Commenter 76 – Matt Langan

Appendix D5
This section states that no known populations of endangered plant species have been identified that would be affected by the project. Aside from endangered plant species, are there other biological resources that could be affected? This section needs additional analysis, interpretation and discussion of data to make that claim.

76-27

The issue of bird strikes on smoke stacks and transmission lines and towers is only discussed in this appendix. This topic is important enough to be discussed in the main part of the document. The Draft EIS assumes the impact of bird strikes as minimal stating that there probably will be millions of birds migrating past this site without any substantiation of this number. Use of bird strike data from wind turbines placed on Buffalo Ridge is not an analogous application of the research. Buffalo Ridge is a grassland area in southwestern Minnesota with different topography and habitat than forested land in northeastern Minnesota.

The Draft EIS states that the West Range Site will restrict use of one of the migration corridors through the iron formation, yet dismisses the issue stating that there are no known "mass migrations of large mammals." The Draft EIS does not discuss the fact that large mammals do move and disperse and this project will obstruct that movement.

Appendix H
The document identifies Holman Lake and the Swan River as the only two reasonable receiving waters for the cooling tower blowdown (CTB) on the West Range Site, and "dismisses" the Prairie River as a third option to receive CTB discharge. Reasons given for not including the Prairie River alternative are: added costs, the need for a variance, and locating the discharge site upstream of Prairie Lake. For example, the 7-day Q10 flow of the Swan River is just 800 gpm; whereas, the 7-day Q10 flow of the Prairie River is 9,880 gpm---twelve times greater than the Swan River. The additional flow of the Prairie River can better dilute the CTB discharged to it. Since Mesaba proposes to withdraw water from the Prairie River, some of the impacts from pipeline infrastructure construction could be mitigated. In addition, because additional daily discharges from the IGCC Power Station could have adverse physical effects on receiving streams (e.g., increased bank erosion, higher flood levels, stream channel widening, or streambed down cutting, and other potential cumulative effects downstream), the higher hydraulic capacity of the Prairie River channel should more easily accommodate added flows, compared to the Swan River. The Prairie River, below the Prairie Lake Dam, appears to have better ability to dilute and flush the CTB discharge; therefore, it should also be evaluated as a CTB discharge alternative, amongst others, in the Final EIS.

76-28

The Draft EIS states that thermal impacts to Holman Lake and the Swan River could become very significant during low flows, and would most likely introduce the need for a variance for the temperature of the discharge---especially if cooling ponds are unable to mitigate adverse thermal concerns. Because heated discharges could have adverse effects on receiving waters (e.g., increased biota metabolic activity, disruptions to reproduction, metamorphosis, and migration, increased sediment biological oxygen demand, decreased gas solubility, increased pollutant synergism, increased algae and aquatic plant growth), the higher flows of the Prairie River should more easily mitigate these potential impacts and offset the need for a thermal variance.

Responses

Comment 76-27
Volume 1 of the EIS discusses large mammal populations in Section 3.8 and the impacts of the proposed project in Section 4.8. The impacts analysis determined that the project would not have a long-term adverse impact on large mammal populations and movement. As stated in the EIS, there are no known mass migrations of large mammals in the area; therefore, no impacts would be anticipated. The project could impede movement of individual large mammals; however, this would not impact overall populations.

The following text has been added to Section 4.8.2.2 (Volume 1):

"Bird mortality from collisions with smoke stacks, transmission lines and towers would be expected, though this would not likely have a significant impact on bird populations within or migrating through the area. Collisions would typically peak seasonally during the spring and fall migrations and also during night time hours. See Appendix D5 for further information."

Comment 76-28
The use of an enhanced ZLD system would negate concerns of pollutant discharge impacts to the Swan River. See response to Comment 76-01, which addresses the use of the enhanced ZLD system at the West Range Site.

Commenter 76 – Matt Langan

East Range Site

76-29 The DNR has noticed some inconsistencies in the Draft EIS that make review difficult, particularly Figure 3.5-4, which shows the East Range process water sources. The Final EIS should clarify the locations of mine pits 5N, 5S, and 3. It should clarify whether the Donora Pit is the same as Mine Pit 9 (or 9N). It should also clarify whether Stevens Pit is the same as Stephens Pit.

2.2.2.3. Process Water Requirements (p.2-29)

76-30 The Draft EIS states that "Abandoned mine pits would be the primary source of water at either the West Range Site or the East Range Site." Table 2.3-5 and various others, however, state that the sustainable flow from these pits is uncertain, and show that the majority of the available water is from the Mesabi Nugget effluent, Polymet dewatering, and Colby Lake appropriations (a total of 7,900 gpm) rather than the local mine pits from which direct appropriations would be made (a total of 4,675 gpm).

Table 2.3-5. Process Water Sources – East Range Site (p. 2-71)

76-31 This table quantifies numerous sources of water for the East Range Site. The Draft EIS does not demonstrate, however, that any of this water is actually available for their use. For example, water appropriation permits cannot be issued for taking of water from any of the listed sources without Mesaba first demonstrating "control" of riparian land (this same point applies to the West Range Site). Steel Dynamics, Inc., and Mesaba Nugget Delaware have purchased much of the riparian land around many of the pits and they have existing or conceptual plans for use of the water. Further, Table 2.3-5 shows 4,000 gpm available pit dewatering water from Polymet's operation; Table 4.5-12 shows up to 8,000 gpm available from Polymet. Polymet will have no available pit dewatering water for the proposed project since this plan is to use all of the available water. Further, Polymet is not an existing operation and therefore cannot be counted on to provide water for this project. Assuming Polymet is constructed, this project will require - in addition to their own dewatering - an average of approximately 4,000 gpm from Colby Lake, and up to 8,000 gpm during drought conditions. The appropriation permit (49-0135) referenced in Table 2.3-5 is currently held by Cliffs-Erie (CE) and is applicable only to the past, and now inactive, CE taconite operation. Mesaba cannot assume that any "excess" water previously-authorized for use by CE is available to them without adequate consideration of competing uses and evaluation of impacts. For example, ME could need up to 10,000 gpm for the East Range Site. Since most, if not all, of this water may have to come from Colby Lake/White Water Reservoir, the combined demand from Polymet and Mesaba could reach 18,000 gpm during critical dry conditions. The Draft EIS has not demonstrated the riparian control needed for legal access to any of the water bodies listed, nor has it evaluated the impacts associated with the identified water needs.

3.8.2.2. Aquatic Communities – East Range Site (p.3.8-13)

76-32 Characterization of the fish populations of Colby Lake is from a 2000 fish population assessment. A more recent (2005) fish population assessment is available on the DNR Web site that continues to show generally low fish populations but also shows a recent increase in bluegill sunfish and channel catfish numbers.

4.5.4. Impacts on the East Range Site and Corridors (p.4.5-31)

76-33 The Draft EIS states that use of the enhanced ZLD system "allows the Generating Station to play a synergistic role with the industrial mining operations seeking to locate on the East Range industrial site", and that "the majority of the water available at the East Range (site) is from other industrial activities in the area (mine pit dewatering or industrial effluent)". Although there is some, as-yet unidentified potential for Mesaba to use pit dewatering from some future mining operation(s), this statement is not

Responses

Comment 76-29
Figure 3.5-4 and Table 3.5-6 in Volume 1 have been revised for clarification.

Comment 76-30
Text has been added to Section 4.5.4.1 (Volume 1) that discusses updated plans for water withdrawals and potential impacts at the East Range Site as explained in response to Comment 76-31 below.

Comment 76-31
The following provides a brief summarization of the new text in response to issues identified in the comment (see Section 4.5.4.1 [Volume 1] for further detail):

- Control of riparian land - Access to riparian land on the pits would be necessary before a water permit can be issued, and although the project proponent is not in a position to acquire riparian land at this stage of the project, it is expected that the proponent would negotiate easements necessary to access all required water sources on mutually agreeable terms with other potential users. Minn. Statute 216B, Subd. 2(a)(3) does grant the power of eminent domain to innovative energy projects (of which the Mesaba Energy Project has been designated) which would secure the required riparian rights to serve the proposed facility. While this approach to acquiring control of riparian land would be a last resort and is an unlikely scenario, it demonstrates the possibility that such access could be obtained for the project.

- Water availability regarding PolyMet - Recent discussions between Excelsior and PolyMet have confirmed that NorthMet has changed its water management plans since the development of Excelsior's Water Management Plan for the East Range Site and the potential 4,000 gallons per minute source of water for the project (derived from NorthMet's dewatering operations) can no longer be assumed to be available. However, further evaluation has revealed other potential sources of water, as discussed in 4.5.4.1 (Volume 1), that could provide a significant amount of the water demand.

Commenter 76 – Matt Langan

Mr. Storm
January 9, 2008
Page 11

76-33 (cont'd) supported by factual information or agreements between Mesaba and existing mine pit land owners to access the riparian land needed to make the water available to Mesaba. And, as previously noted, Polymet is planning to use all of their pit dewatering water for processing.

76-34

4.5.4.1. Process Water Alternatives (p.4.5-32)
The Draft EIS states that "water supplies from any of the individual East Range pits (listed in Table 4.5-12, pg. 4.5-32) can be over-pumped as necessary to meet the demands of Phases I and II", that "mine pit 2WX would serve as the reservoir from which the plant would appropriate water to meet its needs", and that "water would be pumped from Colby Lake into 2WX" to further help meet the plants needs. Again, Mesaba has not demonstrated "control" of any riparian land around any of these pits or Colby Lake, as is necessary for them to acquire appropriation permits for taking of the water. Further, the Draft EIS does not describe the term "over-pumping." Over-pumping, from a hydrologic perspective, implies that more water will be taken from the pit(s) then the pit(s) yield. This cannot be done on a continuous basis without depleting the pit(s) of water, resulting in an inadequate long-term supply for the plant. Also, Polymet will not have 2,000 gpm to 8,000 gpm mine dewatering water available for Mesaba that is noted in Table 4.5-12. And finally, the EIS provides no documentation of impacts to Colby Lake or White Water Lake, from which Mesaba would likely need several thousand gallons per minute in order to operate. Pg. 4.5-33 also states, "the amount of water to sustain Phases I and II over the long term (at the East Site) is reasonably assured". As noted in the previous comment, this statement is not supported by documentation of riparian land control, impact analysis, or mitigation strategies, and likely is not a correct statement for the noted water sources.

76-35

5.2.4.2 Water Resources, East Range
The Draft EIS states that Mesabi Nugget has a permit to withdraw 5,000 gpm from Mine Pit 1, and an additional 5,000 gpm from Mine Pit 2WX as a standby source. Mesabi Nugget withdrawals from Mine Pit 2WX would be in direct conflict with the process water needs for Mesaba Energy, which plans on using Mine Pit 2WX as its primary source.

76-36

Appendix D3 Cumulative Water Resources Effects from new sources/appropriations
This section states the minimum flow allowed in the lower Partridge River is 13 cfs or 5,835 gpm, to be controlled by augmentation from Whitewater Lake through a control structure to Colby Lake. The "flashy" nature of the Partridge River means that there may be little flowing water during midsummer droughts. Area Fisheries staff in recent years have observed several instances of no or barely perceptible flow in the lower Partridge River where it passes under the Co. Rd 110 bridge. In these instances, the damp cobble of the riverbed was fully exposed and any flow, where it existed, was limited to a trickle through the cobble. One of these instances was during the Fish Population Assessment fieldwork on 07/11/2006. On this day, 101 F discharge water from the Laskin generating plant was recirculating back into the main body of the lake, creating surface temperatures of 100 F at the bridge east (upstream) of the discharge pipe, and 80.6 F at the deep spot of the lake in the narrows just south of Little Lake.

The DNR is concerned that the East Range Site relies on water sources that may not be available at all times of the year, or may be in competition with other users. In the case of the mine pits, their watersheds are quite small and annual precipitation may not provide adequate recharge over the long term given the proposed withdrawals.

In the case of maximizing appropriations from Colby Lake, it's primary water source (the Partridge River) is very flashy with very low flows at times during midsummer and midwinter. This could require

Responses

Comment 76-31 (cont'd)

- Competing uses at Colby Lake and potential impacts – The proponent proposes to meet the balance of its water needs through appropriations from Colby Lake at approximately 1,300 gallons per minute. Discussions with MNDNR and other water users are ongoing and it is expected that through its negotiations with all stakeholders, MNDNR would issue Excelsior a water appropriation permit that would specify the terms under which the Mesaba Generating Station could withdraw from Colby Lake waters while minimizing impacts to regional water resources. The specific implementation of overall water management among users would require detailed study and negotiation, but cannot be accomplished until a site is selected for the Mesaba Energy Project and mining plans are more fully developed.
- Though not yet confirmed at this stage of the project, the design of the proposed facility incorporated elements that could provide synergies for other nearby projects, such as Mesabi Nugget and Polymet (e.g., the Mesaba facility could use and treat the wastewater being discharged by neighboring users via its enhanced ZLD system).

Comment 76-32
The text in Section 3.8.2.2 (Volume 1) has been updated to include the more recent information from the 2005 fish population assessment.

Comment 76-33
New text regarding the East Range Site's water supply and potential conflicts has been added to Section 4.5.4.1 (Volume 1). See also response to Comment 76-31, which addresses the same concern.

Comment 76-34
New text regarding the East Range Site's water supply and potential conflicts has been added to Section 4.5.4.1 (Volume 1). See also response to Comment 76-31, which addresses the same concern.

Comment 76-35
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Comment 76-36
New text regarding the East Range Site's water supply and potential conflicts has been added to Section 4.5.4.1 (Volume 1). See also response to Comment 76-31, which addresses the same concern.

Commenter 76 – Matt Langan

Responses

76-36 (cont'd)

additional use of Whitewater Lake as a reservoir to augment the level of Colby Lake and maintain minimum flows in the Partridge River, which in turn would result in larger water level fluctuations in Whitewater Lake. Whitewater Lake is promoted by the City of Hoyt Lakes (which operates a large campground on Fisherman's Point) as a recreational lake with excellent populations of walleye, northern pike, and yellow perch. These fish populations are currently self-sustaining, but natural reproduction would likely be adversely affected by large fluctuations in water levels, particularly in April and May when walleye eggs are incubating on gravel shoals and northern pike and perch eggs are incubating on shallow submerged vegetation. A fish population assessment was conducted on Whitewater Lake in the summer of 2007, and the report is in process. In addition to these concerns, a number of permanent homes have recently been built on lakeshore lots sold by Minnesota Power. Large fluctuations in the water levels of Whitewater Lake may conflict with the interests of these riparian home owners.

Thank you for the opportunity to review this document. We look forward to receiving your Final EIS. Please contact me with any questions regarding this letter.

Sincerely,

Matt Langan, Environmental Planner
Environmental Review Unit
Division of Ecological Resources
(651) 259-5115

c: Steve Colvin, Craig Engwall, Steve Hirsch, Bob Leibfried, Tim Goeman, Mike Peloquin

ERDB#20060263-0003; D:\AA_OMBS\comment letters\010908_DraftEIS_MesabaEnergyProject.doc

Commenter 77 – Jean and Herb Halverson

>>> "Jean Halverson" <halverjh@mchsi.com> 1/9/2008 12:56 PM >>>

This memo is in reference to:

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

77-01

We are writing to express our sincere concern regarding the proposed Mesaba Energy project and its impact on the environment.

First, the definition of environment seems to vary, depending on the eyes of the beholder. To those of us who live in the northland, the environment consists of the wooded landscape, the many lakes, the wildlife that inhabit the area....all of the many reasons we all continue to live here. We feel each of these aspects are

endangered by the building of this facility in the midst of this very green and natural area. Not only would it alter the area visibly, but it would challenge the water

quality as it now exists for recreational use and the long term effects on the water table for years to come. It would directly affect the entire area with its

intrusion of power lines, additional trains carrying the coal and the removal of many trees and habitat for the wildlife in the area. Those are the areas that we

look at as citizens and guardians of our environment. These are the most immediate and obvious impacts and are major to all of us.

77-02

Secondly, the time frame of the environmental impact is crucial. We are not just discussing today and tomorrow, but we are required to look at the long term

consequences of our actions today and their impact on future generations. With no plan at the present for sequestering carbon dioxide due to high costs and

lack of feasible alternatives, it appears to us to be extremely shortsighted and selfish to consider releasing more of their gases into the environment when the

effects of global warming are being tabulated and documented worldwide. With the recent findings of the Arctic ice shelf diminishing, the drastic changes

occurring throughout the world and the emphasis on doing our part in alleviating the problem, how can we proceed with a project that increases the problem and

Responses

Comment 77-01
See Sections 3.2 and 4.2 (Volume 1) of the Final EIS, which address aesthetic impacts. Habitat impacts are discussed in Sections 3.8 and 4.8.

Comment 77-02
See responses to Comments 1-02, 4-01, 19-03, and 22-01, which address the same concerns.

Commenter 77 – Jean and Herb Halverson

77-02 (cont'd)

has no plan to sequester the carbon dioxide! We have an absolute obligation to our children, grandchildren and to society as a whole to do our share in

not only preserving what we have been given to use, not abuse, and to leave the world in better shape than it was before us. We feel this should begin

right here in our own backyard.

77-03

These are just the issues regarding the environmental impact physically. The use of public funding to support this project when there are many, many projects

that could be contributing to our environment for today and for our grandchildren tomorrow if they had proper funding seems to be another issue that could be

a positive for the area and the environment. Please consider the concerns of those of us who live in the area and bear the brunt of these decisions.

Jean and Herb Halverson
20665 Mishawaka Shores Circle
Grand Rapids, MN 55744

Responses

Comment 77-03
Thank you for your comment. It has been noted and will be included in the administrative record for this EIS.

Commenter 77 – Jean and Herb Halverson

From: Jean Halverson [mailto:halverjh@mchsi.com]
Sent: Wednesday, January 09, 2008 12:31 PM
To: Richard.Hargis@NETL.DOE.GOV
Cc: Bill.Storm@state.mn.us
Subject: Mesaba Energy Project

This memo is relative to:

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

77-04 We are sincerely concerned about the proposed Mesaba Energy project and the preliminary EIS. First of all, environment means many different things to many people and businesses. For those of us who live and enjoy the north woods, it means the varied landscape, the forests, the many lakes and streams and the wildlife enjoying this habitat. It appears to us, this plant poses a serious threat and impact on all of the above. The removal of trees that add beauty, enhance the air quality and are sustainable would be a loss; this is not a "brown area".

77-05 The water quality would be affected, from the water table to the quality of the existing water for recreational, fishing and other uses. There is a reason that ST. Louis Cty. did not want that impact on the St. Louis River.

77-06 The visual impact is a concern, to say nothing of the additional power lines, railroad cars filled with coal going across the state. Real estate values, pollution, the Scenic Hwy rerouting, the Mesaba Bike Trail, these are all valid issues and concerns that affect our environment.

77-07 Secondly, environmental impact needs to be measured not only in the short term but in the long term. The inability to finance or plan for the sequestering of carbon dioxide is the most serious of concerns. It is unbelievable to us that with the emphasis on

Responses

Comment 77-04
DOE agrees that loss of vegetation and habitat, landscape alterations, and other land-disturbing activities associated with the project would have adverse environmental impacts. DOE has worked in concert with the project proponent to minimize these impacts to the extent practicable, while ensuring that the project would meet DOE's purpose and need. As described in response to Comment 2-01, the processes imposed by NEPA and the Minnesota Power Plant Siting Act are intended to ensure that potential adverse impacts are weighed in comparison to the beneficial objectives of the project.

Comment 77-05
The Final EIS has been updated to reflect the project proponent's announced decision (to be included in a revised permit application to MPCA) to utilize an enhanced ZLD system at the West Range Site, comparable to the system proposed for the East Range Site, which would eliminate discharges of process water and cooling tower blowdown into any water bodies. Also see responses to Comments 6-01 and 7-02, which address the same concerns.

Comment 77-06
Sections 3.2 and 4.2 (Volume 1) address existing conditions and impacts relating to aesthetics for the Mesaba Energy Project. Also, see Table 5.3-1 for mitigation measures for the Mesaba Energy Project, including mitigation for aesthetic impacts. Potential impacts from project features on real estate values are discussed in Section 4.11. See also response to Comment 80-13, subsequently.

Commenter 77 – Jean and Herb Halverson

77-07 (cont'd) greenhouse gases, the global emphasis on curtailing carbon dioxide emissions and the documented changes in our environment, that we would even consider contributing to that problem as this plant would do. It appears that this is a rush to get the funding and approval before it is outlawed. That is not responsible planning and extremely shortsighted, from our point of view.

77-08 Please consider again the serious concerns as raised by the many people who live in this area and will be the most directly affected by the impact of your decisions. We take our responsibility very seriously to use, not abuse, this environment which we have been fortunate to live in. We want to leave this state in as good, if not better condition than our grandparents found it. We feel this coal burning plant is a giant step in the wrong direction.

Jean and Herb Halverson
20665 Mishawaka Shores Circle
Grand Rapids, MN 55744

Responses

Comment 77-07
See responses to Comments 1-02, 4-01, 19-03, and 22-01, which address the same concerns.

Comment 77-08
Thank you for your comment. It has been noted and will be included in the administrative record for this EIS.

Commenter 78 – Mary Erickson

From: Mary Erickson [mailto:vember@uslink.net]
Sent: Wednesday, January 09, 2008 1:19 PM
To: Bill.Storm@state.mn.us
Subject: Mesabi Energy Project Comment

Mary M. Erickson
5404 Park Dr.
Mt. Iron, MN 55768
January 9, 2008

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

Dear Mr. Storm:

I have lived on the Iron Range most of my life and have experienced the "roller coaster" economy tied to mining. I know the importance of creating jobs in our area and support efforts to do so. However, when it comes to the proposed Mesabi Energy Project, I am not convinced that the benefits created from new jobs will outweigh the possible negative consequences to our environment. I am concerned that decisions made will not only affect those of us that live here today but future generation as well. I have a few comments and questions concerning this

78-01 project.

1. We are about to expand mining operations with such projects as Minnesota Steel, Polymet and Franconia Minerals, which will bring new types of mining and additional waste products to our environment. These new mining projects along with the current taconite plants use a natural resource that is here, it comes out of the ground where we

live. However, the Mesabi Energy Project is proposing the hauling of a natural resource, coal, from a different state to where

Responses

Comment 78-01
Section 1.2 (Volume 1) of the Final EIS describes the Federal and state contexts for the Mesaba Energy Project and the basis by which the project would be located in the TTRA of northeastern Minnesota rather than in an area closer to coal mines. Section 4.3 (Volume 1) describes the impacts of the project on air quality. Human health risks attributable to the project based on air emission modeling as described in Section 4.17 (Volume 1) would be below EPA and MPCA thresholds. Cumulative impacts are described in Section 5.2.

