacts and Infrastructure Costs**

Promoting jobs and economic growth in the region are also touted as some of the primary benefits of the Mesaba Energy Project. However, numerous discrepancies have been reported with exactly how many jobs may be created as well as conflicting information about the true economic benefits and impacts to the region. In fact, some sources indicate that much of the proposed revenue from the Mesaba Project would flow out of the region and even out of Minnesota for such things as coal and natural gas fuel supplies, rail transportation, and specialized contractors and vendors for parts and servicing of the IGCC plant. To date, the financial burden of the project has been with millions of dollars in public funding including Iron Range Resources, State of Minnesota, and the U.S. Department of Energy. In addition, tens of millions of dollars of public infrastructure will be needed in order for the project to proceed including highway and railroad extensions, gas pipelines, power transmission lines, and water and sewer treatment plant expansions.

**Comment 100-01**

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 in response to Round 2 of funding opportunity announcements under the CCPI Program. Section 2.1.1.2 (Volume 1) of the Final EIS describes the reasonable alternatives considered by DOE for the agency’s action. Two applications proposed IGCC technologies among the 13 submitted. DOE selected both of the applicants for co-funding. The Mesaba Energy Project was the only application that proposed to demonstrate the Conoco-Phillips E-Gas™ gasification technology, which is of interest to DOE. Section 2.1.1.2 also explains that 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. Excelsior 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. Excelsior 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 based on the incentives. No other applicant proposed to demonstrate the particular IGCC technology at a site closer to the source of coal or a suitable geologic formation for sequestration of CO<sub>2</sub>. Therefore, because DOE cannot select alternative projects or choose alternative sites that have not been proposed in response to the funding announcement, the alternative sites are limited to those considered by Excelsior in the TTRA. See also responses to Comments 8-01 and 111-02, which address the same concerns.

**Comment 100-02**

See response to Comment 97-08, which addresses the same concerns.

**Comment 100-03**

See responses to Comments 16-01, 27-01, and 64-01, which address the same concerns.

**Commenter 100 – Darin Steen**

**Responses**

**100-03  
(cont'd)**

Excelsior Energy has already received substantial public funding and incentives from federal, state and local governments at the expense of tax payers. The conclusions from the MPUC and other agencies have been that the Mesaba Energy Project has significant economic and financial risks and is not in the public interest. Generalized studies (especially those commissioned by biased project proponents) used in the EIS over-emphasize the economic benefits and under-estimate the real long term costs. A more detailed Cost-Benefit Analysis conducted by a reputable non-biased agency must be conducted to properly evaluate and analyze the real costs and impacts to human health and the environment and the long-term social and economic burden to the government, future utility customers, and the general public.

**100-04**

**Environmental Impacts to Air**

Northern Minnesota is rich in aquatic and terrestrial natural resources and is the primary reason tourism is a major industry and equally important economic benefit to the region. The tourism industry depends upon clean air, clean water, and pristine undeveloped land for hunting, fishing, and recreation. The construction and operation of this large IGCC plant threatens to harm those resources by annually emitting 10 million tons of carbon dioxide (with no feasible or viable plans for carbon capture or sequestration) and over 5,000 tons of other pollutants including sulfur dioxide, nitrogen oxide, carbon monoxide, particulate matter, and volatile organic compounds. These significant air emissions are known to cause serious human health and environmental damage. Modeling results have shown that the project will cause regional haze and visibility impacts to the Class I areas of Voyageurs National Park and Boundary Waters Canoe Area Wilderness and virtually all of northeast Minnesota. We are aware that state and federal environmental regulatory agencies have similar concerns with these air emissions issues and that Best Available Control Technology (BACT) analysis is still an on-going point of contention with Excelsior Energy. The BACT issue must be more thoroughly evaluated and analyzed in the EIS. Furthermore, Excelsior Energy should be required to install the most strict and state of the art air pollution control technology available including Selexol, Selective Catalytic Reduction and others to achieve the highest reductions and removal efficiencies possible. Any arguments from the company that BACT are cost prohibitive or infeasible must be refuted, as no control cost is too great when compared with the importance of protecting human health, the environment, and negative economic impacts to the region.

**100-05**

**Environmental Impacts to Water**

The proposed discharges of cooling tower water from the IGCC plant will add increased concentrations of mercury and other metals, total dissolved solids, phosphorus, sulfate, and other pollutants to the Canisteo Mine Pit and Holman Lake. Several of these discharge parameters are expected to exceed and violate state water quality standards. The projected impacts to Canisteo Mine Pit and other downstream waters within the Mississippi River watershed are projected to be detrimental to fishery resources such that they may become unusable. Contamination of these surface water resources also threatens drinking water supplies. This is simply unacceptable and, as was mentioned above, the most start of the art pollution control equipment must be required for this facility to insure that water quality standards are complied with, fishery and other aquatic resources are protected, and human health impacts are prevented. The projected

**Comment 100-04**

Sections 3.13.3.1 and 3.13.3.2, respectively, describe the recreational opportunities in proximity to the West and East Range Sites. As discussed in response to Comment 65-01, tourism is a key sector of Minnesota's economy, and northern Minnesota is the second-most popular destination for travelers (after the Twin Cities). As described in response to Comments 1-01, the IGCC technology proposed for the Mesaba Energy Project is considered a clean coal technology, because it would have a substantial overall emissions reduction advantage (less SO<sub>2</sub>, NO<sub>x</sub>, and mercury emissions) when compared to conventional coal-fired power plants. Furthermore, as explained in response to Comment 12-02, IGCC offers the best opportunity among coal-fueled plants to capture concentrated CO<sub>2</sub> emissions. Section 4.3 (Volume 1) addresses air emissions and impacts of the Mesaba Energy Project. See also the response to Comment 49-01 regarding BACT analysis. The elimination of discharges to surface waters at the West Range Site, through the implementation of an enhanced ZLD system as described in response to Comment 6-01, would prevent the introduction of pollutants from plant blowdown water as well as process water at either plant site. As stated in response to Comment 7-03, the human health risk assessment is contained in Section 4.17.2 (Volume 1) of Section 4.17, Safety and Health. 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 risks associated with air pollutants emitted by the project. From the perspective of environmental justice, Section 4.12.4 (Volume 1) specifically addresses the health risks to American Indian tribes in northern Minnesota, because they may consume higher amounts of locally caught fish than the general population. As discussed in response to Comment 42-01, Diamond Lake was considered representative of the nearest fishable bodies of water to the West Range Site receiving emissions from the plant.

**Comment 100-05**

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

**Commenter 100 – Darin Steen**100-05  
(cont'd)

discharge of 54 pounds per year of mercury into the environment is also of grave concern. This new source is inconsistent with Minnesota's Total Maximum Daily Load (TMDL) goal of reducing mercury and, therefore, should not be permitted. Mercury contamination of fish is a human health concern and tribal members are especially at high risk due to subsistence harvesting and increased consumption levels.

**Cumulative Impacts to the Region**

100-06

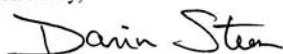
The Iron Range of northeast Minnesota has already experienced decades of natural resource damage from large scale industrial impacts, primarily due to the mining industry. Several mining projects are currently under various phases of expansion, revisions and reissuance of environmental permits, and even proposed construction of new facilities including Minnesota Steel and PolyMet. The cumulative impacts of all large industrial activities have had, and will continue to have, major environmental impacts and human health consequences within the region. The overlapping and long-term negative effects on air quality, water quality, wetlands, wildlife, and other resources from existing industrial sources should be more clearly understood and properly mitigated before yet another industry is approved for construction. This critical issue has been identified and echoed by many other state, federal, and tribal resource management agencies in recent years. Cumulative impacts analysis for Mesaba Energy Project in relation to the entire Iron Range is a weakness in the EIS that needs to be strengthened.