Commenter 78 – Mary Erickson

78-01 (cont'd) we live. This project could be done where the coal comes out of the ground or anywhere. Has the proposed Mesabi Energy Project been evaluated with all these new mining methods as to a future change in our environment? In particular air quality, will it bring additional mercury, soot and carbon dioxide into the air that we breathe? We currently have Mesothelioma studies taking place so air quality and industry related illnesses are important to us.

78-02 2. Have all the costs for the Mesabi Energy Project been included in the equation? Such as the costs of transporting the coal (both fuel and carbon dioxide emissions) from train travel. Have the costs involved with carbon sequestration, the costs to bury and maintain the carbon dioxide in the earth been considered? How many years will this carbon dioxide need to be monitored? What about small leaks? Has the possibility of a future carbon dioxide tax been added to the costs?

78-03 3. I think that there are too many unanswered questions. I feel that these ideas of coal plants with or without carbon sequestration are bad ideas. Those of us living near the plants will be taking the most risk. And I hope that future generations will not be stuck with tons of carbon dioxide waste buried in the ground.

78-04 4. Now is the time to put our money and efforts into cleaner, renewable energy. This is the direction that the people of Minnesota should be going. I think that it holds the key to the creation of jobs and our future well being.

Thank you for reading my comment.

Sincerely,

Mary Erickson

Responses

Comment 78-02
See responses to Comments 4-01, 12-02, 19-03, 41-01, and 75-13, which address the same concerns.

Comment 78-03
Results gained from early research and commercial CCS experiments indicate that CO_2 storage in geologic formations will remain secure for long time periods. The Sleipner project in the North Sea began injection of CO_2 into the Urtisa formation in 1996, and repeated seismic surveys have indicated that the CO_2 remains in the formation. See response to Comment 75-13, which addresses the same concern.

Comment 78-04
See response to Comment 37-01. DOE oversees numerous projects that are investigating and supporting a wide variety of renewable energy generation technologies, such as wind, solar, and hydro power.

Commenter 79 – Richard Twaddle

From: Twaddle [mailto:shirik@lcp2.net]
Sent: Wednesday, January 09, 2008 4:49 PM
To: Richard.Hargis@NETL.DOE.GOV; Bill.Storm@state.mn.us
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

79-01

With regard to the above item I would like to say:
It appears that this proposed facility would be one of the dirtiest in the State. Sequestering of carbon is not a proven technology and even if it were the carbon would have to be piped hundreds of miles to be sequestered. Mesaba's talk about sequestration of carbon is just that-"talk". I am surprised that the people responsible for tha analysis of the proposal even consider it. I hope you will not listen to our uninformed polititions and that you will kill this proposed project.

Richard Twaddle
26646 Eagle View Drive
Bovey, MN 55709

Responses

Comment 79-01
See responses to Comments 1-01, 1-02, 4-01, and 19-03, which address the same concerns.

Commenter 80 – Andrew David

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

Review Mesaba Energy Project Draft EIS

Sections 4.11 (Socioeconomics) and 4.12 (Environmental Justice)

Summary Comments

80-01

Section 4.11 analyzes the economic impact of building Phase I and Phase II of the Mesaba Energy Project, particularly the impact that construction and then continued operation would have on employment, income, business, population and housing. The outlook for employment, income and business is predictably positive and virtually unchanged from earlier reports (i.e. UMD/BBER IMPLAN software modeling). The CAMP position paper entitled "Economics of the Mesaba Energy Project" does an excellent job of illustrating the faults and inaccuracies of the BBER report.

This section also investigates the impact on population levels and housing during construction and operation. The EIS finds both the East and West Range sites capable of supporting temporary and permanent increases in population, with little impact to real property. Long-term housing requirements are not viewed as an issue, however the EIS does find that "… depending on the percentage of construction jobs that could be filled by existing residents, the influx of workers from outside the region could create a demand for rental housing and lodging that may exceed available capacity." (4.11-4).

80-02

Section 4.12 investigates the impact the Mesaba Energy Project might have on minority or low-income populations in the following areas: 1) would health effects be significant or above generally accepted norms, 2) is the risk or rate of hazard exposure likely to exceed that of the general, or comparison, population and 3) would health effects occur due to cumulative or multiple adverse exposures from environmental hazards. The EIS finds no issues with these three factors for either low-income, or minority populations (surprise, surprise!) due in no small part to the narrowly defined 'region of influence'.

Responses

Comment 80-01
See response to Comment 16-01, which addresses the same concerns.

Comment 80-02
See response to Comment 16-02, which addresses the same concerns.

Commenter 80 – Andrew David

General Comments Section 4.11 Socioeconomics

80-03

1. The wide range of influence is the 7 county area (Aitkin, Carlton, Cook, Itasca, Koochiching, Lake and St. Louis) the local range of influence is Census Tract 9810 (Iron Range Twp and Taconite) for the West Range Site and Census Tract 140 (Hoyt Lakes) for the East Range Site. The economic analysis is supposedly for the 7 county area the population and housing analysis is done from the Census Tracts.

80-04

2. The BBER, 2006 study does not do a cost/benefit analysis it is strictly a benefit analysis. Even the BBER authors recognize this and caution against using their study as a complete view of the impacts of building Mesaba Phase I and II. Quoting directly from the BBER, 2006 study,

> *"Readers are also encouraged to remember the BBER was asked to supply an economic impact analysis only. Any subsequent policy recommendations should be based on the "big picture" of total impact. A cost-benefit analysis would be needed to assess the environmental, social, and governmental impacts."*

University of Minnesota Duluth Labovitz School of Business and Economics, Bureau of Business and Economic Research 2006. The Economic Impact of Constructing and Operating An Integrated Gasification Combined Cycle Power Generation Facility on Itasca County. April 2006 For Itasca Development Corporation. Page 13.

80-05

3. The BBER study is misleading in stating the economic value to Itasca County or the seven county wide range of influence. That is because much of the economic value supposedly coming to the area in the form of costs for coal, transportation, profits, interest, etc will actually be accrued where those services are provided or purchased. Most wages will be provided in Itasca County although 20% are estimated to be provided to residents of other counties. Again quoting from the BBER, 2006 study, page 13,

> *"As noted in the "Itasca County Study Area" section at the beginning of this report, there are known IMPLAN modeling issues associated with small study areas like county-level impacts, including difficulty in measuring accurately the extent that payments made to imports or value added sectors are shown as re-spent within the study area."*

80-06

4. The BBER study estimates the number of jobs that would be created in construction and during operation of Phase I and II as well as additional positions created as a result of having additional workers in the area. However, these predictions should be tempered as the job estimates are a combination of full time, part time and temporary positions.

Responses

Comment 80-03
As stated in response to Comment 16-01, the economic and employment benefits predicted by BBER's study cannot be measured accurately at the level of a local community or neighborhood. However, the adverse effects of plant construction and operations on local communities and residents can be predicted based on their proximities to project features (plant site, rail lines, access roads, and infrastructure). Therefore, efforts were made in the EIS to identify communities that would be affected most adversely by project features, while the beneficial economic impacts of the project were considered more broadly by necessity.

Comment 80-04
As stated in response to Comment 16-01, IMPLAN is a widely used input-output impact model for predicting the multiplier effects of increased spending, such as for new projects, on a regional economy. The commenter is correct in stating that it is not a cost-benefit model; rather, it estimates benefits in terms of multiplier effects on the economy and employment. As further explained in response to Comment 41-01, the CEQ NEPA regulations state in 40 CFR 1502.23: "For purposes of complying with the Act, the weighing of the merits and drawbacks of the various alternatives need not be displayed in a monetary cost-benefit analysis and should not be when there are important qualitative considerations." This statement highlights the difficulties of reaching a consensus of opinion on values or costs to be assigned to environmental conditions or impacts, many of which represent qualitative considerations with intangible benefits or costs.

Comment 80-05
As stated in response to Comment 16-01, although direct employment for construction and operations may involve hiring from outside the region, the indirect and induced employment predicted by IMPLAN reflects jobs specifically created within the 7-county Arrowhead region. Likewise, although some portion of direct project spending would flow outside the region and state, economic benefits predicted by the IMPLAN model, both in terms of value-added benefits from direct spending for wages, rents, interest, and profits for construction and operations, and in terms of total output economic benefits from all direct project expenditures for construction and operations, would occur specifically within the Arrowhead Region.

Commenter 80 – Andrew David

80-07

5. Most of the construction and plant operation positions will be filled by people outside of Itasca County. That number will rise if construction is a union construction job. This has direct negative impacts on housing in the area during the construction period.

80-08

6. The EIS assumes that there will be an available skilled labor force in the region due to, "… historically persistent higher unemployment rates …" and a decrease in the manufacturing and iron mining industries. It is not at all certain that jobs in iron mining and/or manufacturing are transferable to construction or operation jobs that Mesaba Phase I and II would provide. Continued investment in iron mining and the specter of Minnesota Steel would suggest that there will be a dramatic shortage of skilled labor for construction positions, requiring that more outside skilled labor be hired and housed in Itasca County.

80-09

7. The discussion of jobs, wages and employment is occurring in a vacuum. No mention is made of the impact that Minnesota Steel will have on the same population of workers that Mesaba will be trying to hire from. Job competition will be fierce if both are built at the same time. Although this is good news for a few people hired locally with an existing domicile the influx of workers and the shortage of housing will dramatically increase rental and housing costs to the detriment of imported workers through higher rentals, local homeowners through artificially increased property values and taxes and low-income non-skilled individuals and families through increased rental costs and wages that do not keep pace with the increased cost of housing.

80-10

8. Most if not all of the discussion in this section references dollars or employment that would be gained if Mesaba Phase I and II are built. Therefore the economic benefits are being overestimated given the scope of the proposed building. The permitting process is asking only for Phase I yet the economic analysis is offering figures for Phase I and II combined. We need to see an EIS that accurately compares all costs and benefits just for Phase I.

80-11

9. The proposed relocation of Itasca County Road 7, the Scenic Highway, is considered to be an act of Itasca County and not the Mesaba Project. Considering the fact that CR7 was recently (within the past 5 years) rerouted and resurfaced from 169 north along its original route at considerable expense it is obvious that an additional rerouting is being done to convenience the Mesaba Project at the expense of Itasca County taxpayers and should be at the very least considered an additional cost of the project.

80-12

10. The EIS estimates that, "Perhaps a dozen or more of the other residential properties along CR 7 and Diamond Lake Road closest to the plant site or rail alignment may experience reductions in values or at least slower rates of growth in values." (4.11-7)

Responses

Comment 80-06
Sections 4.11.2.1 and 4.11.2.2 (Volume 1) acknowledge that the BBER study projected jobs as full-time, part-time, and temporary without distinction.

Comment 80-07
As stated in response to Comment 16-01, direct jobs both for construction and operations may be filled by individuals from within and without the local communities, the Arrowhead Region, and the state, and that the appropriate distributions could not be accurately predicted, because they would depend upon the availability of individuals with required skills.

Regarding impacts on local housing attributable to an influx of construction workers, Sections 4.11.3.1 and 4.11.4.1 (Volume 1) respectively describe the potential for adverse effects on local housing in the West Range and East Range areas based on limited housing capacity to meet increased demands. Similar concerns were expressed in the Minnesota Steel Industries Final EIS, which concluded that the potential impacts would not be significant, even considering cumulative effects with construction of the Mesaba Energy Project.

Comment 80-08
Section 4.11.2.1 (Volume 1) of the Final EIS states: "The extent to which temporary and permanent jobs can be filled by local residents would be driven in part by the local labor market characteristics, the availability of unemployed or underemployed skilled construction workers, and prevailing wages." However, based on data from the Department of Employment and Economic Development, the EIS concluded in this section that the size of the workforce in the Arrowhead Region relative to the number of construction jobs expected would not have an overly adverse effect on labor availability.

Comment 80-09
See response to Comment 80-07, which addresses the same concerns.

Comment 80-10
As stated in response to Comment 16-01, the BBER used IMPLAN in 2005 to estimate the economic multipliers associated with the Mesaba Energy Project Phase I for the Arrowhead Region and the state. Because Excelsior's Joint Permit Application included both Phases I and II of the project, BBER updated the study in 2006 to estimate the effects of both phases. The Final EIS has been updated to include the results of the earlier BBER analysis for Phase I alone.

Commenter 80 – Andrew David

80-13

11. The EIS states that, "… it is unlikely that residential properties along the proposed new HVTL corridors would experience substantial reduction in property values." Then proceeds to indicate that depending on the route chosen between 4 and 29 residences would be within 500 feet with some as close as 300 feet. I cannot imagine how these residences would not experience a negative impact to their property value. (4.11-7 and 8)

80-14

12. The EIS attempts to indicate that housing of temporary construction workers would be easier at the West Range vs. East Range site. This is not necessarily true, especially if Minnesota Steel is being constructed at the same time. (4.11-8)

80-15

13. The East Range site impacts fewer homeowners because the East Range site is a true brownfield site with existing infrastructure. This would reduce impacts on housing values due to construction. HVTL corridors would have to be widened and 49 residences are within 500 feet but the EIS states, "… it is unlikely that property values along these corridors would be affected by the additional HVTLs." in part because their values are already being impacted by existing HVTLs.

80-16

14. Consider that the economic impact is thought to be a 7 county region, or even throughout Minnesota, but areas that might be adversely affected are considered to be individual blocks within a Census Tract, or just along HVTL corridors and utility ROWs. This is inequitable.

80-17

15. Table 4.11.6 Summary of Impacts. This table claims, "Related realignment of CR7 by Itasca County may influence local housing development in vicinity" Here the EIS considers the realignment of CR7 'related' and a benefit yet does not include it as a cost. At the East Range site the lack of construction needed is considered a detriment where it should actually be a benefit.

80-18

16. The summary table 4.11.6 is not an accurate summary in that it represents the two sites (West and East Range) as being almost identical with the exception of the relocation of CR7 in the West Range plans and number of residences within rail alignments.

80-19

17. The text in section 4.11 points to numerous differences related to impacts to housing values as a result of construction and HVTL corridors, utility ROWs. The text does NOT point out that the East Range site is a brownfield site with existing utility and HVTL infrastructure and therefore more suitable for construction.

80-20

18. The socioeconomic analysis is incomplete. The Mesaba Project has to get its product to market and cannot do that without a HVTL that runs from northern Minnesota to the Twin Cities – St. Cloud area where the power is supposedly needed. This analysis does not cover the cost nor the impacts of creating an additional cross-state transmission line.

Responses

Comment 80-11
The proposed realignment of CR 7 was under consideration by Itasca County when the scope of the EIS was determined. Therefore, as stated in Section 1.6.4 (Volume 1), the impacts of that potential project were addressed in the EIS as a connected action under NEPA. Recently, Itasca County has reconsidered the proposed realignment of CR 7 because of state funding constraints. As stated in Section 2.3.1.2 (Volume 1) of the Draft EIS, if the realignment were not constructed by Itasca County, Access Road 2 would be connected to the existing alignment of CR 7. Excelsior is responsible for constructing the principal access road to serve the Mesaba Energy Project. The alignment of the proposed access road has been modified by Excelsior to avoid and minimize impacts to wetlands based on consultations between DOE and USACE. Section 2.3.1.2 has been updated in the Final EIS to describe the modified alignment, and the impacts of the alignment have been addressed for respective resource subjects in Chapter 4 (Volume 1).

Comment 80-12
This statement in the EIS has been correctly quoted in the comment.

Comment 80-13
Section 4.11.3.2 (Volume 1) states that 1 residence would be located within 300 feet of Excelsior's preferred alignment for a new HVTL (WRA-1 or WRB-1), and 3 other residences would be located within 500 feet of the alignment. Also, two residences would be located within 300 feet of Excelsior's alternative alignment for a new HVTL (WRA-1A or WRB-1A), and 5 other residences would be located within 500 feet. The section further explains that Excelsior's alternative route for HVTL Plan B (WRB-2A) would be located in an *existing* HVTL right-of-way for which 8 residences are located within 300 feet and another 21 residences are located within 500 feet. Therefore the number of residences affected by proximity to *new* HVTL corridors would be small, and Section 4.11.3.2 points out that Excelsior expects to compensate the property owners for the granting of easements.

The statement in the Draft EIS that residential properties along proposed new HVTL corridors would not likely experience substantial reductions in property values is supported by a recent study (Pitts and Jackson, 2007). The authors found that prior studies reported an average discount of 1% to 10% in property values when negative impacts of HVTLs are evident. However, although these impacts can extend to a quarter mile when views of lines and towers are completely unobstructed, the impacts were found to diminish with distance and disappeared at a distance of 200 feet if HVTL structures are at least partially screened by trees, landscaping,

Commenter 80 – Andrew David

General Comments Section 4.12 Environmental Justice

80-21

1. The region of influence for the environmental justice analysis is incredibly narrow and does not match the region of influence used for the socioeconomic analysis. Moreover, my guess is that neither would match the size of the region of influence for the true environmental impact of the Mesaba Project Phase I or Phase I and II combined. To wit, "The regions of influence for environmental justice are determined for each resource area by the potential for minority and low-income populations to bear a disproportionate share of high and adverse environmental impacts from activities within the project area." The EIS then goes on to define the project area as Census Tract 9810 for the West Range and Census Tract 140 for the East Range site. If the economic analysis can be extended to a seven county area why is the environmental justice analysis limited to a singe Census Tract for each site?

80-22

2. The environmental region of influence or environmental project area of the Mesaba Project is undoubtedly larger than a single Census Tract (here I am calling the environmental region of influence the geographic area that would receive atmospheric deposition). If this is true then the environmental justice analysis, which is charged with assessing the health effects, risk and rate of hazard exposure and potential cumulative adverse exposures, must take a larger geographic area into consideration.

80-23

3. Where is the health report that Excelsior Energy commissioned touting the 'health benefits' of the Mesaba Project. That information was not referenced in either the socioeconomic or environmental justice sections.

80-24

4. Northern Minnesota in general and Itasca County in particular is the center for the environmental region of influence. Residents of Itasca County will bear the burden of any increased health effects, any increased health risks or rates, or be affected by cumulative or multiple adverse exposures from environmental hazards. The electricity generated here, will be sent to the Twin Cities metro area where it is needed. Northern Minnesota does not need this electricity but is being asked – no required – to accept any health burden that its generation would impose. On that basis alone the environmental justice analysis should compare the environmental region of influence, which would include all of Itasca County, with the Twin Cities metro area being the control group. Then the environmental justice analysis can evaluate whether the Proposed Action or alternative would cause disproportionately high and adverse effects on minority or low-income populations in the region of influence.

Responses

Comment 80-13 (cont'd)
or topography. Therefore, some of the closest residences may experience adverse effects on property values depending upon the visibility of HVTL structures. Section 4.11.3.2 of the Final EIS has been revised accordingly.

Comment 80-14
As described in Sections 4.11.3.1 and 4.11.4.1 (Volume 1), respectively, the potential increase in demand by construction workers may have adverse impacts on the rental housing market for communities in the immediate vicinities of both sites based on the limited housing stock available for rent. No bias is implied in these discussions, which point out in both cases that construction workers would be required to seek housing in the larger local communities.

Comment 80-15
Thank you for your comment. It has been noted and will be included in the administrative record for this EIS.

Comment 80-16
See response to Comment 80-03, which addresses the same concerns.

Comment 80-17
With respect to the comment about CR 7, see Comment 80-11, which addresses the same concern. Regarding the comment about the East Range Site, DOE could not find specific text where the EIS concluded that the lack of construction needed would be a detriment.

Comment 80-18
The table in Section 4.11.6 (Volume 1) summarizes the impacts relative to the basis for impacts stated in Section 4.11.1.2 (Volume 1). Other comparative impacts for the sites are provided for respective resources in Chapter 4 (Volume 1), such as Aesthetics, Air Quality and Climate, Land Use, Community Services, Utility Systems, Safety and Health, Noise, and others, which have relationships to socioeconomic conditions.

Comment 80-19
Section 2.3 (Volume 1) describes the facilities to be constructed, including HVTLs and other utilities, for the West Range and East Range Sites. Section 4.14 (Volume 1) addresses utility systems, including HVTLs, on the West Range and East Range Sites.

Comment 80-20
The scope of analysis in the EIS for the generator outlet HVTLs associated with the West Range and East Range Sites included

Commenter 80 – Andrew David

Responses

Comment 80-20 (cont'd)
transmission requirements to the respective points of interconnection, the Blackberry and Forbes Substations, and the required equipment additions/upgrades to these substations. Section 2.2.2.4 (Volume 1) describes the infrastructure requirements for Phase I and Phase II of the Mesaba Energy Project and explains decisions to be made by the Midwest Independent System Operator (MISO) relating to HVTL requirements. The HVTLs required for the West Range and East Range Sites are described in Section 2.3 (Volume 1).

Subsequent upgrades to the regional transmission system to accommodate the injection of power from Phase I and Phase II into the Blackberry and Forbes Substations would be subject to MISO decisions, the results of which will be dependent upon other project developments and would likely require separate environmental review by MDOC and approval by the Minnesota PUC. However, MISO recently completed sensitivity studies based on load from Minnesota Steel and the CapX 2020 transmission project between Boswell and Bemidji substations which conclude that no upgrades to the regional transmission system are required in order to interconnect Phase I to the electric grid.

Comment 80-21
As stated in response to Comment 16-02, environmental justice impacts occur when a minority or low-income population would bear disproportionate adverse impacts from a proposed action. Therefore, regions of influence for the Mesaba Energy Project were selected in closest proximity to the project features (plant site, rail lines, access roads, and infrastructure) most likely to affect residents adversely. The demographic compositions of these regions of influence were compared to those of the larger populations (local townships and cities, respective counties, and the state) to determine whether minority or low-income populations might be affected disproportionately by the proposed action.

Commenter 80 – Andrew David

Responses

Comment 80-22
As stated in response to Comment 16-02, Section 4.17 (Volume 1) describes the risks to local populations from emission depositions. The heading for Section 4.17.2.3 (Human Health Risks) was inadvertently lost in printed copies of the Draft EIS. 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. Diamond Lake was considered representative of the nearest fishable bodies of water to the West Range Site receiving emissions from the plant. Also, cumulative impacts on air quality, deposition, and air inhalation health risks are described in Sections 5.2.2 and 5.2.3 (Volume 1) of the Final EIS.