**Conclusion**

100-07

The proposed Mesaba Energy Project has many significant potential environmental, economic, and human health impacts which deserve further close examination and analysis. Many state and federal government agencies and public and private groups have echoed and elaborated on many of these as well as other serious concerns. We look forward to staying informed and involved regarding the review and approval of the final EIS and any state and federal permit applications and decisions. Thank you again for the opportunity to provide comment and input to the EIS process. If you have any questions regarding these comments, please feel free to contact me at the information listed below.

Sincerely,



Darin Steen, Environmental Services Manager  
Bois Forte Tribal Government  
Phone: 218-757-3543  
Fax: 218-757-3547  
Email: [dsteen@boisforte-nsn.gov](mailto:dsteen@boisforte-nsn.gov)

Cc: Corey Strong, Commissioner, Bois Forte Department of Natural Resources  
Bois Forte Reservation Tribal Council

**Responses****Comment 100-06**

See response to Comment 97-06, which addresses the same concerns.

**Comment 100-07**

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

## Commenter 101 – Harry E. Gallaher

**LOCKRIDGE GRINDAL NAUEN**  
P. L. L. P.  
ATTORNEYS AT LAW

SUITE 2200  
100 WASHINGTON AVENUE SOUTH  
MINNEAPOLIS, MINNESOTA 55401-2179

TELEPHONE (612) 339-6900  
FACSIMILE (612) 339-0981

SUITE 210  
415 SECOND STREET, N.E.  
WASHINGTON, D.C. 20002-4900

TELEPHONE (202) 544-9840  
FACSIMILE (202) 544-9850

WWW.LOCKLAW.COM

ROBERT J. SCHMIT  
RICHARD A. LOCKRIDGE  
CHARLES N. NAUEN\*  
H. THEODORE GRINDAL  
W. JOSEPH BRUCKNER  
CHRISTOPHER K. SANDBERG  
J. MICHAEL SCHWARTZ  
HARRY E. GALLAHER  
WILLIAM A. GENDLER  
ERIC C. TOSTRUD\*  
ROBERT K. SHELQUIST  
HENRI G. MINETTE  
GREGG M. FISHBEIN  
SUSAN E. ELLINGSTAD  
KAREN HANSON RIEBEL  
HEIDI M. SILTON  
GREGORY J. MYERS

OF COUNSEL  
DANIEL A. FARBER\*\*  
ELIZABETH A. SHELSON  
BRADLEY W. ANDERSON  
PATRICIA A. BLOODGOOD\*

\*ALSO ADMITTED IN WISCONSIN  
\*\*ADMITTED IN WASHINGTON, D.C. ONLY

YVONNE M. FLAHERTY  
DARLA JO BOGGS  
LISA M. POLLARD\*\*\*  
BRIAN R. MCDANIEL  
DAVID J. ZOLL  
NATHAN D. PROSSER  
ELIZABETH R. ODETTE  
DAVID W. ASP  
R. REID LEBEAU II  
CARMEN B. COPHER  
SARAH M. RUSSELL  
RACHEL J. CHRISTIANSEN  
DAVID D. LEISHMAN  
ANNA M. HORNING NYGREN

\*\*\*ADMITTED IN NEW YORK ONLY

GOVERNMENT RELATIONS†  
DENNIS H. MCGARRN  
ALYSON J. HARTLE  
REBECCA K. KLETT  
MATTHEW S. SCHAFER  
ALAYNE M. FAIR  
ELIZABETH A. EMERSON  
MEGAN G. HELGE  
EMILY J. GERHAAN  
HANNAH K. BERNHARDT  
ROGER K. JOHNSON

† NON-ATTORNEY LOBBYISTS

January 11, 2008

VIA E-MAIL: [bill.storm@state.mn.us](mailto:bill.storm@state.mn.us)  
and VIA U.S. MAIL  
Mr. Bill Storm  
Minnesota Department of Commerce  
85 7th Place, Suite 500  
St. Paul, MN 55101-2198

VIA E-MAIL: [Richard.hargis@netl.doe.gov](mailto:Richard.hargis@netl.doe.gov)  
and VIA U.S. MAIL  
Mr. Richard A. Hargis, Jr.  
NEPA Document Manager  
M/S 922-178C  
U.S. Department of Energy  
National Energy Technology Laboratory  
P.O. Box 10940  
Pittsburg, PA 15236-0940

Re: Comments on Draft Environmental Impact Statement  
Mesaba Energy Project, PUC Docket No. E6472/GS-06-668  
DOE Draft Environmental Impact Statement for the Mesaba Energy Project  
(DOE/EIS-0382D)

Dear Messrs. Storm and Hargis:

We represent Steel Dynamics Incorporated ("SDI") and its subsidiaries Mesabi Nugget Delaware, LLC ("MND") and Mesabi Mining, LLC ("MM"). We submit these comments regarding the Draft Environmental Impact Statement ("DEIS") for the Mesaba Energy Project.

The DEIS indicates that the proposed Mesaba Generating Station located at the East Range Site would have average process water demands of approximately 7,400 gallons per minute ("gpm") and a peak demand of 10,000 gpm. The DEIS identifies numerous mine pits located near the East Range Site as the source of the process water and indicates that Excelsior Energy, LLC ("Excelsior") will construct a permanent pumping station and pipeline to draw the process water from the Mine Pit 2 West Extension ("Pit 2WX").

The DEIS further indicates that additional process water may be drawn from up to nine other mine pits in the vicinity through a series of water intakes, pump stations, and pipelines

376976-1

## Responses

## Commenter 101 – Harry E. Gallaher

Mr. Bill Storm  
Minnesota Department of Commerce  
Mr. Richard A. Hargis, Jr.  
U.S. Department of Energy  
January 11, 2008  
Re: PUC Docket E6472/GS-06-668  
Page 2

connecting these mine pits with Pit 2WX. Finally, the DEIS indicates that water may be drawn from nearby Colby Lake during the spring runoff or high precipitation events and pumped into Pit 2WX to be reserved for later use. The process water sources identified in the DEIS are summarized in the following table.

**Process Water Sources – East Range Site<sup>1</sup>**

Water Source	Estimated Range of Flow (gpm)	Average Annual Flow (gpm)
Mine Pit 1 Effluent	0-1,000	1,000
Mine Pit 2 East		100
Mine Pit 2 West		900
Mine Pit 2 West Extension		700
Mine Pit 3	150-450	300
Mine Pit 6		1,800
Mine Pit 9S	90-270	180
Donora Mine Pit	130-380	260
Knox Mine Pit	20-70	45
Stephens Mine Pit	190-590	390
PolyMet Mining Dewatering Operations	1,000-8,000	4,000
Colby Lake		2,900
Total Available Water		12,600

SDI, MND, and MM do not take a position regarding the technical feasibility of the network of water intakes, pumping stations, and pipelines proposed in the DEIS or whether there is sufficient water available at the East Range Site to meet the demands of the Mesaba Generating Plant. It should be noted, however, that the availability of the estimated 4,000 gpm from the PolyMet Mining Dewatering Operations is contingent upon the regulatory approval of PolyMet's proposed operations. In addition, SDI, MND and MM currently hold five water appropriation permits which allow total withdrawals of up to 46,500 gpm from the mine pits identified in the DEIS for the purpose of maintaining water levels to facilitate reclamation responsibilities.<sup>2</sup> MND and MM are in the process of completing the environmental review and

<sup>1</sup> See DEIS Table 2.3-5.

<sup>2</sup> Permit No. 2005-2058 allows MND and SDI to withdraw up to 5,000 gpm from Pit 1 and 5,000 gpm from Pit 2WX (as a standby source); Permit No. 2008-0326 allows MND and SDI to withdraw up to 7,500 gpm from Pit 9; Permit No. 2008-0327 allows MM and SDI to withdraw up to 4,000 gpm from Pit 6; Permit No. 2008-0328 allows MM and SDI to withdraw up to 5,000 gpm from Pit 9S; and Permit No. 2008-0329 allows MM and SDI to withdraw up to 20,000 gpm from Pit 2WX.

## Responses

### Comment 101-01

New text in Section 4.5.4.1 has been added that discusses water appropriation and associated permits for the East Range Site. Also, see responses to Comments 76-01 and 76-31 for discussions on proposed water use at the East Range Site.