Comment 80-23
The report identified in this comment (titled "Air Quality and Health Benefits Modeling: Relative Benefits Derived from Operation of the MEP-I/II IGCC Power Station") was filed in Minnesota PUC Docket Number E6472/M-05-1993 for the power purchase agreement, which is separate from the docket for Excelsior's Joint Permit Application. As noted in response to Comment 20-02, MDOC has stated that the power purchase agreement is not a subject of this EIS. The report compared the health effects of emissions from an IGCC power plant in the Iron Range to those of a comparably sized supercritical pulverized coal-fired power plant in central Minnesota and concluded that the IGCC plant would cause fewer adverse health effects than the pulverized coal-fired plant to generate the same baseload of electricity. It was not cited in the EIS, because MPCA requires applicants to address health risks using the agency's AERA protocol, which is contained in Appendix C (Volume 2) and summarized in Section 4.17.2.3 (Volume 1). Section 4.17 (Volume 1) was referenced in Section 4.12.4, Health Risk-related Environmental Justice Impacts. See also response to Comment 80-22.

Comment 80-24
As stated in response to Comment 16-02, the demographic compositions of the regions of influence for environmental justice (census units in closest proximity to the respective plant sites) were compared to those of the larger populations (local townships and cities, respective counties, and the state) to determine whether minority or low-income populations might be affected disproportionately by the proposed action. These demographic compositions are compared in Sections 3.12.2 and 3.12.3 (Volume 1). They indicate that the distributions of minority populations in the West Range and East Range census units closest to proposed project features are substantially lower than in the respective larger

Commenter 80 – Andrew David

80-25

1. The environmental justice analysis outside of construction sites, HVTL corridors and utility ROWs presented in this EIS is inadequate. The EIS looked at "… the potential for adverse health risks in a wider radius from respective project sites and corridors based on impact analyzed in Section 4.17, Safety and Health, and the assess the potential that an adverse health rise would affect a minority population, low-income population , or American Indian tribe at a higher rate than the general population." The term 'wider radius' was never defined and the only reference made was to effect that additional mercury deposition would have on subsistence fishing on Diamond Lake. There was no effort made to include any other health risks such as particulate matter, VOCs, NOx, SOx or other heavy metal contamination from airborne deposition, nor consider their impact either individually or as cumulative or multiple adverse exposures as required in the Method of Analysis.

80-26

2. Somewhere I heard a woman testify that the West Range site is within view of a proposed American Indian retirement home. If this can be substantiated, even if it has not been built but exists only as purchased property with a plan, it may trigger the low-income, minority or American Indian tribe provisions of the analysis.

80-27

3. On page 4.12-3 the EIS states that, "Mercury emission in Minnesota declined significantly (about 68 percent) from 1990 to 2000, and there is evidence that concentrations of mercury in Minnesota's fish have declined by about 10 percent, which is considered an encouraging response (MPCA, 2005)." Given this statement why would we want to go backwards towards higher levels of mercury emission? Especially since it appears that even significant declines in emissions have only relatively modest declines in the amount that is actually concentrated in fish. Clearly there is a long lag time between a decrease in mercury emissions and a decrease in mercury concentration in fish. This is consistent with the idea that mercury is a bioaccumulator that is not readily removed from the environment.

Responses

Comment 80-24 (cont'd)
census areas, counties, and the state. They also indicate that the distributions of low-income populations in the West Range and East Range census units closest to proposed project features are comparable to, or lower than, those in the larger local census tracts, the Arrowhead Region, and the United States as a whole. It is true that the Arrowhead Region generally has a higher distribution of low-income population than the state as a whole. However, in adopting the "innovative energy project" legislation that provided incentives for an undertaking like the Mesaba Energy Project (see Section 1.2 in Volume 1), the Minnesota Legislature specifically targeted the TTRA in part because of the economic challenges experienced there.

Comment 80-25
See response to Comment 80-22, which addresses the same concerns.

Comment 80-26
A Native American Tribal retirement complex is believed to be planned on property along the west shores of Twin Lakes, off Cherokee Road, south of US 169, about 3 miles southeast of the West Range IGCC Power Station footprint. The preferred HVTL route for the West Range Site would pass about 2/3 mile to the west of the property boundary of the planned complex. Potential effects on this proposed facility have been included in the Environmental Justice impacts in the Final EIS. Based on the exposure risks determined by the AERA analysis in Section 4.17.2.3, the retirement home would be situated farther away from the Mesaba facility than the adult and child residents with highest risk of exposure to hazardous emissions, which are located 1.2 miles away. The AERA analysis determined that the highest risk exposure scenario for these adult and child residents would be below the risk thresholds established by EPA for both cancer risk and non-cancer morbidity hazard. Therefore, it is concluded that the exposure risk to residents of the planned retirement home would also be below the EPA risk thresholds.

Comment 80-27
Thank you for your comment. It has been noted and will be included in the administrative record for this EIS. See response to Comment 1-01.

Commenter 81 – Jim and Steph Shields

From: James Shields [mailto:jx1@hotmail.com]
Sent: Wednesday, January 09, 2008 8:13 PM
To: Bill.Storm@state.mn.us
Subject: PUC Docket No. E6472/GS-06-668 DOE Draft EIS for the Mesaba Energy Project (DOE/EIS-0382D)

January 9, 2007

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

81-01 Carbon capture and sequestration is the main potential advantage of IGCC technology. The draft EIS states that CCS is not feasible or economically viable for the proposed Mesaba Energy Project. I would hope that the DOE would have the sense to build a demonstration IGCC plant closer to the coal, closer to where the power is needed, and especially closer to where sequestration is possible. If there is not a better place to build a DOE demonstration IGCC plant than the proposed Mesaba Energy site, then IGCC has no future and is not worth risking taxpayer money.

81-02 The Draft EIS does not reflect the importance of the Canisteo Mine Pit as one of the best trout fisheries in Minnesota.

81-03 Why does the Draft EIS use an air emission impact area of only 3 km? The impact area will be much larger and will also overlap with the emissions of MSI. In the final EIS, please include emissions from MSI and expand the impact area to include an area of at least thirty miles.

81-04 The Draft EIS states there is a need for the power from the Mesaba Energy Project. The Army Corp of Engineers says that is not true. Please include information indicating where the power is needed in the final EIS.

Thank you.

Jim and Steph Shields
Pengilly, MN

Responses

Comment 81-01
The potential for capturing CO_2 more efficiently is only one advantage of IGCC over other coal-fueled power plants. As stated in response to Comment 1-01, IGCC offers substantially lower emissions of pollutants than conventional coal-fueled power plants, which is why the technology was selected by DOE for co-funding under the CCPI Program. As stated in response to Comment 8-01, Section 1.2 (Volume 1) describes the Federal and state contexts for the Mesaba Energy Project and the basis by which the project would be located in the TTRA of northeastern Minnesota rather than in an area closer to coal mines or geologic formations conducive to sequestration of CO_2. See also response to Comment 4-01, which explains that CCS was not included in the Mesaba Energy Project as originally selected for the CCPI Program.

Comment 81-02
See responses to Comments 7-02 and 76-07, which address the same concerns.

Comment 81-03
The 3-kilometer radius was used for the cumulative health risk analysis for air emissions. It was conducted according to MPCA guidance, which specifies a 3-kilometer radius for facilities with stack heights below 100 meters. MSI's emissions were, in fact, included in the analysis in Appendix D2 of the Draft EIS. See responses to Comments 105-08 through 105-26, which addresses the revised AERA analysis. Results of the revised risk analysis are presented in Section 4.17 (Volume 1) and Appendix C (Volume 2) of the EIS.

Comment 81-04
See response to Comment 75-05, which addresses the same concern.

Commenter 82 – Ed Anderson

From: Anderson, Edwin A
Sent: Tuesday, January 08, 2008 12:59 PM
To: 'Bill Storm'; Richard Hargis
Subject: Mesaba Energy DEIS comments

Mr. Hargis and Mr. Storm,

Comments from Citizens's Against the Mesaba Project regarding the Mesaba Project Draft Environmental Impact Statement.

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

Submitted by: Citizens Against the Mesaba Project (CAMP)

Several emails with attachments will follow due to the size of the file. The attachments are CAMP's comments with regard to the DEIS as well as additional supporting information that will be important in properly addressing the environmental impact of this project.

I had previously asked each of you to reevaluate scoping comments that we feel are not adequately addressed in the Draft EIS. Because I have not had a response to this question, and because CAMP feels that many of these comments are appropriate, they have been submitted again. This includes comments of the Citizen Advisory Task Force, the MPCA, the Army Corps of Engineers, Citizens Against the Mesaba Project, and individual citizens.

82-01

I would hope that you find these comments important in your evaluation. We have worked hard to ensure that these comments are within the scope of the EIS and/or directly relate to information contained in the Draft EIS. Certainly comments from governmental agencies such as the MPCA should be critical to your evaluation. We expect that CAMP's comments will be properly and thoroughly reviewed in the Final EIS.

If for any reason you have difficulty receiving the forthcoming emails, please let me know. CAMP's comments will also be available on our website in a day or two at www.camp-site.info Please add this email as part of CAMP's Draft EIS comments.

Ed Anderson
Citizens Against the Mesaba Project

This message was secured by ZixCorp(R).

Responses

Comment 82-01
See response to Comment 7-01, which addresses concerns about scoping and the consideration of public comments.

Commenter 82 – Ed Anderson

CAMP's COMMENT RE: MESABA ENERGY PROJECT DEIS November 27, 2007
Prepared by Ed Anderson, Physician and Co-Chair of Citizens Against the Mesaba Project

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

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

82-02

For the past two weeks, CAMP has been reviewing the DEIS, and our overall reaction is disappointment. We're disappointed in the agencies that produced this document, and we're extremely disappointed in the process by which you have led us to believe that public input is important.

The DEIS is far from complete. The purpose of the scoping was supposed to ensure that the EIS is complete and to identify areas of local concern. Instead, it appears that the overall objective of this document is to minimize the adverse environmental impacts, push a federal policy for "clean coal", and facilitate a project that has no hope of ever realizing the DOE objectives outlined in the Clean Coal Power Initiative.

Many people in this room have spent inordinate amounts of time reading the JPA, researching the issues, and submitting comments during the scoping process. Agencies such as the Army Corps of Engineers, MPCA, and the MN DNR also submitted numerous comments over a wide variety of issues. These issues included Excelsior's unverified claims of need for power, site selection, water discharge and mercury deposition, air emissions, and the plant's impact on the CMP trout fishery and local recreation. Most of the comments have not been addressed at all, and others have been addressed inadequately.

For example; the JPA describes how the Canisteo Mine Pit (CMP) would be closed to recreational use and that the water and trout fishery will be ruined by concentrated discharge of cooling water. The DEIS does not acknowledge that the CMP is a trout fishery or even that it is used for recreation.

As the CMP becomes polluted, private wells and the municipal water supply for Coleraine and Bovey are at risk. The MDH Wellhead Protection study that describes the hydrologic connection between the municipal wells and CMP is not mentioned in this document.

Numerous comments were submitted regarding human health, and most of these comments came directly from a study commissioned by Excelsior in 2005. In Feb 2007, the NEJM published an excellent study showing that each 10 mcg/m3 increase in PM 2.5 increases the risk of heart attack and stroke by 70%. A large majority of physicians and nurse practitioners in Itasca County have submitted a letter expressing opposition to this project and concern for our patient's health and well-being. Excelsior's study clearly reveals the expected increase in illness and premature death due to Mesaba's air emissions, and those numbers are low given recent research in this field.

In contrast, the DEIS describes Electro-Magnetic Field (EMF) effects and gives a brief summary of cancer and non-cancer health hazard indices. But the majority of this text talks about rates of

Responses

Comment 82-02

As stated in response to Comment 75-03, all comments received during the Federal and state scoping periods were given thorough consideration by DOE and MDOC in establishing the scope of issues to be addressed in the EIS. All comments received on the Draft EIS are included in this volume with associated responses. Refer to comments from respective agencies relating to specific data presented in the EIS, including: Minnesota Historical Society (Commenter 48); USDA Forest Service (Commenter 49); NOAA (55-01); U.S. Department of the Interior (Commenter 57); MNDNR (Commenter 76); MDH (Commenter 84); MPCA (Commenter 105); EPA Region V (Commenter 111); and USACE (Commenter 116). These comments provide a fair measure of the EIS's sufficiency in addressing scoping comments relating to issues considered most important to the agencies charged with overseeing environmental and public health interests in the State of Minnesota.

See responses to: Comment 75-05 regarding the need for power; Comments 5-04 and 111-03 regarding the site selection process; Comments 7-03, 38-01, and 105-08 through 105-27 regarding potential health risks; and Comments 49-01 through 49-09 and 105-01 through 105-07 regarding air emissions.

Section 3.8.2.1 (Volume 1) discusses the trout fishery in the CMP (see also response to Comment 7-02 on the same subject). The proposed use of enhanced ZLD at the West Range Site would eliminate discharges to the pit as explained in response to Comment 6-01. Section 3.13.3.1 (Volume 1) discusses the use of the CMP for recreational fishing and boating. As stated in Section 4.13.3.2 (Volume 1), provided an acceptable exclusion/protection zone is established (for security purposes) around the Project's intake structure on the CMP and provided Phase I and Phase II of the Mesaba Energy Project is approved on the West Range Site, Excelsior intends to modify its request to close off the entire pit to recreational use. However, as discussed in response to Comment 75-04, this decision would be under the jurisdiction of MNDNR and/or other State agencies.

With respect to the comment about potential pollution of private wells and municipal water supply caused by discharges to the CMP, the planned use of ZLD at the West Range Site would eliminate the need to discharge cooling tower blowdown to surface waters, including the CMP, which would eliminate this concern (see also responses to Comments 11-01 and 116-13, which address the same concerns).

Commenter 82 – Ed Anderson

82-02 (cont'd)

obesity, hypertension, smoking, and drinking among people in MN, Itasca County, and St. Louis County. None of the important health issues are discussed in the DEIS. Excelsior actually did a better job of describing the adverse health impacts of their project than you have. In this area again, the DEIS is grossly inadequate.

These are just a few examples, and CAMP's formal comments will be submitted prior to the January 11th deadline.

82-03

Although we believe the DOE's objectives related to their Clean Coal Power Initiative are misdirected, they do appear to be clear. The DOC objectives are not quite as clear. The DOC mission statement includes "ensuring equitable commercial and financial transactions, reliable utility services, and advocating the public's interest before the PUC". The Mesaba Project does not meet any of the DOE & DOC objectives by any stretch of the imagination. We certainly don't feel that the DOC is advocating in the public's interest. This is the wrong project, and it's in the wrong place. The people here today deserve to have you take their concerns and comments seriously. We hope you'll show us that you really do value public input, and demonstrate that in the Final EIS.

Edwin A. Anderson, MD
Co-Chair Citizens Against the Mesaba Project

Responses

Comment 82-03
Section 1.5.2 (Volume 1) explains MDOC's responsibilities under the Minnesota Power Plant Siting Act, which provides the framework for the state EIS.

Commenter 82 – Ed Anderson

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

Submitted by: Citizens Against the Mesaba Project

82-04

Department of Energy bias:
CAMP respectfully suggests that the Department of Energy's (DOE) involvement in the EIS is biased and therefore the EIS cannot be relied upon as an objective analysis of the Mesaba Project's environmental impact.

The DOE has openly and publicly supported the Mesaba Energy Project on several occasions through different media sources. It is stated in the EIS in the Summary Section, DOE Purpose and Need; "DOE's purpose in considering the Proposed Action (to provide cost-shared funding) is to meet the goal of the CCPI Program (NETL, 2006b) by demonstrating the commercial readiness of the Conoco-Phillips E-Gas™ gasification technology in a fully integrated and quintessential IGCC utility-scale application. The principal need addressed by DOE's Proposed Action is to accelerate the commercialization of clean coal technologies that achieve greater efficiencies, environmental performance, and cost-competitiveness."

It has also supported the project with $36 million of public money as stated in Section 2.1.1.1 of the draft EIS. The DOE also remarks that it may continue to support the project through a federal loan guarantee program.

The Department of Energy has shown considerable bias toward the Mesaba Project and has ignored citizen and other governmental agency comments and concerns regarding the environmental impact. In the interest of moral responsibility to the citizens of this community and beyond, the Draft EIS should be disregarded in its entirety. A new document needs to be established without the biased influence of the DOE in order to adequately and objectively assess the environmental impact of the Mesaba Project.

82-05

DEIS inadequacy by excluding citizen and other governmental agency expert comments:
With respect to Minnesota Rule 7849.5220 Subpart 3. E. "a description of the effects of the facility on the natural environment, including effects on air and water quality resources and flora and fauna."

Responses

Comment 82-04
DOE's specific interests and basis for involvement in the Mesaba Energy Project are explained in Chapter 1 (Volume 1); specifically in Sections 1.2.1, 1.3.1, and 1.4.1 (Volume 1). DOE's responsibilities as lead Federal agency for the EIS under NEPA are explained in Section 1.5.1 (Volume 1).

Comment 82-05
See response to Comment 75-03, which addresses the same concern.

Commenter 82 – Ed Anderson

82-05 (cont'd)

It is clear throughout the EIS most of the disseminating information that was considered came from Excelsior Energy's Joint Permit Application and other agencies information such as the Minnesota Pollution Control Agency were ignored. The MPCA, MN Dept. of Health, Army Corps of Engineers and highly educated citizens submitted comments and suggestions that were not considered or included in this study. The Department of Energy and Minnesota Department of Commerce have a public duty to examine and consider all comments and suggestions put forward to come to unbiased conclusions in the EIS.

Mesaba Project should not qualify for Clean Coal Power Initiative:
In section 1.2 CCPI of the draft Environmental Impact Statement (EIS) one of the bulleted items to qualify for the Clean Coal Power Initiative (CCPI) is the Global Climate Change Initiative to cut greenhouse gas intensity 18 percent by the year 2012.

82-06

With the Department of Energy (DOE) readily acknowledging global warming issues and also acknowledging in Appendix A2 of the EIS that Carbon Capture and Sequestration (CCS) is not feasible for the Mesaba Energy Project (MEP), how can the MEP qualify as part of the CCPI program? And therefore how can the DOE justify providing $36 million in support of the program?

In the same section the DOE mentions aging power generating facilities that will have to be replaced. Yet nowhere in the EIS does it state what facilities will be shut down to validate the construction of the MEP. What power generating facilities will be shut down as suggested in section 1.2 of the EIS?

Plain and objective language (Minnesota Rule 7849.5300)
In the case of Minnesota Rule 7849.5300 Subpart 6. "Draft EIS. The draft environmental impact statement must be written in plain and objective language…"

82-07

It can be argued that the EIS was not written in plain and objective language. The language in the DEIS is not objective, conclusions are drawn with no information/data as to how the conclusions were reached, much of the document is vague with respect to how the Mesaba Project might expected to obtain environmental permits. This document is difficult if not impossible for environmental experts to decipher, and serves to further obfuscate and detract from the true intent and purpose of an environmental impact statement.

Certificate of Need:

82-08

Both the Department of Energy (DOE) and MN Department of Commerce (MDOC) have remarked in the draft EIS that Certificate of Need (CON) comments were not included because of the legislation passed (Minn. Stat. § 216B.1694) exempting the

Responses

Comment 82-06
Section 1.2.1 (Volume 1) states that clean coal technologies emerging from the CCPI program "…also contribute toward satisfying…" other incentives, including the Global Climate Change Initiative. However, the attainment of Global Climate Change Initiative goals is not a requirement for projects selected to demonstrate CCPI technologies. IGCC is a CCPI technology of interest to DOE based on its reduced emissions and improved environmental performance over conventional coal-fueled power plants. The technology is also more effective at facilitating CO_2 capture for potential storage, which is supportive of the Global Climate Change Initiative.

See response to Comment 4-01, which addresses the concerns about CCS and the CCPI Program. See response to Comment 9-02, which addresses the comment about shutting down other coal-based power plants.

Comment 82-07
As stated in response to Comment 24-01, to the extent that an EIS for a complex, advanced technology-based project such as the Mesaba Energy Project can be summarized briefly, the Summary at the beginning of Volume 1 attempts to do so. With respect to permits required, Chapter 6 (Volume 1) lists all relevant regulations and associated permits for the project. Also, environmental permits are discussed in Chapters 3 and 4 as associated with the resources to be protected by respective permits. To the extent that an EIS for a complex project can be "written in plain language" (40 CFR 1502.8), DOE and MDOC have attempted to do so. This volume (3) of the Final EIS contains responses to all comments submitted on the Draft EIS, including those from state and Federal agencies as noted in response to Comment 82-02. These comments provide a fair measure of the EIS's adequacy in presenting information in plain and objective language.

Comment 82-08
See response to Comment 75-05, which addresses the same concern.

Commenter 82 – Ed Anderson

82-08 (cont'd)

Mesaba Energy Project (MEP) from the CON. Yet Excelsior Energy is allowed to exert its claim for the need of 3000 to 6000 Mw of base-load power by 2015.

Why the double standard? CAMP submits that since the MEP has been exempted from the CON that the issue needs to be fully addressed according to Minnesota Ruling (MR) 7849.5300 Subpart 5. It states; "Matters excluded. When the Public Utilities Commission has issued a Certificate of Need for a large electric power generating plant or high voltage transmission line or placed a high voltage transmission line on the certified HVTL list maintained by the commission, the environmental impact statement shall not address questions of need, including size, type, and timing; questions of alternative system configurations; or questions of voltage."

Therefore, since the MPUC has not issued a CON, it can be argued according to MR 7849.5300 Subpart 5, that Excelsior Energy should be required to proceed with the CON regulatory process, or at the very least, the DEIS should clearly evaluate "questions of need, including size, type, and timing; questions of alternative system configurations; or questions of voltage."

82-09

<u>Canisteo water, recreation, and municipal aquifer risk.</u>
The Canisteo Mine Pit (CMP) is considered a national recreational attraction that includes, but is not limited to, a major trout fishery. The Minnesota DNR manages only 4 lake trout fisheries in the entire state. The CMP is one of these trout lakes and is highly valued because of this. Nowhere does the DEIS discuss how closing the CMP, (Excelsior Energy's intentions), will affect tourism revenues brought into the area (See separate document for details of revenue loss). The DEIS inadequately addresses the inherent danger of ground water and lake contamination by the planned concentrated water discharges, coal storage, etc. of the Mesaba Energy Project (MEP)*.

Minnesota Rule 7849.5220 Subpart 3. F. "a description of the effects of the facility on rare and unique natural resources"requires that this assessment take place. These two very important considerations need to be re-examined to determine the true effects of the MEP on water quality, especially as it related to the CMP trout fishery, municipal drinking water for Coleraine and Bovey, and the possible effects on Trout Lake.

<u>Submitted documentation regarding municipal aquifer risk:</u>
***Wellhead Protection Plan, Part I; Wellhead Protection Area Delineation, Drinking Water Supply Management Area Delineation, Well and Aquifer Vulnerability Assessment For The City of Bovey, February 8, 2007; James F. Walsh, Minnesota Department of Health**

Responses

Comment 82-09
See responses to Comments 7-02, 38-01, 65-01, 76-04, 111-08, and 116-49, which address the same concerns.

Commenter 82 – Ed Anderson

and

82-09 (cont'd)

Wellhead Protection Plan, Part I; Wellhead Protection Area Delineation, Drinking Water Supply Management Area Delineation, Well and Aquifer Vulnerability Assessment For The City of Coleraine, February 12, 2007; James F. Walsh, Minnesota Department of Health

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Need for Cost Analysis:

This comments is in regard to the criteria specified in "Minnesota Rule (MR) 7849.5220 Subpart 1. H. a cost analysis of the large electric power generating plant at each proposed site, including the costs of constructing and operating the facility that are dependent on design and site; Subpart 2. K. cost analysis of each route, including the costs of constructing, operating, and maintaining the high voltage transmission line that are dependent on design and route; Subpart 3. B. a description of the effects of construction and operation of the facility on human settlement, including, but not limited to, public health and safety, displacement, noise, aesthetics, socioeconomic impacts, cultural values, recreation, and public services; and Subpart 3. C. a description of the effects of the facility on land-based economies, including, but not limited to, agriculture, forestry, tourism, and mining."

Each one of the above mentioned rulings pertain to a "cost analysis" being completed to satisfy requirements of an EIS. There has been no such study performed to date.

82-10

The University of Minnesota – Duluth, Labovitz School of Business and Economics (LSBE), Bureau of Business and Economic Research, completed an "economic benefit" study. The research report is titled "The Economic Impact of Construction and Operating An Integrated Gasification Combined Cycle Power-Generation Facility on Itasca County" and was develop for the Itasca Development Corporation.

In the very first paragraph of the Executive Summary it states; "Mesaba One will be a privately funded power-generation facility…" To date no private investors have been found and several million dollars of public money has been used to develop the Mesaba Energy Project (MEP). Excelsior Energy's MEP has been selected to apply for federal loan guarantees up to $800 million, again "public dollars" not private investment. In addition Excelsior Energy has been granted tax-free incentives.

It is noted in the second paragraph Executive Summary "For this county-level model, Excelsior was not able to quantify what will actually be exclusively spent in Itasca County."

The very next paragraph acknowledges several inadequacies of the study; "IMPLAN modeling issues associated with small study areas like county-level

Responses

Comment 82-10

See responses to Comments 16-01, 41-01, 75-02, and 80-03 through 80-08, which address the same concerns.

Commenter 82 – Ed Anderson

impacts, as noted in the IMPLAN User's Guide, 2 include the following: A small area will have a high level of leakage. Leakages are any payments made to imports or value added sectors, which do not in turn re-spend the dollars within the region. Also important to consider: A study area that is actually part of a larger functional economic region will likely miss important backward linkages. For example, linkages with the labor force may be missing. Workers who live and spend outside the study area may actually hold local jobs."

The very last paragraph on page 13 states; "Readers are also encouraged to remember the BBER was asked to supply an economic impact analysis only. Any subsequent policy recommendations should be based on the "big picture" of total impact. A cost-benefit analysis would be needed to assess the environmental, social, and governmental impacts."

82-10 (cont'd)

Despite the cautions sited, many governmental agencies were mislead by the study with information that was supplied by Excelsior Energy, including the Minnesota Department of Commerce (MDOC) and the Department of Energy (DOE) when drafting the EIS.

MR 7849.5220 clearly states in several subparts that a "cost analysis" is required in determining outcomes for the EIS. It is also clear that the MDOC and DOE have not adequately addressed the issues pertaining to MR 7849.5220 above-mentioned subparts because no cost benefit analysis has been conducted. The DEIS goes into great detail with regard to the IMPLAN economic analysis. No cost analysis has been performed. (See also CAMP's "Economics of the Mesaba Energy Project".

It is not unreasonable to request that a cost analysis for the MEP to be included in the EIS. The Minnesota Rule requires that a cost analysis be performed. Public comments have requested a cost analysis, and CAMP has submitted a detailed analysis/rebuttal refuting the economic impact analysis study paid for by Excelsior. It is clear that these comments were ignored, but it is also clear that a cost analysis must be conducted according to MR 7849.5220.

The Cost of Coal:
It is stated in the EIS in the Summary Section, DOE Purpose and Need; "IGCC technology meets the goals of the CCPI by utilizing an estimated 240-year domestic supply of reliable, low-cost coal in an environmentally acceptable manner."

82-11

Throughout the EIS the cost of coal is referred to as "low-cost", "clean", "affordable", "reliable".

The terms used to describe coal in the EIS are inaccurate. The following are just a few examples pertaining to costs of the MEP that are not in the EIS. The costs of health related costs are not included in the total cost per MW and could be attained

Responses

Comment 82-11
See responses to Comments 12-02, 53-04 and 75-08, which address concerns relating to CCS and the availability of coal. DOE's stated goal for the Carbon Sequestration Program is to develop fossil fuel conversion systems that offer 90 percent CO_2 capture with 99 percent storage permanence at less than a 10 percent increase in the cost of energy services by 2020. Achieving that goal requires that incremental milestones will be met through research and demonstration projects. By demonstrating IGCC technology, the Mesaba Energy Project offers a step toward the goal of the Carbon Sequestration Program. However, it should be recognized that the project has been selected for demonstration under the CCPI Program, not the Carbon Sequestration Program.

Commenter 82 – Ed Anderson

by conducting a cost analysis study, which is required by Minnesota Rule 7849.5220. The costs of Carbon Capture and Sequestration (CCS) are not included in the total cost output. This is acknowledged in the EIS Appendix A2. The costs of transmission upgrades by other utilities are not included in the total cost. It has been demonstrated in the MPUC rulings that the cost of energy output by the Mesaba Energy Project (MEP) is not "low-cost", therefore cannot be deemed "affordable". Since the MEP is a demonstration project it can hardly be defined as "reliable".

The DOE also comments on supposed 240-year supply of coal. Not all coal is attainable, and to continue to comment on a long-term coal supply is misleading and inaccurate.

82-11 (cont'd)

I wish to draw your attention to a study performed by the German research organization Energy Watch group*. Another study completed by the University of Stanford comes to the same conclusions. The results of these studies show that with the attainable coal reserves peaking in 2025, the cost of coal will increase dramatically as coal reserves become harder and harder to attain making the terms "low-cost", "affordable", "cheap", "clean" and other labels that favor the coal industry inaccurate and outright false.

In Appendix A2 the DOE readily admits that the proposed project's Carbon Capture and Sequestration (CCS) plan is not economically feasible. The DOE states expectations of Integrated Gasification Combined Cycle (IGCC) plants to offer 90% carbon capture with 99% permanent sequestration at less than 10% increase in cost. The cost of electricity from the proposed MEP is currently evaluated at 10-30% higher without CCS. With CCS not only does the cost per kW increase dramatically, the efficiency of the plant is reduced by up to 30%. The DOE's cost increase expectation of less than 10% with CCS is inaccurate.

The real cost of the MEP needs to be re-examined with the above-mentioned issues.

<u>Certificate of Need:</u>
The MDOC has the legal right to request a Certificate of Need under Minnesota Rule 7849.7080:

82-12

7849.7080 APPLICANT ASSISTANCE. "The commissioner of the Department of Commerce may request the applicant for a certificate of need or for certification of a HVTL to assist in the preparation of an environmental report. Upon request, the applicant shall provide in a timely manner any unprivileged data or information to which it has reasonable access and which will aid in the expeditious completion of the environmental report."

Responses

Comment 82-12
See response to Comment 75-07, which addresses the same concern.

Commenter 82 – Ed Anderson

82-12 (cont'd) | **In the interest of the providing a complete report for the Mesaba Energy Project's EIS, the MDOC should request a certificate of need.**

Responses

Commenter 82 – Ed Anderson

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

Submitted by: Citizens Against the Mesaba Project

82-13

1. Carbon Capture and Sequestration (CCS) is arguably the main potential advantage of IGCC technology. Excelsior Energy only added their CCS "plan" when it became politically necessary to do so. MPUC Chair Koppendrayer has stated "You're in the wrong place." The DEIS 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 if it has virtually no hope of realizing the main theoretical advantages of the technology? Given Minnesota's plan to reduce greenhouse gas emissions by 15% by the year 2015 and 80% by 2050, why would we allow a project to go forward that would be the state's 2nd largest polluter of CO2 and has no realistic hope of CCS?***

82-14

2. Excelsior Energy's plan calls for the Canisteo Mine Pit to be closed to recreational use. The original Joint Permit Application outlined how this extraordinarily clear trout fishery would be ruined by concentrated discharge of cooling tower blowdown water. The appeal of the West Site for Excelsior is the availability of water that is not in the Lake Superior Watershed making it possible to discharge more mercury into our local waters. The DEIS does not reflect the importance of the CMP for local recreation. Excelsior continues to confuse the issue by discussing alternative water discharge plans based on theoretical future changes in water discharge permitting. 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 waters when technology exists to prevent this pollution completely?

82-15

Excelsior states that the Mesaba Project will not contribute additional mercury to the water discharge. Although they have repeatedly made this misleading statement, the reality is that the discharge water will carry highly concentrated levels of mercury, sulfates, and dissolved solids into Canisteo Mine Pit and/or Holman Lake and the Mississippi River. ***Given the complex relationship of mercury in an aquatic environment, shouldn't the DEIS give accurate detail related to mercury discharge and subsequent impact? Why would the DEIS continue to repeat some of the same misleading statements given by Excelsior regarding mercury discharge? Why would the DEIS use an impact are of 3km when the mercury deposition will affect 720 lakes over 340 square km?***

What is the health impact related to the 487,000 fish harvested from those lakes? Please address this health impact, especially as it relates to children and women of childbearing age. The DEIS should also address this impact relative to the information in Excelsior's JPA regarding the increased risk of cardiovascular disease in men even with low level chronic mercury exposure.

82-16

4. Adverse health consequences of the Mesaba Project are of significant local concern. Excelsior's early information to the MPUC in 2005 outlined significant negative health impacts related to air quality and plant emissions. These problems have been outlined during the Citizen's Advisory Task Force, in a letter to the MPUC signed by a majority of

Responses

Comment 82-13
The potential to capture a concentrated stream of CO_2 is only one potential advantage of IGCC technology. IGCC provides substantial environmental advantages over conventional coal-fueled power plants by reduced emissions of criteria air pollutants (including oxides of nitrogen and sulfur) as well as mercury and other hazardous air pollutants, which is why it is a technology of interest to DOE's CCPI Program. See response to Comment 4-01, which addresses the concern about CCS.

Comment 82-14
See responses to Comments 7-02, 76-04, 82-02, 111-08, and 116-49, which address the same concerns.

Comment 82-15
See responses to Comments 6-01, 38-01, and 42-01, which address the same concerns.

Comment 82-16
See response to Comment 7-03, which addresses the same concern.

Commenter 82 – Ed Anderson

82-16 (cont'd)

Itasca County physicians and nurse practitioners, and in citizen comments during the DEIS scoping. The DEIS discusses EMF health concerns, gives statistics related to the percentage of the population that is overweight, smokes, drinks, has hypertension, etc. However, the DOE/DOC ignores the real issue, which is the significant and expected increase in mortality and morbidity (death and illness) should this plant be built. The New England Journal of Medicine recently published a study outlining the 70-80% increase in heart attack and stroke for every 10 mcg/mm3 increase in PM 2.5 (See attached NJM article) ***Why does the DEIS fail to address the negative health consequences directly related to the Mesaba Energy Project?***

82-17

5. The DEIS lists "need" as a benefit of the Mesaba Project based on Excelsior's claim of regional baseload power need in the future. The Army Corps of Engineers and many citizens have challenged these claims, yet the DEIS then goes on to dismiss public comments refuting Excelsior's claims of "need". ***Why would the DEIS ignore valid arguments contrary to Excelsior's unproven claim of need, yet list Excelsior's claim of need as a benefit of the Project?***

82-18

6. The MPUC doesn't believe that the Power Purchase Agreement is in the public interest, as Excelsior's energy will be too expensive and the Project carries excessive risk. ***Why does the DEIS indicate the MPUC will determine the public interest of this project, then disregard the MPUC findings/recommendations and instead reference Excelsior's press-release talking points in support of the Project?***

82-19

7. The DEIS cites Excelsior's claims of economic benefit based on a single limited and poorly conducted study of economic impact that grossly overstates the Mesaba Project's economic impact. The DEIS then dismisses strong arguments against the claimed economic impact of this study stating that this will be evaluated by the MPUC. The MPUC has determined that a Power Purchase agreement with Excel Energy is not in the public interest due to the expense and risk to ratepayers. No cost benefit or total impact studies have been performed ***Why were citizen comments dismissed yet Excelsior's unfounded claims included? Why is the MPUC referenced as evaluating the economic merits of the project only to have that evaluation ignored?***

82-20

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

82-21

9. The DEIS 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" Minnesota Power's emissions reductions and negate this improvement to our air quality?***

82-22

10. The East Range site (Hoyt Lakes) carries less environmental impact than the West Range site. Although the air emissions, cost issues, and risk would be roughly the same, the West Site is more advantageous for Excelsior primarily because they can discharge higher mercury concentration water and might have greater ease obtaining land in the proposed footprint. There are many environmental disadvantages to the West Site. ***Why does the DEIS appear to give preference to the more environmentally sensitive site just because of cost advantage for the developer?***

Responses

Comment 82-17
See response to Comment 75-05, which addresses the same concern.

Comment 82-18
The PUC's decisions regarding a Power Purchase Agreement are separate from, though related to, its decisions on the Joint Permit Application. As stated in Section 1.3.2 (Volume 1), the EIS for MDOC addresses the proposed action to approve, or disapprove, the Joint Permit Application. As stated in Section 1.3.1 (Volume 1), the EIS for DOE addresses the proposed action of providing co-funding for a project selected competitively under the CCPI Program.

Comment 82-19
See responses to Comments 7-01, 16-01, 41-01, and 82-18, which address the same concerns.

Comment 82-20
See responses to Comments 7-02, 76-04, 111-08, and 116-49, which address the same concerns.

Comment 82-21
See response to Comment 3-02, which addresses the same concern.

Comment 82-22
Although the West Range Site has been identified as Excelsior's "preferred" site for the Mesaba Energy Project for reasons stated in Section 2.1.2.1 (Volume 1), the EIS addresses the potential impacts of the project at both the West Range and East Range Sites objectively. Neither MDOC nor DOE have stated a preference for the project site. See also response to Comment 6-01 regarding the use of enhanced ZLD at the West Range Site.

Commenter 82 – Ed Anderson

82-23

11. Excelsior Energy did not perform a thorough investigation of the environmental permitting process as it relates to their original East Range site. Excelsior now says it would be too expensive to eliminate water discharge, so the West Site is preferred. This is because they apparently didn't realize the East Site is in the Lake Superior watershed and has a lower mercury standard. If this is the case, then they really don't have an "alternative" site, which is required. It may also mean that they don't even have a preferred site as their current plan won't allow permitting for water discharge. The current plan seems as poorly thought out as the first as they now need to rely on a "variance" or a possible future TMDL system which does not currently exist. The DEIS could give scenarios on possible future options if regulations change, but the DEIS should first outline how Excelsior plans to meet permit requirements under current conditions.

82-24

12. Cumulative air quality effects are poorly outlined in this DEIS. For example, MSI already exceeds the Class I (BWCAW) limit for NOx and is supposed to buy NOx offsets to meet its permit requirement. It is unlikely these offsets will be able to be purchased. Since Mesaba is behind MSI in the permit line, Mesaba must have a NOX emission of zero, or purchase 100% of their NOx offset in addition to what MSI is supposed to buy. The DEIS makes no mention of this problem. *Why does the DEIS have such gross omissions with regard to cumulative effects?* Why does the air quality modeling give no input assumptions/data? *Why does the air quality information use modeling that gives low/conservative estimates?*

82-25

13. The only way the Mesaba Project can meet environmental permitting criteria for water discharge (East or West site) is to totally eliminate water discharge. The DEIS gives a brief superficial description of this process. *The Final EIS should clearly indicate that total elimination of water discharge is necessary to comply with environmental regulations, and should give a detailed description of the Zero Liquid Discharge Process to be used. Only then can the actual environmental impact of the Mesaba Project be assessed as it relates to water quality.*

Responses

Comment 82-23
The site selection process undertaken by Excelsior for the Mesaba Energy Project is described in Appendix F1 (Volume 2) and summarized in Section 2.1.2.3 (Volume 1). MDOC has determined that Excelsior met the requirements for a preferred and an alternative site in compliance with Minnesota Rules 7849.5220. Enhanced ZLD treatment is specified for both the East Range and West Range sites, which eliminates permitting obstacles associated with water discharge. Enhanced ZLD was originally proposed for the East Range Site because the site was located in the Lake Superior Basin watershed.

Comment 82-24
See response to Comment 19-02, which addresses the same concern. Modeling assumptions and input data used in the Draft EIS are provided in Appendix B (Volume 2) and were based on an FLM accepted air modeling protocol for the Mesaba Energy Project air permit application (see Section 4.3.1.1).

Comment 82-25
The Final EIS has been updated to reflect the project proponent's announced decision (to be included in a revised permit application to MPCA) to utilize an enhanced ZLD system at the West Range Site, comparable to the system proposed for the East Range Site, which would eliminate discharges of process water and cooling tower blowdown into any water bodies. Also see response to Comment 6-01, which addresses the same concern.

Commenter 82 – Ed Anderson

November 25, 2007 FIRST DRAFT
Mesaba Energy Project Draft EIS
CAMP work-group/DEIS review

REVIEW of the DEIS
Chapters 1 & 2

Comments:

Chapter One

	Page	Error	Comment
82-26	1-8	Provide 3000-6000 MW of needed generation in Minnesota.	Where is this number derived from? Xcel, the largest utility in the state has indicated that it will need far less capacity and it can get this from wind and renewable.
82-27	1-8	Bottom of page: economic benefit. The Economic Impact Analysis completed by the Bureau of Business and Economic Research at the University of Minnesota, Duluth (BBER, 2006) was a purely theoretical study based upon project cost.	The study is not relevant or accurate as it ignored the inputs to the project, namely coal, gas and specialized maintenance costs and services which must come from outside of Minnesota. The real ongoing economic impact will be less than $15 million per year in NE Minnesota.
82-28	1-23	Citizens Advisory Task Force is discussed.	The concerns about the project raised by many of the Task Force are not mentioned.

Chapter Two

	Page	Error	Comment
82-29	All	General	There are many errors and statements that are not entirely accurate or misrepresent what will really happen. Is this a consistent pattern of minimizing the downsides of the project and promoting the upsides, often in an inaccurate manner?
82-30	2-6	Table CO2 should be 10,600,000 / 9,400,000 (off by a factor of a million tons per year!)	Is this part of the pattern of minimizing the downsides of the project ?
82-31	2-21,	CO2 capture	This underestimates the length of pipe

Responses

Comment 82-26
See response to Comment 75-05, which addresses the same concern.

Comment 82-27
See response to Comment 16-01, which addresses the same concern.

Comment 82-28
Section 1.6.2.2 (Volume 1) describes the Citizens Advisory Task Force established by the PUC for the Mesaba Energy Project. As stated, the Task Force was not able to reach a consensus of opinion on a preferred site for the project. Also, as stated in Section 1.6.2.2, the Final Comments and Recommendations of the Task Force are posted on the MDOC Mesaba Energy Project Docket website: http://energyfacilities.puc.state.mn.us/Docket.html?Id=16573.

Comment 82-29
DOE has addressed discrepancies where they have been specifically identified in comments throughout this volume.

Comment 82-30
See response to Comment 1-01, which acknowledges and corrects the error relating to the presentation of CO_2 emissions in tables.

Comment 82-31
See responses to Comments 1-02 and 4-02, which address the same concerns.

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82-31 (cont'd)	2-22	Pipelines of: 265 miles to saline formations in Eastern ND and; 405 miles to sequestration areas mentioned	required. The route to saline formations in Eastern ND would more likely be closer to 400 miles and the route to the old oil fields 550 to 750 miles (if it is required to go up to Saskatchewan to handle the volume of CO2. Further, the DEIS assumes a direct route following a road or railroad. A CO2 pipeline would most likely be more circuitous as it may not be allowed near residences due to the danger from the heavier than air odorless poisonous gas CO2.
82-32	2-21, 2-22	CO2 capture	Many details are not included about the CO2 capture, energy required, energy required to pump the CO2 from 400 to 750 miles, etc. Further, if CO2 Capture is not required, Mesaba will be the second largest source of CO2 in the state. It will increase rather than solve the problem.
82-33	2-8	2.1.2.1 West Range site has lower electrical losses	This is only to the connection substation. Further this cannot be stated as a line loss study has not been done.
82-34	2-39, 2-49	Petroleum Coke is mentioned as a fuel source 50/50 with sub-bituminous coal	Petroleum Coke contains many toxic metals (including Vanadium and others), that are not listed in the EIS here or elsewhere, If burned at a 50/50 blend, these metals and the resulting compounds, e.g. harmful Vanadium Pentaoxide and others) could be part of the air, water and land emissions and should be considered in the EIS. The EIS should include all toxic emissions expected from the operation.

Responses

Comment 82-32
See responses to Comments 1-02 and 4-03, which address the same concerns.

Comment 82-33
In Section 2.1.2.1 (Volume 1), West Range Site and Corridors, the West Range Site was stated to have reduced electrical losses due to the fact that the West Range Site would have shorter power transmission distances than the East Range Site to the respective points of interconnection.