101-01

**Commenter 101 – Harry E. Gallaher**

Mr. Bill Storm  
Minnesota Department of Commerce  
Mr. Richard A. Hargis, Jr.  
U.S. Department of Energy  
January 11, 2008  
Re: PUC Docket E6472/GS-06-668  
Page 3

**101-01  
(cont'd)**

permit applications necessary to resume mining operations and as part of this process, the water appropriation permits will be amended to allow withdrawals for the purpose of dewatering the mine pits to facilitate mining activities.

**101-02**

Assuming that it is technically feasible for Excelsior to draw the process water from the various mine pits identified in the DEIS, it is unlikely that Excelsior can obtain the requisite water appropriation permits from the Minnesota Department of Natural Resources. An applicant for a water appropriation permit must submit written evidence of its ownership, control, or license to use, the land abutting the surface water source from which the water will be appropriated. Minn. R. 6115.0660 subp. 2. Excelsior does not own the land abutting any of the potential process water sources identified in the DEIS. Accordingly, Excelsior is precluded, as a matter of law, from drawing its process water from the mine pits unless it has negotiated agreements with the landowners granting it the right to use or control the abutting land.

**101-03**

In addition, all of the water pipelines identified in Figure 2.3-7 of the DEIS traverse property which is not owned by Excelsior. As a result, Excelsior must obtain easements for the construction and operation of the pipelines and associated facilities before drawing any process water from the mine pits. There is no indication in the DEIS that Excelsior has obtained, or reasonably could obtain, such easements; casting significant doubt on its ability to draw its process water from the mine pits. Indeed, a majority of the proposed water pipelines, including the pipeline which would connect Pit 2WX and the East Range Site, cross property owned by MMD. As of the date of these comments, Excelsior has not approached MMD to discuss its plans to construct the pipelines and associated facilities on MMD's property.

In light of the foregoing, the mine pits identified in the DEIS may not be viable process water sources. Accordingly, the final EIS should (1) identify alternative process water sources; (2) analyze the potential environmental impacts of drawing all of the process water from Colby Lake; and/or (3) identify the leases, licenses, easements, or other property rights which provide Excelsior with the legal right to appropriate the water from the mine pits and to transport such water to the East Range Site. Moreover, when the concerns related to process water supply are considered in conjunction with the factors identified in Section 2.1.2.1 of the DEIS, it is apparent that Excelsior's preferred West Range Site provides a superior location for the proposed facility.

376976-1

**Responses**

**Comment 101-02**

New text in Section 4.5.4.1 has been added that discusses water appropriation and associated permits for the East Range Site. Also, see responses to Comments 76-01 and 76-31 for discussions on proposed water use at the East Range Site.

**Comment 101-03**

New text in Section 4.5.4.1 has been added that discusses water appropriation and associated permits for the East Range Site. Also, see responses to Comments 76-01 and 76-31 for discussions on proposed water use at the East Range Site.

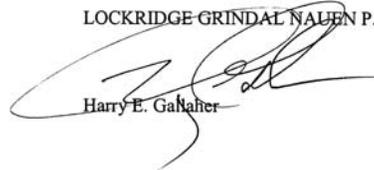
**Commenter 101 – Harry E. Gallaher**

Mr. Bill Storm  
Minnesota Department of Commerce  
Mr. Richard A. Hargis, Jr.  
U.S. Department of Energy  
January 11, 2008  
Re: PUC Docket E6472/GS-06-668  
Page 4

Thank you for the opportunity to comment on the DEIS.

Very truly yours,

LOCKRIDGE GRINDAL NAUEN P.L.L.P.