Comment 82-34
Air toxic emissions were calculated based preferentially on test results from the Wabash River Coal Gasification Re-Power Project (Wabash River Plant), where available, and then adjusted when appropriate for the worst-case feedstock for Mesaba (as discussed in the Air Permit application on p.80 and Appendix B). The Wabash River Plant test data included operational periods on both coal and 100 percent petroleum coke, and the hazardous air pollutant emissions presented in the Draft EIS represent the worst-case emissions across all feedstocks. For some compounds, data was not available from the Wabash River Plant; hence AP-42 values for coal combustion were used. In these cases, no data is available for petroleum coke. However, testing for vanadium in syngas was conducted at the Wabash River Plant where the vanadium concentration in syngas was found to be below the detection limit of the EPA Method 29 test, even during operation using petroleum coke. While petroleum coke does contain significant quantities of vanadium, its volatility is relatively low and therefore is expected to preferentially partition to and be immobilized in the slag rather than emitted into the air. This expectation and the results from the Wabash River Plant tests are supported by mass balance studies of trace substances conducted at the Louisiana Gasification Technologies Inc. EGas™-based IGCC facility in Plaquemine, Louisiana where subbituminous coal was used as the process feedstock. Such tests showed that the enrichment factor for vanadium in the slag relative to that in the raw coal was similar to the enrichment factor for other non-volatile metals like cobalt and manganese – elements for which recovery was shown to be nearly 100 percent (Williams, et al., 1996).

Fuel type does not affect the level of toxic discharges to water or land. Water discharges have been eliminated, and experience at the Wabash River Plant demonstrates that the solid slag byproduct is nontoxic (i.e., it is below toxicity characteristic leaching procedure limits), whether the feedstock is coal, petroleum coke, or blends thereof.

Commenter 82 – Ed Anderson

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

Submitted by: Citizens Against the Mesaba Project

82-35

Paragraph 3.2.1.2

The statement is made "with an average tree height between 60 and 80 feet." With no data to back up the statement it appears this is intended to imply that the forest will hide the view of the plant. What is the height of the plant? What is the height of the smoke stack? How visible will these be from neighboring communities and local highways?

82-36

Paragraph 3.3.1

It is stated that the "closest residence to the power plant footprint in the West Range Site is located 1.1 kilometers (0.7 miles) away. How many residences are located within 8 kilometers (5 miles) of the power plant footprint? This is more significant than how close it the closest residence.

82-37

Table 3.3-5 Pertinent Air Quality Regulations, Page 3.3-12

Minnesota Air Pollution Episodes Rule
Quoting "Since the Mesaba Generating Station will have allowable emissions of greater than 250 tons per year on any single regulated pollutant, the plant is subject to Minnesota's Air Pollution Episodes rules." 250 tons per year is equal to 500,000 pounds of any single regulated pollutant! Where are all those pollutants going? How are they going to deal with all of those pollutants?

82-38

The entire section on Air Quality Regulations talks about limitations on the facility with regard to emissions and how they will deal with compliance. There is no information with regard to existing similar facilities and their compliance with these regulations. It seems this would be more informative than all the statements of how this new plant will conform.

82-39

3.4 Geology and Soils

The majority of this section is a discussion of the various bedrock and soils of the area. In section 3.4.5.2 is a discussion of the soils that will be found in the paths of the high voltage transmission lines and the rail corridor. It appears to be a sensitive area and would probably require extensive excavation in order to support a rail line.

82-40

In section 3.4.6.2 the discussion of Prime Farmland again notes that the West Range Site for the project is principally located on Prime Farmland, Prime Farmland if drained, or

Responses

Comment 82-35
Section 4.2.2.1 (Volume 1) provides a discussion of the stack height, and the potential for aesthetic impacts during construction and operation. Generally, the power plant structures tend to be either tall and narrow, or short and wide. The tallest structure at the plant site would be the stack serving the TVB, which would have a diameter of 5.5 feet and a height of 210 feet above grade. The top of the structural steel supporting the gasifiers (and through which the TVB stack emanates) is approximately 200 feet above grade and about 140 feet long and 60 feet wide; however, at this time there are no plans to enclose this structure. The third, fourth and fifth highest structures would be the rod mill feed bins (155 ft long x 25 ft wide x 150 ft above grade), the building enclosing the steam turbine generator (approximately 170 feet long x 140 wide x 90 feet above grade), and the heat recovery steam generators (approximately 110 feet long x 55 feet wide x 90 feet above grade), respectively. Other structure heights and diameters are found in Table 4.2-1.

A GIS visibility analysis was created for the Draft EIS, which used topography and tree height to determine which locations would have views of the generating station emission points. The results of the analysis can be found in figures 4.2-1 and 4.2-2 for the proposed West Range and East Range Sites, respectively. In each location, high elevation points and lake borders would have the highest concentration of views of the stacks. Sections 4.2.3.2 and 4.2.4.2 (Volume 1) describe the potential for impacts from operation. The tailings pile at the Hill Annex Mine State Park, the western shores of Reiley Lake, and the southern border of CMP would have the least obstructed views of the stacks at the West Range Site. At the East Range Site, the Mesaba Generating Station, in addition to Syl Laskin plant, would be visible from most vantage points along the south shore of Colby Lake, the southwest section of Hoyt Lakes and Colby Ridge.

However, plant visibility would depend on both seasonality and weather conditions, with the greatest visibility occurring in the winter due to loss of leaves on trees and cold-weather condensation of water vapor.

Comment 82-36
The intent in Section 3.3.1 (Volume 1) is to identify the closest residences and other sensitive receptors to the plant footprint within the region of influence. Residences closest to the respective proposed plant sites and utility corridors are further indicated on four figures in Section 3.2.2, and demographic data showing population and housing within local jurisdictions are described in Section 3.11. However, of more

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Responses

Comment 82-36 (cont'd)
importance to all residents within the region of influence is the potential for air quality impacts and emissions-related health impacts. Section 4.3 (Volume 1) has been updated based on the latest modeling protocol and describes the air quality impact analysis for the West and East Range Sites based on protocols required by EPA and MPCA. The AERA is described in Section 4.17.1 (Volume 1) and Appendix C (Volume 2). AERA protocols are intended to protect residents, farmers, and subsistence fishers, even in areas where these receptors are not present. While there are numerous residences within the 5-mile radius mentioned by the commenter, the AERA analysis shows that impacts to those residences would be well below applicable thresholds for health risks established by EPA and MPCA.

Comment 82-37
Although the Mesaba Energy Project would be a major source of certain air emissions according to the PSD regulations under the Clean Air Act and would be subject to the Minnesota Air Pollution Episodes Rule, the emissions would be lower than conventional coal-fired power plants because of its IGCC technology. The impacts of air pollutants that would be emitted into the atmosphere, and mitigation measures that would be taken to reduce impacts, are discussed in Section 4.3 (Volume 1) of the Final EIS.

Comment 82-38
The section on regulations in Section 3.3 (Volume 1) serves to provide an overview of the major Air Quality regulations that may be applicable to the IGCC Power Station and that drive major issues related to the operation of the power plant and its potential impact on the environment. Information on existing similar facilities and their compliance with these regulations in the context of the EIS is provided in Section 5.2.2, Cumulative Impacts (Volume 1), of the EIS. A comparison of the Mesaba Energy Project's emissions with those of existing IGCC and state-of-the-art conventional coal-fired power plants is provided in Section 2.2.3.1 (Volume 1).

Comment 82-39
Construction of the HVTL corridor and rail line would require soil disturbance and excavation. Potential impacts to the soils from increased erosion at the West Range Site are discussed in Section 4.4.3.1 (Volume 1). Where construction would cross peat or muck deposits, special construction procedures would be implemented to reduce the soil disturbance. These are also discussed in Section 4.4.3.1.

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82-40 (cont'd) Farmland of Statewide Importance. This would appear to be another reason for **NOT** locating the facility in this location.

82-41 The final section, 3.4.7 Suitable Formations for Geologic Sequestration of Carbon Dioxide, basically concludes that the only current solution is building a pipeline to transmit carbon dioxide to western North Dakota for sequestration in the Williston Basin.

Responses

Comment 82-40
Soils classified as "Prime Farmland" and "Prime Farmland, if Drained" are ubiquitous in Itasca County. As indicated in Table 4.4-1, the Mesaba Power Generating Station would remove approximately 153 acres of Prime Farmland out of approximately 1,727 acres of total construction disturbance area. The amount of Prime Farmland occupied by the Power Station is very small in comparison with the total amount of Prime Farmland within the watershed (approximately 849,000 acres).

Comment 82-41
Section 5.1.2 (Volume 1) provides a more extensive discussion of potential geologic sequestration prospects for the Mesaba Energy Project during commercial operations.

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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

Submitted by: Citizens Against the Mesaba Project

The following comments refer primarily to Section 3 of the Draft EIS:

82-42 **3.5.1.1 "As most of the taconite mining in the area has ceased," only Butler was a taconite mine and ceased operations in1985**

82-43 **3.5.7 Prairie River….Flow data collected 967 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 this 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 or other infrastructure requirements. In dry years, the Prairie River flow is extremely low. How will this affect the Mississippi River?**

82-44 **Figure 3.15-1 shows West Range Site at KELLY LAKE?**

82-45 **3.16-2 cites 2 closed landfills, doesn't mention Nashwauk or Nashwauk Township sites.**

82-46 **3.15.1.1 cites commercial airport in Grand Rapids, iron ore being shipped out of Duluth and a four lane highway system.**

82-47 **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. What is the solution to this problem?**

82-48 **3.13.4.1 School Districts; does not include Bug-Oh-Nay-Ga-Shig, Hill City or Big Fork.**

82-49 **3.11 Socioeconomics for West Range were based on Iron Range Township, City of Taconite, AND SEVERAL OTHER JURISDICTIONS…..This may not adequately reflect the overall region, and may in fact significantly skew the numbers.**

82-50 **Table 3.11-1 shows Itasca County population has increased since 1980? This appears to be incorrect. Population decline started early in 1981 when part of Butler was not called back after shutdown…..this further declined came Butler shut down in 1985 .**

82-51 **3.5.1.3 Site is potentiometric high? And 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**

Responses

Comment 82-42
The sentence in Section 3.5.1.1 (Volume 1) has been changed to: "As mining ceased in areas along the Iron Range, and associated dewatering operations ended, many of the pits have filled with water, some to the point that they have connected with adjacent pits."

Comment 82-43
The water withdrawn from the river would be subject to the CWA rule 316(b) criteria for cooling water intake structures, which specifies that the maximum amount of water that can be withdrawn is "5 percent of the mean annual flow or 25 percent of the 7Q10, whichever is the lesser." The estimate of 5.5 cubic feet per second (or 2,468 gallons per minute) was based on 25 percent of the 7Q10 flow (22 cubic feet per second) of the Prairie River (found to be less than 5 percent of the mean annual flow of 319 cubic feet per second). The 7Q10 flow was calculated based on daily data collected by Minnesota Power (MP) at the Prairie Lake Dam between 1998 and 2004. Water would not be withdrawn from the Prairie River during Mesaba Phase I. During Mesaba Phases I and II, the amount of water that could be withdrawn from the Prairie River depends on how much water can be provided from other sources (i.e., the CMP); however, 5.5 cubic feet per second represents the maximum withdrawal limit from Prairie River for the Mesaba Generating Station. See responses to Comments 76-09 and 76-12, which discuss water balance and impacts to Prairie River, respectively.

Water would be directed from the Prairie River to the LMP complex via minimal infrastructure – the proposed gravity drain connecting the Prairie River to the LMP would be 18 inches in diameter and approximately 200 feet in length. For more information see subsection "Prairie Water Intake" under Section 4.5.3.1 (Volume 1).

Based on readings from a USGS gauge located in Grand Rapids, MN (upstream of the confluence of the Mississippi and Prairie Rivers), average flows that occurred between 1884 and 2007 were approximately 1,570 cubic feet per second. The maximum withdrawal that would be allowed from the Prairie River (5.5 cubic feet per second) represents less the 0.5 percent of the average flow at the Mississippi River. Thus, the impact to the Mississippi River from withdrawing water out of the Prairie River to the LMP is considered minor.

Comment 82-44
Figure 3.15-1 (Volume 1) is correct. The text "Kelly Lake" is referring to the rail stop and not the project site.

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Responses

Comment 82-45
Section 3.16.2 (Volume 1) refers to a single closed landfill, which is at the current location of the Itasca County Solid Waste Transfer Station. The MPCA website of closed landfills does not list a closed landfill in Nashwauk.

Comment 82-46
Section 3.15.1.1 (Volume 1) has been revised to delete reference to Grand Rapids – Itasca County Airport serving commercial aviation (no longer applicable). Statement regarding the four-lane highway system is a general statement remarking on the interconnectedness of the state's major northeastern communities – new text "ranges from two-lane roads to four-lane, divided highways" has been added to broaden the description of roads. However, the Duluth Seaway Port Authority continues to report tonnage of iron ore and concentrates shipped.

Comment 82-47
See response to Comment 76-01, which addresses the same concern.

Comment 82-48
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 82-49
As explained in Section 3.11.1.2 (Volume 1), socioeconomic and demographic data for the West Range Site are included for the City of Taconite and Iron Range Township, which are the closest local jurisdictions to the proposed site boundary. Data are additionally included for Census Tract 9810, Block Group 3, which encompasses the entire site boundary and portions of Taconite, Marble, Calumet and surrounding rural areas. Furthermore, data are provided for entire Census Tract 9810, which includes all of the communities along US 169 between Coleraine and Nashwauk, as well as rural areas to the north and south as indicated in Figure 3.11-2 (Volume 1). These respective census units were chosen to show increasing radiuses of land areas from narrowest to widest encompassing the West Range Site. DOE and MDOC consider these census units to be representative of the communities closest to the West Range Site. Regional data are also provided in Section 3.11.1.1 for all seven counties in the Arrowhead Region.

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82-51 (cont'd) restrictions and while water is too solid to control dust), rainfall/snowfall en route to the surface,.

82-52 3.9.2.1 Has burial mound at Big Sucker Lake been examined yet?

82-53 3.10.5 Publicly owned lands….cites parcels that would be used for corridors…..60% Itasca County, 34% State…what is the percentage of private lands impacted? Who will be impacted? See alternative routes submitted by Mr. Norgard.

82-54 3.8.2 Aquatic communities….. Accepted spelling is Oxhide Lake, not Ox Hide. All of the mine pits support fish. The Canisteo Mine Pit in particular is valued as a lake trout fishery. The Minnesota DNR considers this a cold water fishery, and it is one of the few cold water fisheries in Itasca County. This outstanding lake trout fishery deserves more than 4 sentences in Section 3.

82-55 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 This is absolutely false. Paragraph five: In past years the Canisteo Pit was stocked with lake trout, and the population has become self-sustaining. See above comment.

82-56 3.8-8 An unnamed (Pickerel Creek) designated trout stream drains into Swan Lake (east of Pengilly). The Swan River also supports a population of brook trout.

82-57 3.8-6 Habitat fragmentation is a problem primarily ***around*** the proposed West site. However, fragmentation on the site is minimal and this site supports a diverse ecosystem that would be severely and permanently fragmented by this project.

82-58 3.8-6 The biology discussed in the DEIS with regard to forest fragmentation is superficial and outdated. The sections regarding forest fragmentation need to be completely rewritten by up to date experts in this field.

82-59 3.7-11Type 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. Groundwater contamination is therefore even more of a concern, and the upstream and downstream resources need to be thoroughly addresses with regard to the potential for contamination.

82-60 3.7-8 Last paragraph: The majority of wetlands identified have a connection to interstate commerce? How much of the West site wetland area has a "connection to interstate commerce? Does this make them any less valuable to the ecosystem? It could be argued that these wetlands would have even more "connection to interstate commerce" which is certainly not in the best interest of wetland preservation.

Responses

Comment 82-50
The data in Table 3.11-1 (Volume 1) are as posted by the Minnesota Department of Administration (reference MDOA, 2006), and verified at the website on June 17, 2007: http://www.lmic.state.mn.us/datanetweb/php/census2000/c2000_menu.php. Itasca County's population declined from 1980 to 1990 but increased from 1990 to 2000 reaching a level slightly above the 1980 population.

Comment 82-51
Section 2.2.2.1 of the Final EIS (Volume 1) states that storage areas "would incorporate dust suppression systems (including covered conveyers and other enclosures, dust suppression sprays, and vent filters) and would be paved, lined, or otherwise controlled to enable collection and treatment of stormwater runoff and prevent infiltration of chemical species leached from feedstock materials and/or flux to groundwater."

Comment 82-52
Big Sucker Lake is located approximately 6 miles northeast of the West Range Site. DOE did not study the mound at Big Sucker Lake, because the lake is located approximately 1.5 miles away from the HVTL Phase 2 (Plan B) alignment Area of Potential Effect, which is the closest corridor to Big Sucker Lake and is an existing HVTL corridor.

Comment 82-53
As stated in Section 1.5.2.2 (Volume 1), the HVTL Route Permit Application (part of the Joint Permit Application) must identify each owner whose property is within any of the proposed routes. Figures in Section 3.2 (Volume 1) indicate residences closest to proposed sites and corridors for the West Range and East Range alternatives. Section 4.10.3.1 (Volume 1) lists the numbers of residents closest to proposed routes in the West Range; Section 4.10.4.1 lists the numbers of residences closest to proposed routes in the East Range.

Comment 82-54
The spelling of Oxhide Lake has been corrected in Section 3.8.2 (Volume 1).

Section 3.8 has been updated to include more information on the CMP lake trout fishery. Also see responses to Comments 7-02 and 76-07, which address the same concerns.

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Responses

Comment 82-55
Section 3.8 (Volume 1) has been revised to state, "With the exception of the CMP, which has developed a self-sustaining population of lake trout due to MNDNR stocking in past years, 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 and significant groundwater source hydrology."

Comment 82-56
The stream name has been added to Sections 3.8.1.1 and 4.8.3.2 (Volume 1).

Comment 82-57
See responses to Comments 14-02 and 14-03, which address similar concerns. As discussed in Section 3.8 (Volume 1), the majority of the West Range Site contains medium quality habitat. No old-growth or mature conifer forests were observed during field reconnaissance. All of the terrestrial communities identified have been impacted by forest management practices and other land use activities. The eastern half of the West Range Site was harvested for timber in 2005, and portions of the western half of the site exhibited evidence of logging activities within the past 10 to 20 years. Further habitat fragmentation on the site will not adversely affect wildlife, as similar appropriate habitat in the area is plentiful.

Comment 82-58
See responses to Comments 14-02, 14-03, and 59-01, which address the same concern.

Comment 82-59
Use of an enhanced ZLD system coupled with measures taken on site to capture stormwater runoff would virtually eliminate the potential impacts to groundwater at the West Range Site. See response to Comment 7-02, which addresses impacts to aquifers and Comment 105-49, which addresses stormwater management.

Comment 82-60
DOE has revised the last sentence in the last paragraph of Section 3.7.2 of the Final EIS (Volume 1) to read: "The majority of wetlands identified at each alternative site are regulated by USACE, because they have a connection to interstate commerce (meaning that a wetland/water body crosses a state boundary or boundary of a Federally recognized tribal reservation and that the wetland/water body was used in the past, is currently used, or may be used in the future for commerce). However,

Commenter 82 – Ed Anderson

82-61 3.7.4.1 desktop review A soil survey has not been completed for St Louis County…..why not?

Appendix

82-62 5.1 Land use: "The site is currently unoccupied by any residential dwellings and has no direct access"(West site) . How does this fit requirement for the statutory requirement that adequate infrastructure be in place?

82-63 D.4.1 Impacts of train traffic on regional communities between Grand Rapids and Hibbing……what about the rest of Minnesota's communities to the west???

82-64 D.6.3 Mercury Deposition and bioaccumulation…….This is poorly addressed, see CAMP comments regarding water discharge and mercury deposition, methylation of mercury, wetlands, sulfates, etc.

82-65 D.6. Water quality impacts, mercury deposition and bioaccumulation, air toxics inhalation risk, water supply etc. This section lists pages of information not yet made available by Excelsior Energy. All of these concerns outlined in the DEIS need to be addressed in order to determine the environmental impact. The DOE/DOC needs to request this information from Excelsior now, and it needs to be included in the Final EIS. If this does not occur, the Final EIS will be incomplete, and will not accurately reflect the environmental impact of this Project.

82-66 D.6 Trains Mesaba 1 and 2 are listed under East Range? Four trains per day (two in, two out) is not the four or five per week that has been discussed at previous informational meeting held by Excelsior Energy.

82-67 Letters in appendix…..Corps of Engineers…..least damaging practicable alternative DOE request for biological opinion from FWS regarding effects on wolf and lynx. Has this been done?

82-68 The Army Corps of Engineers requested information from Excelsior regarding alternative sites previously considered. The sites that were listed all had inadequate water supply and unavailable land as reasons for dismissing them as alternatives. The criteria by which these sites were initially chosen/considered are not given. This appears to show either lack of research and poor planning by Excelsior in the first place (similar to the East site now being the "alternative" because they can't be permitted there) or reveals that there never was a process by which several other sites were considered.

Responses

Comment 82-60 (cont'd)
some wetlands appear to be isolated and, therefore, not regulated by USACE."

Wetlands that have a connection to interstate commerce are not less valuable to the ecosystem.

Comment 82-61
Section 3.4.5.1 (Volume 1) discusses the soil survey reports for Itasca and St. Louis Counties. As of April 2006, the USDA NRCS was in the process of generating, but had not completed, the soil survey for St. Louis County. An earlier, more rudimentary soil survey was completed for the Hoyt Lakes area in 1989. This preliminary survey provided the description of the soils at the East Range Site in the EIS. In accordance with the NEPA regulations, 40 CFR 1502.22, DOE determined that the information to be provided in the soil survey is not essential because "reasonably foreseeable significant adverse effects on the human environment" relating to the soils data would not be expected from the proposed action.

Comment 82-62
Because the West Range Site property is unoccupied by residences or other structures, there is no current roadway accessing the site. However, as in the case of the East Range Site property, the site is accessible from adjacent roadways. As is common for many residential, commercial, and industrial projects, direct access to a property must be provided from the nearest public roadway.

Comment 82-63
DOE defined the scope of the cumulative impact analysis for rail traffic at the West Range Site to include the rail line between Grand Rapids and Hibbing, which is the segment of the national rail network most directly affected by the Mesaba Energy Project. Refer to Section 4.15.2.2 (Volume 1), which discusses potential impacts to receptors along existing rail corridors, including increased dust emissions, noise, and vibration along the corridors and increased traffic delays, frequency of train horns, and safety hazards at grade crossings. These impacts are described as not resulting in significant increases above baseline conditions given the existing levels of rail use in the region.

Comment 82-64
The proposed use of enhanced ZLD for the West Range Site (see response to Comment 6-01) would eliminate discharges of process and blowdown waters from the plant potentially containing mercury. PSD regulations and application guidelines do not include or address

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Responses

Comment 82-64 (cont'd)
deposition of mercury. In Mesaba's cumulative Class I analysis, total mercury was included as a transported pollutant (See Table 5.2.2-7 of Draft EIS, or Tables 5.2.2-5 and 5.2.2-6 of the Final EIS). However, mercury deposition was not modeled because the chemical and physical form of mercury emissions from various sources is unknown. Deposition parameters for mercury compounds are highly dependent on the form of the mercury, and poorly defined for some forms. Therefore there is no current methodology for reliable modeling of total mercury deposition.

However, mercury deposition was modeled for the Mesaba Energy Project in the AERA using technology-specific emissions data, based on actual stack test data from the Wabash River Plant, an IGCC power plant that uses E-Gas™ technology (see U.S. Environmental Protection Agency, "Control of Mercury Emissions from Coal-fired Electric Utility Boilers: Interim Report, Office of Research and Development, EPA-600/R-01-109, April 2002). The E-Gas™ gasification process would be employed in the Mesaba Energy Project. Because virtually 100% of the mercury emitted from the combustion turbine stack in the E-Gas™ process is expected to be in its elemental form, modeling cumulative mercury deposition would not be instructive, since the speciation of emissions from other sources – although unknown – is expected to include mercury in its ionized form. Because the deposition rate for ionic mercury is orders of magnitude higher than for elemental mercury, deposition from other sources would obscure impacts from the Mesaba Generating Station. In order to avoid potentially biased results, the mercury deposition analysis focused on cumulative, worst case ambient mercury concentrations assuming that mercury emissions from all sources would be non-reactive. On this basis, the worst case mercury inhalation risks could be assessed, and the Mesaba Energy Project's relative contribution to mercury deposition would be conservatively high. These assumptions were the basis for the results presented in the EIS. Appendix C (Volume 2) of the Final EIS has been updated to provide further justification of the speciation of mercury emissions.

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. See also Sections 4.3, Air Quality, and 4.17, Safety and Health (Volume 1).

Comment 82-65
The various sub-appendixes in Appendix D (Volume 2) provide the

Commenter 82 – Ed Anderson

Responses

Comment 82-65 (cont'd)
results of the Cumulative Impacts Analysis for the Mesaba Energy Project, based on the approach explained at the beginning of Appendix D. The "Approach to Cumulative Impacts Analysis", which is the subject of the comment, was written *before* the analysis was performed to explain DOE's intended methodology. The information identified as "if not otherwise available" was subsequently provided by Excelsior and used in the respective analyses. The potential cumulative impacts of the Mesaba Energy Project based on the analyses in Appendix D are described in Section 5.2 (Volume 1):

- Section 5.2.2 describes the cumulative impacts on air quality based on Appendix D1.
- Section 5.2.3 describes the cumulative impacts for air inhalation risk based on Appendix D2.
- Section 5.2.4 describes the cumulative impacts on water resources based on Appendix D3.
- Section 5.2.5 describes the cumulative impacts on wetlands based on Appendix D4.
- Section 5.2.6 describes the cumulative impacts on wildlife habitat based on Appendix D5.
- Section 5.2.7 describes the cumulative impacts on rail traffic based on Appendix D6.

Comment 82-66
The four to five trains per week referenced in the comment would be roughly accurate for Mesaba Phase I alone. Mesaba Phases I and II would require a maximum of five roundtrip train deliveries every four days or approximately 1.25 roundtrip deliveries per day. The rail impacts analysis in the EIS assumed a very conservative number of two daily roundtrip deliveries (instead of 1.25). Two roundtrip deliveries mean four train trips per day – the "two in, two out" that the commenter may be referring to.

Comment 82-67
Sections 3.8.3.1 and 4.8.2.1 have been updated to provide the results of a Biological Assessment for the Canada lynx requested by USFWS.

Comment 82-68
Appendix F1 (Volume 2) has been updated by Excelsior to provide additional explanation of the site screening and selection process in response to Comment 116-01 by the USACE.

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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

Submitted by: Citizens Against the Mesaba Project

4.3 Air Quality and Climate (including Greenhouse Gases)

I. Assumptions built in to modeling, and data used:
As citizens, reviewing the data and analysis of the affect of Mesaba I/II on air quality and climate is difficult as only the results are presented, and not the modeling assumptions or data used to come up with the results. This is like a math teacher getting a sheet of answers and telling the student, "but show me your work…How did you come up with these numbers?"

82-69

Right off we noticed that MN Steel, a "reasonably foreseeable future action in the project vicinity," was not included as a major source input in the description of Mesaba's Predictive Modeling Approach. (4.3-2). We discovered that MN Steel data is included in chapter 5 in the cumulative affects section, but we wondered ***what is the affect on modeling without including MN Steel's data?*** This led us to turn to MN Steel's Final EIS and compare their section on affect on air quality to Mesaba's DEIS. We found what we think are discrepancies in the data presented regarding the quality of the existing air, and even differences in the standards used for analysis. It also triggered more questions about how reflective the results of the modeling are of the on-the-ground reality.

For example, regarding Particulate Matter, which has been found to be detrimental to health, the PSD increment standard for PM10 in Mesaba's DEIS is 37 (p. 4.3-18). But the standard in MN Steels' FEIS is stated as 30 (FEIS, p. 4-103). Mesaba says it will emit PM10 at a rate of 23.5 in a 24 hour period. MN Steel says it will emit PM10 at 26 ug/m3 in a 24 hour period. The total of the two emission rates is 49.5 in a 24 hour period which exceeds even Mesaba's higher standard rate of 37.

Mesaba's DEIS did not include wet or dry depletion/deposition in the modeling" (4.3-1). *Why not?* MN Steel's FEIS did include this. An EPA document explains that, "Wet and dry deposition are important processes in indirect exposure modeling because they account for the movement of constituent mass from the atmosphere to soil, water, and vegetation" (p. 5-28).[1]

And **why use such old data**? Appendix B in Mesaba's DEIS states, "The meteorological data are based upon Hibbing, Minnesota hourly surface weather observations for the years 1972 through 1976" (B.1-1) Mesaba's DEIS (4.3-3) states that upper air data from

Responses

Comment 82-69

The Class II NAAQS and PSD increment analyses presented in Section 4.3.3.1 (Volume 1) of the Draft EIS were performed to demonstrate compliance with applicable air quality standards during operation of Phase I and Phase II. EPA and MPCA require these analyses to include all existing sources and all proposed new sources for which permits have been issued or complete permit applications have been submitted. The source data used for the Mesaba analyses were provided by the MPCA, and included data on all sources for which the agency maintained emission inventory data. At the time of the data request, MPCA did not yet have a permit application for MSI. The Class I cumulative impact analyses (Draft EIS Section 5.2.2 [Volume 1]) were carried out at a later date, by which time MPCA was able to provide preliminary data on MSI. Note that 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 (since publication of the Draft EIS) and include a more comprehensive listing of regional sources.

With regard to PSD increment, the maximum allowable 24-hour PM_{10} concentration increase in Class II areas is 30 $\mu g/m^3$. The value of 37 $\mu g/m^3$ in Table 4.3-12 of the Draft EIS is a typographical error and the correct value is shown in Tables 4.3-8 and 4.3-12 of the Final EIS. The correct increment limit was shown in Draft EIS (Volume 1) Table 4.3-5.

The maximum increment consumption impacts of Mesaba and MSI are highly localized, occurring on or near the respective site boundaries (See Figures 7.5-4 and 7.7-5 of Excelsior's air permit application for the Mesaba Energy Project, which is accessible at http://energyfacilities.puc.state.mn.us/Docket.html?Id=16573). Concentrations exceeding 4 $\mu g/m^3$ are expected within approximately 1,300 m of the Mesaba Generating Station fence line. Since the MSI facility is located approximately 10,000 m from the Mesaba Generating Station, the maximum concentrations due to Mesaba emissions will be much less than 4 µg/m3 in the vicinity of MSI. Therefore, the maximum impacts of the two facilities will not occur at the same location or time. Note that Table 4.3-5 of the Draft EIS shows that the highest all-source 24-hour PM_{10} impact of Mesaba is only slightly higher than the Mesaba impact alone. The same is true of MSI (Final EIS Tables 4.7.9 and 4.7.10). These comparisons demonstrate that nearby sources do not have a significant effect on increment consumption for PM_{10}. Therefore, it is not correct to add the increment results of the two sources.

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82-69 (cont'd)

two stations were used: St. Cloud and International Falls for 1990 and 1992; and Minneapolis and International Falls for 1996. More current data is available. The US EPA site has links to the "**Radiosonde Data of North America (RDNA)**" which is a standard upper air database provided by NCDC, containing data through 1997 data. Another data bas has hourly and synoptic type data for approximately 12,000 global stations are available for 1995-2005. Upper air data for 1990-present are also available.

82-70

We also found what we think are **discrepancies and deficiencies in data** in Mesaba's DEIS when compared with MN Steel's FEIS. For example:

In the analysis of the affect on air quality in the Class II area:
-Mesaba shows an existing background of Sulphur Dioxide (SO2) at 10 ug/m3 in 1 hour, while MN Steel shows 90.
-Mesaba shows background Nitrogen Oxide (NOx) being 5 annually, while MN Steel shows it as being 12.
(MNSteel page 4-91, Mesaba page 4.3-11).

Regarding the Class I area (Federally Protected areas like the Boundary Waters):
-Mesaba does not include Isle Royale.
-Mesaba does not include wet or dry deposition information for sulfur and nitrogen, or ozone concentrations info.
-MN Steel shows that the maximum allowed SO2 concentrations in 3 hr period in the BWCAW is 10.8, but Mesaba's DEIS indicates it's 1.5.
(MNSteel page 4-92, Mesaba 4.3-13).

82-71

II. Air Pollutant Emissions Significantly Above Thresholds:
No matter what data was used in the modeling, it still turns out that **Air Pollutant Emissions from the proposed Mesaba I/II facilities are significantly above threshold levels.** ***Mesaba Energy will emit 9 of the 10 Air Pollutants at levels significantly above the threshold level.***

For example, Mesaba will emit 2,872 tons/per year of nitrogen oxide and the threshold is 40 tons per/year. This is in addition to the 59,701 tons/year of Nitrogen Oxides (NOx) emitted from regional facilities that currently exist,[2] and MN Steel's planned addition of 1,505 tons/year of Nitrogen Oxides. Mesaba will emit 1,390 tons/year of Sulphur Dioxide and the threshold is 40 tons/year. This is in addition to the 36,491 tons a year that are already emitted from regional sources, and MN Steel's facility will add yet another 421 tons/year to our air.

Pollutant	PSD Significance Threshold (TPY)	Plantwide Potential to Emit (TPY)
Carbon Monoxide (CO)	**100**	**2,539**
Nitrogen Oxide (NOx)	**40**	**2,872**
Sulphur Dioxide (SO2)	40	1,390
PM	25	503
PM10	15	493 (West)
O3 as VOC	40	197

Responses

Comment 82-69 (cont'd)
The Class II PSD increment modeling analysis for PM10 was updated for the Final EIS (see Table 4.3-8). Mesaba, MSI, and all other regional increment consuming and expanding sources were modeled, and the highest second-high impacts were 24.8 µg/m^3 at the West Range Site and 26.3 µg/m^3 at the East Range Site, both of which comply with the increment.

Wet and dry depositions were not included in the Class II modeling in conformance with MPCA modeling guidance. The omission of deposition is conservative. The intent of the model analyses is to estimate maximum expected concentrations in ambient air. If deposition were included, ambient concentrations would decrease as a result of the loss of pollutant to the ground surface. Wet and dry deposition were included in the Class I model analyses and the cumulative analyses (see response to Comment 82-70).

The meteorological data used for all Class II analyses were prescribed by the MPCA. The agency has prepared computer files of representative meteorological data for all areas of Minnesota. The specific years of data are less important than the quality of the data and the availability of five consecutive years. These factors were considered by MPCA in their selection of appropriate meteorological data for permit application use. Meteorological data for the Class I analyses in Chapter 5 of the Draft EIS were limited to the three years of 1990, 1992, and 1996 because those were the only years for which MM5 meso-scale modeling input data were readily available. All Class I analyses using CALPUFFF in the Final EIS have been updated to use 2002-2004 MM5 data, which became publicly available after the air modeling for the Draft EIS had been completed.

See responses to Comments 49-01 and 49-11, which address a revised air modeling that was conducted for the Final EIS.

Comment 82-70
The differences between the Mesaba Energy Project Draft EIS and Minnesota Steel's Final EIS are due to different data and methodologies being used in each EIS. Below are further details:

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Responses

Comment 82-70 (cont'd)
With regard to Class II area data:

Background concentrations are different for the Mesaba and MSI Class II air quality analyses because of the different methodologies used. The Mesaba modeling analyses followed the MPCA recommendation to model all sources expected to have any impact. Both local and distant sources were included in the modeling using data provided by the MPCA. The background concentrations in Draft EIS Table 4.3-6 represent only natural background and small unmodeled sources; the background values were recommended by the MPCA. The MSI background concentrations are based on measured concentrations from regional monitoring stations, and include the impacts of existing sources. However, it appears that the MSI NAAQS analysis modeled only MSI sources and did not include the existing sources that are part of the background concentrations.

With regard to Class I area data:

(a) Isle Royale: The EIS has been updated to include visibility modeling of Isle Royale for the East Range Site.

(b) Wet/dry S and N deposition: Mesaba's discussions of S and N deposition have been updated and are provided in Section 4.3.2.5 (Volume 1) of the EIS. Table 4.3-19 of the Final EIS presents updated results of the deposition analysis. The data for sulfur and nitrogen deposition show total modeled deposition by wet and dry deposition processes. Potential cumulative N and S deposition impacts to soils, waters, and vegetation in Class I areas were also updated and are discussed in Section 5.2.2 (Volume 1) and Appendix D1 (Volume 2). Ozone concentrations were considered in the Class I modeling by use of seasonal average ozone concentrations recommended by the MPCA.

(c) SO_2 concentrations in BWCAW: The 1.5 $\mu g/m^3$ figure from the Draft EIS refers to predicted impact from the Mesaba Energy Project. The 10.8 $\mu g/m^3$ figure from the MSI Final EIS refers to the estimated background concentration. They refer to different quantities and, therefore, need not agree.

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(Volatile Organic Compound)		
Sulfuric Acid-mist	7	130
Hydrogen Sulfide	10	17

Mesaba DEIS Table 4.3-1

Nitrogen oxides and ozone:
Nitrogen oxides and ozone play a major role in formation of particulate matter and ground level ozone (smog). Ozone causes respiratory illness and lung inflammation. On high ozone days there is a marked increase in hospital admissions and emergency room visits for asthma and other respiratory illness.[3] Ozone forms in the presence of nitrous oxides, volatile organic compounds, light, and heat. The Mesaba plant would produce 2,872 tons/yr of nitrous oxides and 197 tons/yr of volatile organic compounds.

82-71 (cont'd)

Particulate Matter:
With regard to particulates, PM2.5 is thought to have the most significant adverse impact on human health. Secondary formation of particulate matter can also have a significant impact on human health. In Mesaba's analysis, PM10 and SO2 exceed the threshold monitoring concentrations, but all Mesaba says that it will do about this about this is make application requesting a waiver of the preconstruction monitoring requirements (Mesaba 4.3-12). Not only has Excelsior Energy been exempted from demonstrating need for the entire project altogether, or whether it's the least cost alternative, they want to be exempted from monitoring requirements, as well.

III. Understatement of affects of Mercury:
Mesaba I/II will release up to 54 lbs of mercury per year. But Mesaba's DEIS only presented information for area within a 3 kilometer radius (4.3-26). A report of the mercury impact zone includes 720 lakes over 320 square km.[4] 487,000 fish are annually harvested from these lakes and 7,780 women of child-bearing age and children live here. Chronic mercury exposure in a developing fetus can cause mental retardation, growth deformity, seizures, blindness, deafness, and severely delayed development. Chronic mercury exposure of infants and small children can cause impaired reflexes, delayed motor development, impaired attention, impaired memory, and impaired language. Low level mercury exposure from fish consumption may lead to heart attack, and hardening of the arteries, especially in adult males.

82-72

The effects of mercury are well-known. A March 2007 report from the Pollution Control Agency stated that "MPCA scientists calculate that mercury emissions will have to be **reduced 93 percent from 1990 levels for fish mercury levels to be reduced to safe levels.** The MPCA has established a goal of reducing Minnesota mercury emissions by 93 percent, to 789 pounds per year, and is working with the U.S. Environmental Protection Agency to address out-of-state sources."[5] Amidst these efforts to reduce mercury in the environment, why add another 54 lbs a year when the need for this electricity has not even been shown?

Responses

Comment 82-71
Although the Mesaba power plant would be a major source of certain air emissions according to the PSD regulations under the Clean Air Act, because of its IGCC technology, it would have lower emissions than conventional coal-fired power plants. The threshold values referred to in the comment are merely guidelines above which additional analysis and/or modeling is required and are not emission limitations. The impacts of air pollutants that would be emitted into the atmosphere and mitigation measures that would be taken to reduce impacts are discussed in Section 4.3 (Volume 1) of the Final EIS. See response to Comment 1-01, which deals with pollution prevention measures incorporated into the IGCC technological platform and the response to Comment 7-03, which deals with performance aspects.

Comment 82-72
See responses to Comments 1-01 and 38-01, which address the same concerns.

Commenter 82 – Ed Anderson

Miltich Comments - 4

IV.Acid Rain:

82-73

As a utility generating unit greater than 25 MW, Mesaba also exceeds allowable emissions that contribute to **acid rain**. To deal with this, all they write is that they are required to obtain and comply with a Phase II Acid Rain Permit "in a manner consistent with EPA's overall efforts to reduce emissions of acids precursors" (4.3-24).

V. Major Greenhouse Gas Producer/Adding to Global Warming:

82-74

Mesaba will emit 9.4-10.6 million tons/year of CO2, a major greenhouse gas that contributes to global warming (4.3-25). Mesaba discusses its plan for Carbon Capture & Sequestration (CCS) in Appendix A and states that CCS would reduce emissions by 30%. But it is very expensive to actually do CCS, and the technology is not yet proven. So, this DEIS was careful to include a statement about what more they will ask for to implement CCS: "upon approval of a modification to the proposed power purchase agreement that would allow for Excelsior to be compensated at a reasonable cost of capital for the necessary capital investments, and to be made whole on the other costs associated with the CCS program" (A-1). Translation: without major additional taxpayer money, there is no plan to reduce CO2.

VI. Affect on Class I area Visibility and Regional Haze:

Mesaba would cause **regional haze** in Class I areas like the Boundary Waters Wilderness Canoe Area, and in its own words, "Project-related impacts occurring during periods of natural visibility degradation would have added effect" (4.3-29).

MPCA's July 2007 draft "Concept Plan for Addressing Major Point Sources in Northeastern Minnesota"[6] states, "Concerns have been raised by Federal Land Managers (FLM) and others about the impact of new and existing sources in NE Minnesota on visibility in the Class I areas – due to both proximity and high emissions" (p. 2). The MPCA has to submit a Regional Haze Plan to the EPA by December 2007. MPCA's plan calls for a 30 percent reduction in combined sulfur dioxide (SO2) and nitrogen oxides (NOX) emissions in Northeastern Minnesota. Again, why add more sources of pollution?

82-75

Back to our questions about the modeling technique used: Mesaba's DEIS states that "CALPUFF is the approved long-range transport model" (4.3-2). But an EPA document: "CALPUFF Analysis in Support of the 2005 changes to the Regional Haze Rule, published in June 15, 2005,[7] provided this further explanation of the limitations of using CALPUFF. The report states that, "The challenge we encountered is that CALPUFF has not been fully tested for secondary formation and thus is not fully approved for applications in PSD permitting and NAAQS attainment demonstrations (i.e., it is approved for primary particulates, but not for secondarily-formed particulates)" (p. 1).

A report prepared for the DOE assessing reliability of CALPUFF the modeling used for visibility stated that: "CALPUFF is primarily a multi-source plume model that treats transport downwind and dispersion along the transport path. The representation of gas phasechemistry is highly simplified. These simplifications are likely to be deficient when applied to situations in which complex chemistry dominates the processes responsible for

Responses

Comment 82-73
See response to Comment 49-10, which addresses the same concern.

Comment 82-74
See responses to Comments 1-02, 4-01, 4-03, and 53-04, which address the same concerns.

Comment 82-75
The CALPUFF long-range transport model is EPA's Guideline model for regulatory applications, and is specifically recommended by Federal Land Managers for Class I impact analyses. The predictions of the model when run in the Method 2 regulatory mode are known to provide a conservative assessment of visibility impacts as noted in the Draft EIS and in the Mesaba Air Permit Application. Nonetheless, CALPUFF is widely acknowledged to be the best currently available, public domain, long-range transport model.

More recent meteorological data are available than were used for the Draft EIS Chapter 4 Class I analyses, and were used for the cumulative analyses in Section 5.2.2 (Volume 1). The CALPUFF model continues to be refined and modified by EPA. The Final EIS has been updated as appropriate with results that reflect the most recent meteorological data, the most recently approved version of CALPUFF, and mitigation options mutually agreed among the Federal Land Managers, Excelsior and the MPCA.

See responses to Comments 49-01 and 49-11, which address the revised air modeling that was conducted for the Final EIS.

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formation of secondary air pollutants. Such secondary air pollutants are an important source of visibility degradation." The report further stated that, "The agreement between measured and estimated aerosol concentrations using this [CALPUFF] approach is random and poor. Thus, we are concerned that the simplistic approach to aerosol formation may produce significant errors"[8]

Expert testimony provided to the state of Washington on a similar matter found: "The CALPUFF model used in this analysis represents a simplified treatment of visibility and haze. It does not account for the effect of secondary organic aerosol formed as a byproduct of VOC emissions and does not account for the effect of gaseous pollutants, NO_2 in particular, which may lead to a modest underestimation of the impact on visibility. It also does not fully account for the contribution to particulate matter made by NH_3 emissions."[9]

Even accepting CALPUFF as the best means there is of modeling, Mesaba uses old data. For example, Mesaba used data from 1990, 1992, 1996 (Mesaba 4.3-20), while for the same calculations MNSteel's FEIS used data from 2002, 2003, and 2004 (MNSteel page 4-107). Mesaba's DEIS (using the older data) states that it will "reduce visibility in the BWCAW by more than [the unacceptable rate of] 10% from 40-70 days a year" (4.3-20) This would be in addition to existing regional source contributions….