Harry E. Gallaher

c: Steve Rutherford  
Charles N. Nauen

**Responses**

**Commenter 102 – Kristin Henry**



January 11, 2008

VIA: Electronic Mail and U.S., First-Class Mail

Bill Storm  
Minnesota Department of Commerce  
85 7th Place, Suite 500  
St. Paul, Minnesota 55101-2198  
[bill.storm@state.mn.us](mailto:bill.storm@state.mn.us)  
[Richard.Hargis@NETL.DOB.GOV](mailto:Richard.Hargis@NETL.DOB.GOV)

Re: Comments on the Mesaba Energy Project's Draft Environmental Impact Statement [PUC Docket No. B6472/GS-06-668, DOE/BIS-0382D]

Dear Mr. Strom and Mr. Hargis,

The purpose of this letter is to provide written comments on the Department of Energy's ("DOE") and Minnesota's Department of Commerce ("MDOC") Draft Environmental Impact Statement ("DEIS") for Excelsior Energy's proposed Mesaba Energy Project ("Mesaba coal-fired power plant" or "Mesaba power plant") in Minnesota. This comment letter is being submitted on behalf of the Sierra Club.

Excelsior Energy is proposing to build the Mesaba Energy Project power plant north of Taconite in Itasca County, MN. The \$2 billion integrated gasification combined cycle ("IGCC") plant would be built in two phases, with each capable of producing approximately 600 megawatts (1,200 megawatts total), and, if built, it would be the largest IGCC power plant. Excelsior Energy has no plans to capture the estimated 5 million tons of carbon dioxide, a major contributor to global warming, that the proposed Mesaba plant will emit.

On the local level, this project will cause direct and irreparable impacts by emitting mercury, particulate matter, ozone generating pollutants, and other pollutants that will adversely impact local air quality. The project will harm imperiled fish and wildlife resources in the area.

On the regional level, pollution from this facility will have several irreparable environmental impacts. Millions of tons of air pollution (including mercury and

**Responses**

**Comment 102-01**

See responses to specific comments by Commenter 102 as addressed below.

**102-01**

## Responses

## Commenter 102 – Kristin Henry

102-01  
(cont'd)

selenium) will be spewed into the atmosphere causing further degradation and contamination of the region's land and waterways. There are four Class I areas in close proximity to the proposed plant, including the Boundary Waters Canoe Area Wilderness, that will be adversely impacted by this plants emissions. This will in turn hurt the regional economy, which is largely supported by recreation.

On the national and international levels, the emission of over five millions of tons of greenhouse gas pollution from this facility into the atmosphere will worsen the ongoing risks posed by global warming – creating conditions which further threaten life on the planet.

For the reasons set forward below, the undersigned organizations hereby recommend that the DOE and MDOC reject the proposed Mesaba power plant and instead adopt a true “No Action” alternative, which was not adequately analyzed or considered in the DEIS.

**I. Introduction**

The National Environmental Policy Act (“NEPA”) is our “basic national charter for the protection of the environment.” 40 C.F.R. § 1500.1. Congress enacted NEPA “[t]o declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; [and] to enrich the understanding of the ecological systems and natural resources important to the Nation.” 42 U.S.C. § 4321. To accomplish these purposes, NEPA requires all agencies of the federal government to prepare a “detailed statement” that discusses the environmental impacts of, and reasonable alternatives to, all “major Federal actions significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(2)(C). This statement is commonly known as an environmental impact statement (“EIS”). *See* 40 C.F.R. Part 1502.

The EIS must “provide full and fair discussion of significant environmental impacts and shall inform decision-makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.” 40 C.F.R. § 1502.1. This discussion must include an analysis of “direct effects,” which are “caused by the action and occur at the same time and place,” as well as “indirect effects which . . . are later in time or farther removed in distance, but are still reasonably foreseeable.” 40 C.F.R. § 1508.8. An EIS must also consider the cumulative impacts of the proposed federal agency action together with past, present and reasonably foreseeable future actions, including all federal and non-federal activities. 40 C.F.R. § 1508.7. Furthermore, an EIS must “rigorously explore and objectively evaluate all reasonable alternatives.” to the proposed project. 40 C.F.R. § 1502.14(a).

In this case, NEPA requires that DOE and MDOC’s DEIS must assess all impacts of the Mesaba power plant, including any associated energy generation and transmission

## Commenter 102 – Kristin Henry

facilities. 40 C.F.R. §§ 1502.14 & 1502.16. Specifically, the EIS must “present the environmental impacts of the proposal and the alternatives in a comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public.” 40 C.F.R. § 1502.14. In order to adequately assess the environmental impacts of the project and of reasonable alternatives to the proposed project (including, but not limited to, the proposed project plus additional mitigation measures), the DOE and MDOC’s DEIS must assess the direct, indirect, and cumulative impacts that the proposed project and each alternative would have.

For example, the DEIS must consider:

[E]nvironmental impacts of the alternatives including the proposed action, any adverse environmental effects which cannot be avoided should the proposal be implemented, the relationship between short-term uses of man’s environment and the maintenance and enhancement of long-term productivity, and any irreversible or irretrievable commitments of resources which would be involved in the proposal should it be implemented.

\* \* \*

Possible conflicts between the proposed action and the objectives of Federal, regional, State, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned.

\* \* \*

Energy requirements and conservation potential of various alternatives and mitigation measures. Natural or depletable resource requirements and conservation potential of various alternatives and mitigation measures . . . [H]istoric and cultural resources, and the design of the built environment, including the reuse and conservation potential of various alternatives and mitigation measures.

40 C.F.R. § 1502.16.

### II. Purpose and Need Statement – Chapter 1

#### A. The DEIS Failed To Reasonably Define Purpose And Need

The definition of purpose and need in the DEIS is critically important because it determines the range of alternatives that may be considered “reasonable” — based on their ability to satisfy the stated purpose and need. Here, the DEIS has arbitrarily constrained the alternatives analysis by narrowly defining the purpose and need to a coal-generation facility without assessing whether the actual generating needs could be met through renewable energy, conservation and

## Responses

### Comment 102-02

See responses to Comments 37-01, 111-02, and 116-04, which address the same concerns. In response to these comments, DOE has revised Chapter 1 of the Final EIS (Volume 1) to more clearly explain the department’s responsibilities under the CCPI Program in Section 1.2.1, better define the proposed action in Section 1.3, and clarify the purpose and need for agency action in Section 1.4. In the first place, DOE’s purpose and need specifically relate to the goals of the CCPI Program and not to meeting particular generating needs. The CCPI is a multi-year program intended to accelerate the commercial readiness of advanced multi-pollutant emissions control, combustion, gasification, and efficiency improvement technologies to retrofit or re-power existing coal-based power plants and for deployment in new coal-based generating facilities. The CCPI legislation (Public Law No. 107-63) has a narrow focus in directing DOE to demonstrate the commercial viability of technology advancements related to coal-based power generation designed to reduce the barriers to continued and expanded use of coal. Technologies capable of producing any combination of heat, fuels, chemicals, or other byproducts in conjunction with power generation are eligible; however, coal is required to provide at least 75 percent of the fuel for power generation.

MDOC’s responsibilities under the Minnesota Power Plant Siting Act are explained in Section 1.2.2 of the Final EIS, which describes the incentives established by the Minnesota Legislature for the location of innovative energy technology projects in the TTRA.

102-02

**Commenter 102 – Kristin Henry**

efficiency or other sources of fuel, such as natural gas.. This violates NEPA. *See, e.g., Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 198 (D.C. Cir. 1991) (explaining that an “agency may not define the objective of its action in terms so unreasonably narrow that only one alternative from among the environmentally benign ones in the agency’s power would accomplish the goals of the agency’s action”).