82-75 (cont'd)

Further, Mesaba's DEIS states that "PM10 concentrations at the Boundary Waters over a 24-hour averaging period exceeds the SIL," and that "at the West Range site, SO2 impacts are above the SIL" (page 4.3-18). Data in MNSteel's FEIS, which was not included in this section of Mesaba's DEIS stated that MNSteel's contribution to PM10 in the Class I area would range from 4.83 to 7 days for the 3 years modeled. The increment standard is 8 g/m3 for Class I Areas. *It appears the combination of Mesaba and MNSteel's emission of PM10 exceeds the increment standard.*

Deposition of Nitrogen and Sulphur in Class I Area:
MNSteel's FEIS explains the **affects on plant and animal species of deposition of nitrogen and sulphur,** "In evaluating potential adverse effects to flora and fauna, lichen species are generally used as a threshold indicator of potential air pollution damage because they are especially susceptible to air pollution and show adverse effects before other plant species and animal species. If pollutant concentrations in a Class I area are sufficiently low that no damage occurs to native lichens, then it can reasonably be concluded that all other flora and fauna species are protected. The most sensitive lichen species are only present when annual average SO2 concentrations are less than 40 g/m3" (MNSteel 4-104).

Mesaba's DEIS does not provide contextual explanations like this, but does state that the maximum annual deposition of S and N from Mesaba in the Class I Boundary Waters Class I area is "greater than the National Park Service's Threshold" (Mesaba 4.3-21). Rather than include mitigation options, the Mesaba DEIS says, "it is unlikely that the Mesaba Energy Project would cause an adverse effect…because the emission data they entered was very conservative (4.3-22). This statement does not square with the known limitations of using CALPUFF as stated by the EPA and DOE reports cited above.

Responses

Commenter 82 – Ed Anderson

VII. Mitigation:

82-76

Mesaba's DEIS states in its summary of impacts that their facility "***would be a major source***" of Hazardous Air Pollutants. They only offer five bullet points (4.3-32) about mitigation measures of "process modification and improved work practice [that] would be implemented to limit annual emissions." For example, they say they would use clean syngas or natural gas, good flare design, good combustion practices and limiting the fire pumps and emergency generators. ***They do not provide any specifics about these process modifications, and they do not provide any information about how much these measures would reduce emissions***. Without data on the amount of reductions and measures to be taken to mitigate emission of hazardous air pollutants, their plans to mitigate hazardous air pollutants are woefully inadequate to make any real difference in the degradation of air quality and resulting dangerous affects to our health and the environment.

VIII. Inaccurate statement regarding Mineral Loss:

82-77

On page 4.4-13 the DEIS states there will be "no mineral loss." This is not accurate. The site falls within the prime area that Itasca County is now considering to zone for potential future mining activities. A DNR report[10] states that from the west half of the Arcturus Mine to Canisteo there are 460 million long tons of partially oxidized to unoxidated iron-formation. Included in this figure is a subset of unoxidized taconite estimated to total 87 million long tons (DNR October 2003). With the price of steel, and new technologies there are conversations currently underway about mining in the area of the proposed Mesaba facility.

82-78

IX. In section 4.3.5.2. **Effects on Economic Growth**: Mesaba states, "180 workers will be employees following construction of the second phase in 2014." This is one of the main reasons people support this project. But the Mesaba DEIS is careful to qualify this by saying: "To the extent practical and consistent with skill and operational requirements, the project plans to employ people in the local area…"(4.3-21). ***How many people from the local area will be eligible to be employed? Is there are breakdown of job types/job descriptions?*** The uncertainty in their promise to employ local people does not justify the tremendous degradation to air quality described in this DEIS.

Notes

1. www.epa.gov/epaoswer/hazwaste/id/paint/section5-6.pdf
2. NE MN Emissions Inventory from Regional Facilities in 2002: <http://www.pca.state.mn.us/publications/presentations/haze-nemnplan.pdf>
3. "EPA National Air Quality and Emission Trends Report"
4. ICF Consulting for Excelsior Dec. 14, 2005
5. < http://www.pca.state.mn.us/publications/p-p2s4-06.pdf>
6. <http://www.pca.state.mn.us/publications/presentations/haze-nemnplan.pdf>
7. **"CALPUFF Analysis in Support of the 2005 changes to the Regional Haze Rule** June 15, 2005. U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards." <http://www.epa.gov/scram001/reports/tsd_calpuff_for_bart.pdf
8. <http://www.osti.gov/bridge/servlets/purl/764382-oMp4zO/webviewable/764382.PDF>
9. <http://www.efsec.wa.gov/Sumas2/adj2001/beprefiled/mfl-t.pdf>
10. Zanko, L.M, et. Al. "Oxidized Taconite Geological Resources for a Portion of the Western Mesabi Range (West Half of the Arcturus Mine to the east Half of the Canisteo Mine), Itasca County, Minnesota –

Responses

Comment 82-76

The EIS does not state that the Mesaba Energy Project would be a major source of HAPs. Instead, on pages S-26 and 4.3-28 of the Draft EIS, it states that the Mesaba Energy Project would be a major source of criteria air emissions under PSD regulations. Because Phase I and Phase II would emit no single HAP in amounts greater than 10 tons per year and, in aggregate, less than 25 tons per year of HAPs, the Mesaba Energy Project is not a major source of HAPs. Therefore, the mitigation options that were presented on page 4.3-32 of the Draft EIS are for criteria air pollutants and not HAPs. HAPs emissions are mitigated by selecting IGCC technology. The nominal 1200 MW Mesaba Energy Project can be compared to recently-permitted conventional coal plants, such as the nominal 750 MW Comanche 3 plant in Colorado, at 42.5 tons per year of HAPs according to a database developed by EPA (http://epa.gov/region7/programs/artd/air/nsr/spreadsheets/national_coal_projects.xls). No large-scale conventional coal plant in that database approaches the low HAPs emission rate of the Mesaba Energy Project.

Comment 82-77

See response to Comment 5-05, which addresses the same concern.

Comment 82-78

See responses to Comments 16-01 and 64-01, which address the same concerns. Because the specific skills that local individuals currently have or may possess at the time that the Mesaba Energy Project would begin operations cannot be known with certainty, the numbers of local individuals eligible to be hired for the project at that time cannot be determined. Operational positions will require skills ranging from custodial and technical to engineering and managerial, which would be comparable to skills required by other existing and proposed industrial facilities in Itasca and St. Louis Counties.

Commenter 82 – Ed Anderson

A GIS-based Resource Analysis for Land-Use Planning." NRRI/TR-2001/40. Duluth, MN: Natural Resources Research Institute and Department of Geological Sciences, U of MN, Duluth, October 2003.

82-79

Our questions and comments are only directed to this one section of the Draft EIS. There are many other concerns and questions raised by others that we hope the final EIS will address. We are looking for the final EIS to show a true cost/ benefit analysis of this project's promise of serious pollution in an area that does not even have the coal, but rather, is blessed with valuable forests and waters, federally protected wilderness, tourism and iron ore. Also, given the evidence regarding global warning, how can the DOE consider this project without including sequestration an alternative energy project that has any benefit to people or the environment? We strongly feel that the expenditure of tax-payer money on this project is wasteful, and instead our resources should be spent on truly alternative and renewable energy projects.

Thank you for your consideration.

Responses

Comment 82-79
See responses to Comments 37-01, 41-01, and 53-04, which address the same concerns.

Commenter 82 – Ed Anderson

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

Submitted by: Citizens Against the Mesaba Project

82-80

The main points from an ecological view are as follows. First, Permanently fragmenting the forest with the ROW and Train lines is detrimental to forest interior wildlife. These species which have relatively large spatial area requirements are typically the ones which are also declining. Split the woods into smaller fragments, more edge predators do well and have easy access to nests. This is probably why we are seeing such a decline in ground nesting birds. NorthCentral and Northeastern MN is part of the greatest breeding bird diversity in North America. Many of these birds do an amazing financial service to our forest industry. As they migrate up from the tropical wintering grounds and the southern US, they breed and feed their young caterpillars which are defoliators of our trees. This control mechanism is essential to the productivity of our forests. We need to maintain our large forest blocks to maintain healthy populations of these neotropical insectivorous birds. Attached please note the MN Forest Resource Council North Central landscape Goals which have passed, and are guidelines for the counties in the NC region. The entire document has been submitted, and can be found on the MN Forest Resource Council -- which directs policy in Forest issues in the state. Here is a one page summary of the document.

DESIRED FUTURE FOREST CONDITION

The future forest of the NC landscape will have the following characteristics when compared to the current forests of the year 2000:

There will be an increased component of red, white and jack pine, cedar, tamarack, spruce and fir.

The forest will have a range of species, patch sizes, and age classes that more closely resemble natural patterns and functions within this landscape.

The amount of forestland and timberland will not decrease using FIA definitions for timberland and forestland. Large blocks of contiguous forest land that have minimal inclusion of conflicting land uses will be created and/or retained for natural resource and ecological benefits and to minimize

Responses

Comment 82-80
See responses to Comments 14-02, 14-03, and 59-01, which address the same concern.

Commenter 82 – Ed Anderson

Responses

82-80 (cont'd)

land use conflicts

Amended January 27, 2004:

Modified the third bullet to read as follows:

The amount of forestland and timberland will not decrease using FIA definitions for timberland and forestland. Large blocks of contiguous forest land that have minimal inclusion of conflicting land uses will be created and/or retained for natural resource and ecological benefits and to minimize land use conflicts (hereafter referred to as "natural resource emphasis areas").

Added a fourth bullet to the Desired Future Forest Condition Statement:

In large blocks of contiguous forestland retain critical natural shoreline on lakes for scenic, wildlife, water quality and other natural resource values.

We checked into the DEIS idea that grassland wildlife will move into the created artificial non native grasslands so there is no need to worry. Biologists at NRRI in Duluth have done research showing these corridors are actual "sinks" which attract edge predators and thus act as ecological traps for several forest interior species. These are not beneficial to birds except a few edge bird species. ANIMALS CANNOT JUST PICK-UP AND MOVE TO AN ADJACENT AREA. Those niches are filled.

Conifer cover will also decrease. Just doesn't fit the landscape plan at all for this region.

More CO2 and increasing global climate change will only hurt important pulp species such as black and white spruce.

Commenter 82 – Ed Anderson

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

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4.16 Materials and waste management

4.16.2.1 Impacts of construction

82-81 May only accumulate waste on site for 90 days. (with exceptions) What are these exceptions?

82-82 Must have at least one employee available to respond to an emergency. What will their qualifications be? What is the detailed emergency response plan?

82-83 Materials will be recycled or reused when feasible. How is feasibility determined? Who determines feasibility?

82-84 Material will largely be transported by truck. As a regulated greenhouse gas, the amount of carbon dioxide released into the atmosphere as a result of transport needs to be determined. Mobile emissions including on-site equipment, rail transport, truck transport, etc. needs to be quantified. Mobile sources also need to be assessed as to their role in cumulative impact, particularly with regard Minnesota Steel.

4.16.2.2 Impacts of operation

82-85 Facility personnel would be trained in the event of a spill or other release. What types of training would these people have? How many employees would have this training? How will local emergency response systems be utilized? What additional training will local emergency response personnel need? How many more will be needed? What is the cost of training and ongoing maintenance of a higher level of training and staffing?

(Non-hazardous waste)

82-86 292,000 tons of coal slag would be produced annually. If markets do not exist for this product, is land filling responsible? What is the environmental and economic impact of land filling/disposal?

82-87 Local markets would be found for the elemental sulfur produced. What qualifies as a "local" market? What local markets are available? What are the health and safety risks of transporting and/or storing elemental sulfur?

Responses

Comment 82-81
RCRA requirements for large-quantity generators are summarized in Section 4.16.2.1 (Volume 1); the regulatory language cites "exceptions" that are defined in 40 CFR Part 262 Standards Applicable to Generators of Hazardous Waste - Subpart C - Pre-Transport Requirements, Sec. 262.34 Accumulation time. An example of an exception to the 90-day accumulation period is for small quantity generators that may accumulate hazardous waste onsite for up to 180 days without a permit.

Comment 82-82
The qualifications of emergency response personnel will be in adherence to Federal, state and local regulations and in accordance with 40 CFR Part 262.34(5)(i), which states: "At all times there must be at least one employee either on the premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures specified in paragraph (d)(5)(iv) of this section. This employee is the emergency coordinator." See also response to Comment 4-04, which addresses a related concern.

Comment 82-83
See response to Comment 21-02, which addresses the same concern.

Comment 82-84
As explained in response to Comment 12-01, Section 4.3.2 (Volume 1) of the Final EIS has been updated to include a subsection addressing truck and train emissions associated with the Mesaba Energy Project. Section 5.2.8 (Volume 1) of the Final EIS has been updated to address cumulative impacts on climate change, which includes emissions from mobile sources.

Comment 82-85
See responses to Comments 4-04 and 82-82, which address the same concerns. Local emergency response systems would be used for fire, police, and ambulance services. "Higher level" training as noted by the commenter would not be required.

Comment 82-86
See response to Comment 53-03, which addresses the same concern.

Comment 82-87
Excelsior performed an analysis for the beneficial use of elemental sulfur in the regional market (Minnesota and adjoining states) for use in fertilizers. Sulfur would likely be transported via rail.

Commenter 82 – Ed Anderson

82-88 Other non-hazardous materials would be recycled and reused when feasible. Who determines feasibility?

82-89 How are these materials to be transported? The amount of pollution generated in transporting these materials need to be calculated.

(Hazardous waste)

82-90 If the nearest licensed disposal facility is determined to be Eastern Wisconsin, (there also is no agreement of disposal) have potential environmental consequences been examined? How will this material be transported? Again, what are the health and safety risks of storage, transport, and disposal?

4.16.3.1 Impacts of construction

82-91 Have impacts of local species of wildlife been addressed as a result of the clearing of land? Travel corridors, wetlands, fragmentation? These need to be addressed. The East Range site would have no clearing.

4.17 Safety and Health

4.17.2.2 Transportation risks

82-92 Are the four trains per day considered round trip or will this number essentially be doubled when you consider the return trip? Also, at four trains per day and 1,200 miles per train, this is a huge expenditure of energy. This needs to be calculated as the emitting of carbon dioxide and other gasses would be considered a health risk.

4.17.2.3 Human health risks

82-93 The amount of mercury emitted into the water supply is deemed insignificant. Any additional amount of mercury is too much. These also are hypothetical numbers and have no basis in reality. Are these numbers based on tried and true technology or simply what is provided by Excelsior? Why is the mercury deposition impact zone described by Excelsior in the JPA not included? Why is the impact to over 700 local lakes not included? (See map of mercury deposition impact zone in CAMP comments). Note that the mercury deposition impact zone map is based on Excelsior's earlier maximum projected Hg emissions of about 37 annual lbs, not 54 lbs.

4.17.3.1 HVTL

82-94 The issues of eminent domain, forest fragmentation, habitat loss, and the number of additional birds killed striking new lines needs to be addressed. Forest fragmentation was recently identified by the Grand Rapids Chamber of Commerce as a major concern in Itasca County as it relates to our natural environment as well as to our local economy. (See attached MFRC Landscape Guidelines)

Responses

Comment 82-88
See response to Comment 21-02, which addresses the same concern.

Comment 82-89
As explained in response to Comment 12-01, Section 4.3.2 (Volume 1) of the Final EIS has been updated to include a subsection addressing truck and train emissions associated with the Mesaba Energy Project. Section 5.2.8 (Volume 1) of the Final EIS has been updated to address cumulative impacts on climate change, which includes emissions from mobile sources.

Comment 82-90
See response to Comment 21-02, which addresses the same concern. The storage, transport, and disposal of hazardous wastes are closely regulated under RCRA regulations, which are intended to minimize the potential for health and safety impacts.

Comment 82-91
Impacts to local wildlife species resulting from vegetation removal and fragmentation are addressed in Section 4.8 (Volume 1). Clearing of vegetation would be required at either the West Range or East Range Site as described.

Comment 82-92
See response to Comment 21-01, which addresses the same concern about rail traffic. See also response to Comment 12-01 regarding the discussion of mobile emission sources in the Final EIS.

Comment 82-93
See response to Comment 42-01, which addresses the same concern. The mercury deposition impact zone map mentioned in the comment was included in the report: "Air Quality and Health Benefits Modeling: Relative Benefits Derived from Operation of the MEP-I/II IGCC Power Station". However, as explained in response to Comment 7-03, that study compared the health effects of the Mesaba Energy Project (IGCC technology) with those of a new, similar-sized SCPC power plant located in Central Minnesota. The purpose of that document was to provide a comparison of the two technologies for impacts related to particulate matter and mercury and not to fulfill regulatory filings with the state. The AERA report, which was included in the EIS, is more appropriate for assessing whether mercury health risks are acceptable according to state standards. The AERA was based on an annual mercury emission level that was determined using a standard EPA formula to determine air emissions, as shown in Table 4.17-1 (Volume 1).

Commenter 82 – Ed Anderson

4.17.3.2 Natural gas pipelines

82-95 Issues of forest fragmentation and imminent domain need to be addressed. See above. The forest fragmentation issues, edge predator influx, etc, is poorly addressed in the DEIS.

Responses

Comment 82-93 (cont'd)
Note that based on comments from MPCA, the emission rates were revised to reflect additional conservatism for the purposes of risk assessment and is reflected in updated values presented in Table 4.17-1; however, general conclusions regarding impacts remain unchanged. Updated findings on the potential impacts to health risk are discussed in Section 4.17 (Volume 1) and Appendix C (Volume 2). The JPA is not included as part of the EIS because it is publicly available at the MDOC Mesaba docket website (http://energyfacilities.puc.state.mn.us/Docket.html?Id=16573). The impacts of mercury deposition from the Mesaba Energy Project are discussed in Sections 4.3 and 4.17 (Volume 1) of the Final EIS.

Comment 82-94
Excelsior intends to negotiate all required easements with property owners. Excelsior will use eminent domain to acquire real estate rights only if it cannot reach consensual agreements with property owners. Forest fragmentation, habitat loss, and bird strikes are discussed in Section 4.8 of the EIS (Volume 1). Information on bird strikes is further discussed in Appendix D5 (Volume 2). See responses to Comments 14-02, 14-03, 59-01, and 76-07, which address the same concerns.

Comment 82-95
See responses to Comments 14-02, 14-03, 59-01, and 82-94, which address the same concerns.

Commenter 82 – Ed Anderson

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

DOE Draft EIS for the Mesaba Energy Project (DOE/EIS-0382D)
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Chapter 5 Summary of Environmental Consequences

5.1.2 Impacts of Commercial Operation

"If fuel needs of the combined-cycle unit need to be met or supplemented by natural gas for continual operation then the demonstration of synthesis gas production by coal gasification would be considered unsuccessful."

How is this measured and by whom?

What process is used to monitor and determine whether the volume of natural gas used is to be considered successful or unsuccessful?

I am requesting clarification of the Cooperative Agreement and the Draft EIS and how the two documents are interrelated and how all items regarding use of natural gas will be measured as appropriate under said agreements.

82-96

2.9 of the Cooperative Agreement – Cost Sharing – (Mar 2002)
Unallowable costs – DOE will not share in the acquisition costs of any fuel other than coal, under this Clean Coal Power Initiative, unless prior written approval is obtained from the DOE Contracting Officer

The Minnesota Public Utilities Commission has determined the Mesaba Energy Project is not in the best interest of the public due to its high cost of electricity.

What is the impact to rate payers if the demonstration is unsuccessful?

If the project is determined to be unsuccessful how does it impact the Federal Government Loan Guarantees?

Solid Waste Disposal

What is the specific location of the "appropriate commercial landfill" to dispose of unmarketable sulfur and or slag?

82-97

Will a public landfill be used? If so, what is the long range impact to the life of the landfill? Who will bear the cost?

5.1.2.1 Carbon Dioxide Capture and Geological Storage

Responses

Comment 82-96
See responses to Comments 53-01 and 53-02, which address the same concerns.

Comment 82-97
See response to Comment 53-03, which addresses the same concern.

Commenter 82 – Ed Anderson

"CO2 emissions would be 214 million tons over the 20 year commercial life of the generating station. The plant would be adaptable for retrofit of Carbon Capture Technology".

I am requesting specific component costs by customer category for the following items as related to carbon capture/sequestration costs be provided for the Mesaba Energy Project.

82-98

	Residential	Small Commercial/ Business	Larger Commercial/Business	Other
Generation	Cost per KW	Cost per KW	Cost per KW	Cost per KW
Transmission	Cost per KW	Cost per KW	Cost per KW	Cost per KW
Distribution	Cost per KW	Cost per KW	Cost per KW	Cost per KW
Total				

"Excelsior may install CO2 capture transport or sequestration at some point during the commercial life of the project"

Without a detailed plan and design for carbon capture how can the true cost of this project be determined?

A viable detailed plan for carbon capture/sequestration must be in place prior to approval of the EIS.

Appendix A2 DOE Analysis if Feasibility of Carbon Capture and Sequestration for the Mesaba Energy Project

82-99

"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 the cost of electricity."

A 90% removal could increase electricity costs up to 40%.

There are no geological reservoirs capable of sequestering CO2 within the state of Minnesota

The cost to move CO2 via pipeline would significantly increase the cost of electricity.

CO2 injection for enhanced oil recovery (EOR) are economically-driven operations to increase oil production not necessarily scientifically-driven to prove the technical feasibility of permanently sequestering carbon.

"Excelsior has not established a detailed design for carbon capture or sequestration."

The DOE analysis concluded:

"*Carbon Capture and sequestration is not considered feasible for the Mesaba Energy Project."*

Responses

Comment 82-98
See response to Comment 53-04, which addresses the same concerns.

Comment 82-99
See response to Comment 53-04, which addresses the same concerns.

Commenter 82 – Ed Anderson

"Without an order from the PUC that incorporates the costs associated with CCS with the PPA, the Mesaba Energy Project would not be economically viable."

I am requesting my comments be reviewed and evaluated for the draft EIS as per the following:

The Environmental Impact Statement process should be halted based on the DOE analysis and the stated fact that Excelsior Energy has not established a detailed design for carbon capture or sequestration nor determined the cost of CCS and its impact to rate payers.

82-99 (cont'd)

The Carbon Capture Sequestration Plan submitted by Excelsior Energy is merely a paper desktop theoretical exercise lacking specific detailed design for carbon capture transport or sequestration. Excelsior's carbon capture/sequestration plan is merely a conceptual scenario with no established timeline, cost estimate, or cost impact analysis to rate payers.

Table 5.1-2 in the Socio-economics and Environmental Justice impacts states under Capture:

Addition of capture technologies could increase electricity rates and have long- term adverse impact.

Table 5.1-2 under Possible Mitigation Measures states:

Consider distributing potential increases in utility costs to support the proposed project to mitigate the potential for adverse and disproportionate impacts on low-income populations.