The NEPA regulations make clear that “[e]nvironmental impact statements shall serve as the means of assessing the environmental impact of proposed agency actions, rather than just justifying decisions already made.” 40 C.F.R. §1502.2. Instead, the DOE and MDOC must consider all reasonable alternatives, even those that are “not within the jurisdiction of the lead agency.” In preparing the DEIS, it is clear that the DOE and MDOC have violated the “letter and spirit” of NEPA. 40 C.F.R. §1500.1 More specifically, the DOE and MDOC have violated NEPA and its implementing regulations by limiting its analysis of impacts and alternatives to coal-based generation options. Specifically, it is stated numerous times throughout the DEIS that the proposed project’s purpose is to test the “commercial readiness of the Conoco-Phillips E-Gas™ gasification technology in a fully integrated and quintessential IGCC utility-scale application.” As such, the DOE and MDOC’s DEIS is deficient because it simply is “justifying decisions already made” – to build an IGCC plant that utilizes Conoco-Phillips E-Gas™ gasification technology. It is also clear that the DOE and MDOC refused to consider any alternatives it deemed not consistent with the this basic premise – coal-based generation technology which tests the commercial readiness of IGCC. Thus, the DEIS is fundamentally flawed from the start. As such, the DEIS must be reissued without the illegal limitations placed on it by the DOE and MDOC.

The caselaw on NEPA issues of “purpose and need” makes clear that the DEIS violates NEPA. For example:

- “An agency cannot define a project’s purpose so narrowly that it precludes consideration of alternatives and can be accomplished only by the preferred alternative. *Friends of the Southeast’s Future v. Morrison*, 153 F.3d 1059, 1066 (9th Cir. 1998); *Colorado Environmental Coalition v. Dombeck*, 185 F.3d 1162, 1174 (10th Cir. 1999).
- “One obvious way for an agency to slip past the strictures of NEPA is to contrive a purpose so slender as to define competing ‘reasonable alternatives’ out of consideration (and even out of existence)... The federal courts cannot condone an agency’s frustration of Congressional will. If the agency constricts the definition of the project’s purpose and thereby excludes what are truly reasonable alternatives, the EIS cannot fulfill its role. Nor can the agency satisfy the Act.” 42 U.S.C. 4332(2)(E). *Simmons v. U.S. Army Corps of Engineers*, 120 F.3d 664, 666 (7th Cir. 1997).

**B. Failure to Consider Adequate Alternatives****Responses****Comment 102-03**

See responses to Comments 37-01, 111-02, 111-03, and 116-11, which address the same concerns. In response to these comments, DOE has revised Chapter 2 of the Final EIS (Volume 1) to more clearly explain the alternatives determined to be reasonable for the EIS. Section 102 of NEPA requires that agencies consider reasonable alternatives to the proposed action in an EIS. But the term “reasonable alternatives” is not self defining and must be determined in the context of the statutory purpose expressed by the underlying legislation. In this case, DOE’s purpose and need are not associated with particular demands for power generation. Rather, DOE intends to further the goals of the CCPI Program by demonstrating a technology. As explained in response to Comment 102-02, the CCPI legislation has a narrow focus in directing DOE to demonstrate the commercial viability of technology advancements related to coal-based power generation. Also, as stated in Section 2.1.1.2, the CCPI Program only allows for Federal co-funding of proposed industry projects that have been selected through a formal funding opportunity announcement and negotiation process. Thirteen applications from across the nation were received in response to the second-round CCPI announcement. These applications represented diverse technologies and utilized a variety of coals consistent with the requirements embodied in the announcement and the CCPI legislation. Two of the thirteen applications were for co-funding of proposed archetypal IGCC projects. In all, four of the thirteen applications were selected, including both of the proposed archetypal IGCC projects, one of which was the Mesaba Energy Project. The two IGCC projects that were selected for co-funding involved the demonstration of different gasifier types, which is important in achieving a diversity of technology approaches and methods in the CCPI program. They also involve different coals, operating environments, and environmental considerations, all of which enhance the potential for widespread commercialization of IGCC technology in a competitive marketplace. The Mesaba Energy Project was selected because of the opportunity to demonstrate the specific technology proposed—the Conoco-Phillips E-Gas™ gasification technology—in a fully integrated and quintessential large commercial utility-scale IGCC setting. No other applicants proposed this specific IGCC technology. Other technologies that cannot serve to carry out the goal of the CCPI Program (e.g., renewable energy sources or conservation) are not reasonable alternatives in this EIS. However, DOE conducts various programs that support other technologies for power generation or conservation. In like manner, those programs cannot consider coal-based power generation technologies as reasonable alternatives to meet their program goals.

102-02  
(cont’d)

102-03