I am requesting my comments be reviewed and evaluated for the draft EIS as per the following:

82-100

This clearly indicates Excelsior Energy has no indication as to the cost of carbon capture/sequestration and the financial impact to rate payers. Several times in the Summary Document it is stated that carbon capture/ sequestion MAY be feasible at some point during the life of the generating plant. One must question whether the submitted plan to capture or sequester carbon is authentic or merely an exercise to placate the proponents of reducing greenhouse gases.

Tables 5.1-2, has nine instances in the Summary of Impacts and Possible Mitigation Measures columns, where Best Management Practices (BMP) will be utilized. However, there is no statement or reference towards specific BMPs or whether they actually exist.

I request a detailed analysis of all Best Management Practices listed in Table 5.1-2.

Do these Best Management Practices exist?

Where are Best Management Practices utilized and by whom?

Responses

Comment 82-100
See responses to Comments 53-04 and 53-05, which address the same concerns.

Commenter 82 – Ed Anderson

82-100 (cont'd)

What is the performance history of these Best Management Practices?

CO2 Pipelines

I am requesting my comments be reviewed and evaluated for the draft EIS as per the following:

CO2 compression and transport is a pipe dream.

CO2 pipelines are considered hazardous liquids.

The proposed Route 1 will travel through 41 towns, communities and Indian Reservations. What are the potential dangers to all receptors along the entire route of the 400 plus miles of proposed pipeline?

82-101

How many property owners along the 400 mile plus pipeline route will be affected by eminent domain? Easements?

Who specifically are the customers to receive the piped CO2?

Are there commitments in place to purchase the piped CO2?

What guarantee is there that this will be a viable option at "some point" in the commercial life of the plant?

Route 2 is 525 miles passing through Superior National Forest and will thus require Federal approval.

What is the approval process?

A detailed and separate EIS should be developed along the entire proposed pipeline routes.

Water Issues

What is the flow of discharged water? Excelsior only stated that the discharge will flow to Holman Lake. Which lakes, creeks and/or wetlands will it travel through to Holman Lake?

What is the impact to these wetlands?

82-102

What is the exact content of Mercury that will be discharged into Holman Lake?

I am requesting my comments be reviewed and evaluated for the draft EIS as per the following:

Excelsior stated that the Mesaba Plant will not contribute to additional mercury discharge into Holman Lake. ***However, the water will contain highly concentrated levels of***

Responses

Comment 82-101
See response to Comments 1-02 and 4-03, which address the same concerns.

Comment 82-102
See response to Comment 53-07, which addresses the same concerns.

Commenter 82 – Ed Anderson

mercury from the use of water from the Canisteo Mine Pit (CMP) and Hill Annex Mine Pit (HAMP). Holman Lake flows into the Swan River joining the Mississippi River approximately 20 miles SE in the township of Jacobson, Minnesota.

How will the warmer temperature of the discharged water affect the ecological balance of these natural wetlands, especially during winter months when these wetlands freeze?

Will these bodies of water no longer freeze in the winter?

Will the water levels of Holman Lake and the Swan River increase due to the high volume discharge of water from the Demonstration Plant?

What materials will be discharged into the already impaired waters of the Swan and Mississippi Rivers?

What is the impact of this discharged water to the local communities along the 20 mile stretch of the Swan River from Holman Lake to Jacobson Minnesota?

82-102 (cont'd)

Did these communities receive any communication as to the increased flow and impacts on water quality?

The Mississippi River is a public water source for approximately 18 million Americans including the City of Minneapolis. What actions will be taken to notify all communities of the proposed dumping of the discharged water from the Demonstration Plant into public water supplies?

Will the water discharge from the Demonstration Plant negatively impact local residential wells which are a main source of water in this rural community?

What plan will be in place by the operations managers of the Mesaba Plant to mitigate any negative impacts to the local watershed, individual and community wells and wetlands in the event clean water standards are violated?

Who will monitor the levels of materials in the discharged water?

Who is responsible for clean up costs if water standards are violated?

Loss of Habitat & Wetlands

82-103

Wetlands—the bogs, marshes and swamps scattered across Minnesota—provide homes to many plant and animal species; filter and improve the water quality of our lakes, streams and drinking water; provide economic opportunities through recreation such as hunting, fishing or bird watching.

Wetlands provide critical habitat for a variety of fish and wildlife species including amphibians, songbirds, reptiles, fish and ducks. Many species depend on wetlands as

Responses

Comment 82-103
See response to Comment 53-08, which addresses the same concern.

Commenter 82 – Ed Anderson

breeding and rearing locations, especially small seasonal wetlands that are wet for only a short period of time each spring. According to the Minnesota Department of Natural Resources (DNR), 43 percent of endangered or threatened plants or animals in the U.S. depend on a wetland for survival.

Wetlands also filter pollutants, trap sediments from water and can recharge our precious groundwater resources—resources used by many Minnesotans for drinking, industry and agriculture. In Minnesota, over 52 percent original wetlands have been lost due to development.

82-103 (cont'd)

Is there a displaced wetlands replacement plan? What areas have been identified as potential wetland replacement sites?

The loss of these wetlands will negatively impact hunting, fishing and other recreational activities that are a vital component to the economy of Itasca County.

What is the economic impact to the loss of 759 acres of wildlife habitat and 122 acres of wetland?

Visibility

Page 5-2-9 of the draft EIS states "Minnesota Power (MP) reductions would potentially offset visibility impacts related to the Mesaba Energy Project. Additionally, it is expected that many other actions, both voluntary and in response to regulatory requirements would be taken in the near future to reduce the potential for visibility degradation.

Minnesota Power is the former employer of Tom Micheletti and an elite company celebrating their 100th anniversary in business. Newspaper articles were submitted as testimony at the PUC hearings in St. Paul, Minnesota. In the Herald Review dated December 13, 2006, Tom Micheletti is quoted as saying "They're lying." in reference to comments made by Minnesota Power Executive Vice President David McMillan.

82-104

I am requesting my comments be reviewed and evaluated for the draft EIS as per the following:

The purpose of the actions to be taken by Minnesota Power is to reduce pollutant emissions and improve air quality and visibility, not to offset the Mesaba Energy Project. Based on the above statement, emissions from the Mesaba Energy Project will negate the actions taken by Minnesota Power to improve air quality and visibility. Any reasonable citizen would be outraged by these types of unacceptable solutions to environmental concerns. As has been the history of Excelsior Energy, they continue to assume and expect other market place utility companies to solve their problems. The State of Minnesota finds this a serious issue.

Why would the DOE even entertain these types of comments by a private developer in 2007?

Responses

Comment 82-104
See response to Comment 3-02, which addresses the same concern.

Commenter 82 – Ed Anderson

82-104 (cont'd)

What are the many actions that will be taken in the future? I am requesting a specific list.

How will these actions improve air quality and visibility?

I request that Excelsior Energy provide specific information as to the expected actions to be taken to improve air quality and visibility.

Rail

Option 1A of the proposed additional rail loop to serve the Mesaba Energy Project will pass within 400 ft of one residence and within 1000 ft. of 3 residences.

What precautions will be in place to reduce train noise and vibration?

What precautions will be taken to protect residents from the effects of escaping coal dust from the coal cars? Will this be monitored? What are the health risks to residents exposed to the escaping coal dust?

82-105

The Excelsior Energy study identifies traffic delays of up to nine minutes at rail crossings. This will negatively effect local traffic patterns and cause significant backups along major roads.

A nine minute delay to the response time of emergency equipment and first responders is unacceptable. This delay may result in deaths that could have been otherwise avoided if emergency personnel were not delayed.

The rail plan submitted by Excelsior Energy is unacceptable and should not be approved. A comprehensive study by an independent agency or firm should be conducted to identify the impact of the increased response time of emergency equipment and first responders and the depth of traffic delays caused by the nine minute wait time.

Henshaw Effect

82-106

I disagree with the comments in the draft EIS that state since studies of the health risks are inconclusive it is concluded that they are comparable to risks imposed by HVTLs already in use. As noted in my initial comments, those of us raised in the area in the 1950's were exposed to many dangerous chemicals due to the mining industry. When you consider the cumulative effects that result from the incremental impacts of the plant it is reasonable to expect you will consider that not only is our water already impaired from exposure to mercury and other contaminants, but so are we. The diseases attributed to the mining industry continue and Mesothelioma, a lung based disease warrants additional review of any potential for air pollutants of any kind to attach to the charged molecules when inhaled. I request this matter be reviewed in light of the newly released medical information relevant to the local area.

Emergency Response

Responses

Comment 82-105
See responses to Comments 38-03 and 53-10, which address the same concerns.

Comment 82-106
See response to Comment 3-01, which addresses the same concern.

Commenter 82 – Ed Anderson

82-107

The City of Taconite is a rural community of 315 residents with limited emergency services. I request an in-depth analysis be included in the scoping process regarding the capability of local community First Responders to properly mitigate any emergencies during the construction, demonstration and operating phases of the proposed plant. I also ask that an in-depth needs assessment be conducted to determine additional equipment needs and assess the level of training needed by First Responders to mitigate emergency situations throughout the phases of construction, demonstration and operation.

The draft EIS does not properly address the issues of Emergency Response. It merely states that the City of Taconite may need to increase the complement level of volunteer firefighters from 12 to approximately 20. It basically states the City of Cohasset never had a problem therefore we should not as well. This is unacceptable. A complete study should be conducted to determine the levels of needed emergency response, equipment and training needed. The men and woman of the local fire departments who risk their lives deserve to receive the proper training and equipment.

How will additional equipment and staffing be funded?
Will local taxpayers be required to fund additional equipment and training?

Excelsior Energy successfully lobbied the Minnesota legislature for an exclusive exemption to the energy plant personal property tax. This exemption will shift the costs of additional staffing, equipment and training of First Responders to local communities and ultimately the taxpayers.

Responses

Comment 82-107
See responses to Comments 4-04 and 53-13, which address the same concerns.

Commenter 82 – Ed Anderson

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

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Comments on Draft EIS

Submitted by: Citizens Against the Mesaba Project

82-108

The draft EIS is incomplete in that it does not address the entire scope of the MEP. The intent of the entire MEP is to build a total of six IGCC plants o up to three locations.

Of particular concern as described in the initial legislation Minn. Stat. § 216B.1694, Subd. 2 Regulatory Incentives (a), (2) "once permitted and constructed, is eligible to increase the capacity of the associated transmission facilities without additional state review." It is unclear in the legislation if this pertains to HVTL and/or generating facilities and could be argued either way.

Because of the lack of clarification and the intent to build six facilities, the EIS should include environmental, health and socio-economic impacts of all six proposed IGCC facilities.

82-109

Innovative Energy Project

In Appendix A2 the summary conclusion states; "Carbon capture and sequestration is not considered feasible for the Mesaba Energy Project at this time." "Without an order from the PUC that incorporates the costs associated with CCS within the power purchase agreement, the Mesaba Energy Project would not be economically viable."

Since it has been determined that CCS is not a viable option for the MEP, it can not be considered to be better than more traditional technologies in terms of emitting carbon. The MPCA has testified to the MPUC that the Mesaba Project's emissions are not inherently improved over traditional technologies. The Administrative Law Judge ruled that the Mesaba Project does not qualify as an Innovative Energy Project. The MPUC has ruled that the project does qualify,

Responses

Comment 82-108
See response to Comment 75-10, which addresses the same concerns.

Comment 82-109
See responses to Comments 53-04, 75-11, and 75-22, which address the same concerns. As stated in response to Comment 63-01, the Mesaba Energy Project was selected competitively from among 13 applications in response to Round 2 of CCPI Program funding opportunity announcements. Section 1.2.1 (Volume 1) 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. MDOC and PUC have determined that the Mesaba Energy Project meets the requirements of the "innovative energy project" statute (Minnesota Statutes 216B.1694).

Commenter 82 – Ed Anderson

82-109 (cont'd)

but so far they are the only entity besides Excelsior that believe so. Minnesota Power has filed with the court of appeals arguing that the project does not qualify as an Innovative Energy Project. To say this project qualifies as an IEP is premature.

5.1.2 Impacts of Commercial Operation

"The demonstration of the Mesaba Energy Project for the CCPI Program would be considered successful if the results indicate that the continued operation of the gasifier would fully meet the fuel needs of the combined-cycle unit and would be economically and environmentally feasible (i.e., the project would achieve commercially competitive performance in terms of availability, thermal efficiency, emissions, and cost of electricity). However, if the fuel needs of the combined-cycle unit would need to be met or supplemented by using natural gas for continued commercial operation, then the demonstration of synthesis gas (syngas) production by coal gasification would be considered unsuccessful."

82-110

In reference to the paragraph above, the MPUC has found the MEP would not be the least cost resource even without factoring in transportation of CO2 and CCS. Therefore, the project cannot be considered as economically successful.

Excelsior Energy has no definitive plans for CCS, which is commented on in Appendix A2. Therefore, this project cannot be considered environmentally successful.

The administrative law judges determined that this project would not significantly reduce emission as compared to Super Critical Pulverized Coal (SCPC) plants. Therefore, this project cannot be considered environmentally successful nor an innovative energy project.

Since the MEP cannot be found to be environmentally successful, it cannot qualify as a clean energy technology under the Clean Coal Power Initiative (CCPI).

Responses

Comment 82-110
See response to Comment 75-12, which addresses the same concerns.

Commenter 82 – Ed Anderson

82-110 (cont'd)

In order for the MEP to be environmentally successful, CCS should be required at time of start up. All potential impacts should be studied, quantified and included in the EIS.

CCS and EOR

On page 5.1-8 of the draft EIS, it is mentioned that "standard industry practices result in permanent underground storage of 33 percent of CO2 injected, employing advanced technologies could result in Enhanced Oil Recovery (EOR) with 60 percent of the CO2 stored." This would amount to only 1,049,400 million tons (33%) of the 3,180,000 million tons of CO2 proposed to be captured from Phases I/II of the MEP. That's less than 1% of the total 10,600,000 million tons emitted annually. And would be 1.8% or 1,908,000 million tons per year sequestered with the advanced technology of 60%.

82-111

How is this cost effective or beneficial to the environment when the vast majority of the CO2 emitted is not sequestered?

The other factor not clearly identified in EOR/CCS is that the estimated 8.7 million barrels of oil recovered annually would be responsible for (conservatively) CO2 emissions of 4,350,000 million tons, (approximately 1000 lbs of CO2 per 42 gallon barrel). This clearly indicated that CCS is not the answer to reducing global warming CO2. Any economic benefits would solely go to the oil industry.

Referring to mitigation measures of CO2 contamination mentioned on page 5.1-9 it is not clearly outlined how CO2 contamination can be prevented, located within the injection site or stopped.

How can the exact location of a CO2 leak be identified and what can be done to stop the contamination. These questions must fully be answered before any more sequestration takes place to protect valuable water resources.

Responses

Comment 82-111

See responses to Comment 75-13, which addresses the same concerns.

Commenter 82 – Ed Anderson

82-112

5.2 Potential Cumulative Impacts

The data, particularly for the West Range site, should be re-evaluated in its entirety since the final EIS has been released for Minnesota Steel Industries (MSI). There are gross errors in the information provided for the MSI project and this EIS. To fully address potential cumulative impacts all information submitted for the MSI EIS should be included in the MEP EIS.

5.2.3 Air Inhalation Health Risk

Air emissions data and permits have been issued for MSI. Air emission for the power generation planned through the Nashwauk Public Utilities for MSI was not submitted and should be included in the overall impact. The air emissions for MEP EIS should be re-evaluated to be all inclusive. Mesothelioma and other mining related cancers from airborne sources need to be addressed as cumulative.

82-113

5.2.3.2 West Range Site

It is stated that a sub-chronic hazard index was not calculated for the MSI facility in the MSI Human Health Screening-Level Risk Assessment; therefore a cumulative sub-chronic hazard index could not be evaluated.

It is unacceptable for MSI to not disclose its sub-chronic hazard information. As a result the cumulative non-carcinogenic and carcinogenic results data are inaccurate and incomplete.

The sub-chronic hazard information from MSI needs to be included particularly since Mesothelioma and asbestos like cancers are now being documented across the Iron Range.

82-114

5.2 Data Refinements (pg 5.2-13)

The air emissions from any new source of power generation (i.e. Nashwauk PUC) for MSI was not included in this EIS. All emissions for MSI need to be re-

Responses

Comment 82-112
See response to Comment 75-14, which addresses the same concern.

Comment 82-113
See responses to Comments 49-13, 57-05, and 75-15, which address the same concerns.

Comment 82-114
See response to Comment 75-17, which addresses the same concern.

Commenter 82 – Ed Anderson

82-114 (cont'd)

evaluated because of this omission.

5.2.4.1 West Range – Water Resources

Mercury deposition is of great concern to the MN Dept. of Health, so much so that legislation has been passed to reduce mercury emissions. It is not conducive to state guidelines to be adding mercury to the environment from the many proposed industrial scale projects slated for this region. It is a known fact that minute amounts of mercury are damaging to developing fetuses and young children. And have cumulative health affects on the general population as a whole.

It is noted in Appendix D1 Tables 1 and 2 have mercury emission omissions from several sources. How can the cumulative mercury output be accurately analyzed if there are significant amounts of data missing?

82-115

With tighter restrictions on mercury emissions all sources should be included in this EIS.

5.2.4.1 Water Quality – West Range (pg 5.2-15)

It is false to say that the MEP wouldn't add any mercury to water discharges. Air emissions also have an affect on water quality. The JPA mentions Phases I & II of the MEP as emitting 54 lbs of mercury annually, with highest concentrations closest to the location of the proposed plants, (see Mercury Deposition Map).

These emissions will greatly impact all of our water resources with those nearest becoming contaminated faster and more concentrated then they are currently. The 720 lakes identified in the Mercury Deposit Zone all need to be tested for current levels of mercury to determine if they would be at risk to additional levels of mercury deposition. This should include MSI emissions from the operational plant and whatever power source is agree upon and built by Nashwauk PUC.

Responses

Comment 82-115

See response to Comment 75-18, which addresses the same concern.

Commenter 82 – Ed Anderson

5.2.6 Wildlife Habitat

The information in this section is grossly inaccurate. It does not contain the total amount of habitat lost due to the MSI project.

82-116

In table 5.2.6-2 it states a total of 307 acres lost due to MSI. The data given in the final EIS for MSI indicated a total of 4,719 acres affected. (See Minnesota Steel Project Final EIS pg 6-10.)

This section needs to be corrected to reflect accurate information to determine habitat loss.

5.3.2 Additional Mitigation Options

5.3.2.1 Cooling Water Discharge Options at West Range Site

82-117

Zero Liquid Discharge (ZLD) should be implemented from the start of operations at the proposed West Range site. As water resources become acutely more important to our community and society it should be a requirement for the proposed MEP to utilize ZLD. It is unacceptable to not impose ZLD on the proposed MEP no matter where it might proposed to be constructed.

5.3.2.2 Mitigation Options for Visibility Impacts to Class 1 Areas – Enhancement of Existing Design Basis.

82-118

The 1st paragraph mentions MEP's current design status. It also states; "Excelsior could be required to enhance its current design basis to produce further SO2 and NOX emission reductions to reduce modeled visibility impacts." Since it is in the public interest to reduce emissions as much as possible, the MEP should be required to enhance its current design basis to further reduce SO2 and NOx emissions.

5.5 Relationship Between Short-Term Uses of the Environment and the Maintenance and Enhancement of Long-Term Productivity.

Responses

Comment 82-116
See response to Comment 75-19, which addresses the same concern.

Comment 82-117
See response to Comment 6-01, which addresses the same concern.

Comment 82-118
See response to Comment 49-01, which addresses the same concern.

Commenter 82 – Ed Anderson

It is stated that the MEP would be demonstrating innovative coal power technologies that can provide the US with clean, reliable, and affordable energy.

The MEP is not innovative. The technology was introduced during WWII when Germany needed fuel. It is neither clean nor affordable. Coal is not clean. The proposed MEP would still emit over 10 million tons of CO2 annually and would add SO2, NOx, PM10, PM2.5, Hg and VOCs that do not currently exist. The administrative law judges have determined that IGCC does not significantly reduce the above mentioned emissions over a SCPC system. The MN PUC has determined that the electricity produced would be far too expensive and is not the least cost resource and as a result is not in the public interest. It should be noted that the MN PUC findings on cost do not include the necessary transmission upgrades, CCS or transport of CO2 and its related costs.

82-119

This sections states; "The Proposed Action would also support the objectives of the Mesaba Energy Project proponent to provide a source of electric power for the State of Minnesota and the national electric grid, as well as provide economic revitalization for the Taconite Tax Relief Area and Arrowhead Region of Minnesota." There are six bullet points that outline potential long-term benefits to the region:

• The generation of 1,212 MWe to help alleviate the need within Minnesota for 3,000 to 6,000 MWe of new baseload power generation over the next 15 years (Section 1.4.1.1).

The above bullet point mentions that Minnesota will have a need of 3,000 to 6,000 MWe of new baseload power in the next 15 years, this is what Excelsior Energy claims. Any reference to electrical need by the public was omitted in this EIS because of the legislation that was passed exempting the MEP from the Certificate of Need. Since the public was forbidden to comment on the need for electricity then Excelsior Energy should not be able to promote their claim of electrical need. Excelsior Energy has not had to prove the need for electricity so

Responses

Comment 82-119
See response to Comment 75-22, which addresses the same concerns.

Commenter 82 – Ed Anderson

82-119 (cont'd) any mention of needed baseload power should be stricken from the EIS.

82-120 The next six bullet points refer to economic benefits to the region. Excelsior Energy submitted an economic benefit analysis that was conducted by UMD's Labovitz School of Business and Economics, Bureau of Business and Economic Research. The information supplied for the study came from Excelsior Energy. A true economic picture should be obtained by conducting a Cost Benefit Analysis study. This has been requested, but has not been conducted. The results of a Cost Benefit Analysis should be included in this EIS. If a Cost Benefit Analysis is not to be performed then the economic benefit study submitted by Excelsior Energy should be omitted.

82-121 The sixth bullet pertains to the Canisteo Mine Pit water level stabilization. The water levels could easily be stabilized by siphoning water to Trout Lake. This scenario has been studied and is ready to be implemented upon securing funds. The estimated cost of this siphoning project was approximately $3 million, considerably less that the estimated $2.2 billion for the MEP.

82-122 It is not right to overlook the impacts of the Long-Term Productivity on environmental and human health, the costs of which are significant, and should be included in this summarization.

Responses

Comment 82-120
See response to Comment 16-01 regarding the use of IMPLAN modeling in the BBER study and response to Comment 41-01 regarding the use of cost-benefit analysis.

Comment 82-121
See response to Comment 75-24, which addresses the same concern.

Comment 82-122
See response to Comment 75-25, which addresses the same concern.