

**Commenter 5 – Bob Norgord; Commenter 6 – LeeAnn Norgord**

**5-05  
(cont'd)**

1 that they can't sequester CO2 in this area, it  
 2 reinforces a statement made by MPUC Chair LeRoy  
 3 Koppendrayer; he says, "You're in the wrong place."  
 4 Thank you. (Applause)

5 BILL STROM: Thank you, Bob. LeeAnn Norgord.  
 6 LEEANN NORGORD: LeeAnn Norgord, L-e-e-A-n-n  
 7 N-o-r-g-o-r-d. Excelsior stated that the Mesaba plant  
 8 will not contribute additional mercury discharge to the  
 9 water discharge. Although they have repeatedly made  
 10 this misleading statement, the reality is that the  
 11 discharge water will carry highly concentrated levels  
 12 of mercury, sulfates and dissolved solids into Canisteo  
 13 Mine Pit and/or Holman Lake and the Mississippi River.

14 Given the complex relationship of mercury in  
 15 an aquatic environment, shouldn't the EIS give accurate  
 16 details related to mercury discharge and subsequent  
 17 impact? Why would the EIS continue to repeat some of  
 18 the same misleading statements given by Excelsior  
 19 regarding mercury discharge? Why would the EIS use an  
 20 impact area of three kilometers when the mercury  
 21 deposition will affect over 400,000 lakes? Thank you.  
 22 (Applause)

23 BILL STROM: Thank you, LeeAnn. Ed Anderson.  
 24 ED ANDERSON: Ed Anderson, E-d  
 25 A-n-d-e-r-s-o-n. I'm a physician in Itasca County,

**6-01**

**Responses**

**Comment 6-01**

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. Thus, no pollutants would be discharged into any surface waters, which would eliminate the majority of water quality concerns at the West Range Site as originally discussed in the Draft EIS. Sections 2.2.2.3, 2.2.3.2, and 2.3.1.3 (Volume 1) of the Final EIS have been updated to describe the use of the enhanced ZLD system at the West Range Site. Section 4.5 (Volume 1), *Surface Water Resources*, has been revised to reflect use of the enhanced ZLD system. Other resource sections in Chapter 4 (Volume 1) have also been updated to address the impacts of the system as implemented at the West Range Site and to indicate the impacts that would be eliminated by the use of the enhanced ZLD system. A note has been added to the beginning of Section 5.3.2.1 indicating that the use of enhanced ZLD treatment (Mitigation Alternative 3) is now the planned approach for the West Range Site.

**Commenter 7 – Ed Anderson**

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1 Trout Lake Township, and I'm the co-chair of Citizens  
2 Against the Mesaba Project. I was part of the Citizens  
3 Advisory Task Force as well in August of 2006.

4 For the past two weeks CAMP has been reviewing  
5 the Environmental Impact Statement draft, and our  
6 overall reaction thus far is that of disappointment,  
7 disappointment not only in the document, but in the  
8 agencies that produced the document. And we're very  
9 disappointed in the process by which we were lead to  
10 believe that public input and public comment is valued.

11 The draft EIS is far from complete. The  
12 purpose of the scoping, by my recollection and I think  
13 by the presentation tonight, was to have been to ensure  
14 that the final Environmental Impact Statement is  
15 complete and to identify areas of local concern.

16 Instead, it appears that the objective of  
17 that document is really to minimize the adverse  
18 environmental impacts of this project, to push the  
19 federal initiative for clean coal, and to facilitate a  
20 project that really has no hope of ever realizing the  
21 DOE's objectives as outlined in their Clean Coal Power  
22 Initiative.

23 There are a lot of people in this room that  
24 have spent inordinate amounts of time reading the joint  
25 permit applications, researching the issues and

**Responses**

**Comment 7-01**

Section 1.6 (Volume 1) of the Final EIS describes the scoping process that was undertaken by DOE and MDOC for the Mesaba Energy Project EIS. The respective Federal and state efforts complied with applicable requirements of NEPA (specifically 40 CFR 1501.7) and the Minnesota Power Plant Siting Act (specifically Minnesota Rules 7849.5300). 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. MDOC's signed Scoping Decision is contained in Appendix G (Volume 2). The comments submitted during both scoping periods were posted for public access at the MDOC website for the Mesaba Energy Project Docket: <http://energyfacilities.puc.state.mn.us/Docket.html?Id=16573>.

The Final EIS addresses siting alternatives and the site selection process in Sections 2.1.1.2 and 2.1.2.3 (Volume 1); water discharges in Sections 2.2.1.4, 2.2.2.3, 2.2.3.2, and 4.5.2.1 (Volume 1); mercury deposition in Sections 4.3.2.6 and 4.17.2.3 (Volume 1); air emissions in Section 4.3 (Volume 1); and the Canisteo Mine Pit (including the trout fishery and recreation) in Sections 3.5.1, 3.8.2.1, 3.13.3.1, 4.5, 4.8.2.2, 4.13.3.2, and 5.2.3.1 (Volume 1). As stated in Section 1.2.2 (Volume 1) of the Final EIS, the Mesaba Energy Project is exempt from requirements for a Certificate of Need as an innovative energy project.

**7-01**

**Commenter 7 – Ed Anderson**

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**7-01  
(cont'd)**

1 submitting comments. Other agencies, such as the Army  
 2 Corps of Engineers, the MPCA and the Minnesota DNR also  
 3 submitted numerous comments over a wide variety of  
 4 issues. Those issues included Excelsior's unverified  
 5 claims of need for base load power. Concerns about the  
 6 site selection, concerns about water discharge,  
 7 concerns about mercury deposition, air emissions, and  
 8 the plant's impact on the Canisteo Mine Pit waters,  
 9 lake trout fishery and recreational use, most of those  
 10 comments have not been addressed at all, and those that  
 11 have have been addressed inadequately.

12 I'd like to give a couple of examples. Most  
 13 of our examples are specific comments that will be  
 14 turned into written form prior to the January 11th  
 15 deadline.

**7-02**

16 But as one, the joint permit application  
 17 describes how the Canisteo Mine Pit will be closed to  
 18 recreational use and how that water and the trout  
 19 fishery will be ruined by concentrated discharge water  
 20 from cooling the plant. The draft EIS doesn't  
 21 acknowledge the Canisteo Mine Pit as a lake trout  
 22 fishery. I don't believe it even acknowledges its use  
 23 for recreation. As the Canisteo Mine Pit water will  
 24 become polluted, there will be a risk to the private  
 25 wells and to the aquifers, the municipal aquifers of

**Responses**

**Comment 7-02**

Though the CMP is not a natural trout lake, the Draft EIS (Volume 1) acknowledged that the CMP is stocked with trout (Section 3.8.2.1 [Volume 1]) and is used for recreational purposes (Sections 3.5.1.2 and 3.13.3.1 [Volume 1]). The impacts to trout in the CMP are discussed in Sections 4.5 and 4.8 (Volume 1). As discussed in response to Comment 6-01, use of an enhanced ZLD system at the West Range Site would eliminate discharges of process water and blowdown into any water bodies, including the CMP and, thus, would not result in any risks to hydrologically connected private wells and aquifers. See also responses to Comments 111-08 and 116-49, which discuss the impact to the CMP's recreational use and fisheries, respectively.

**Commenter 7 – Ed Anderson**

**7-02  
(cont'd)**

1 Coleraine and Bovey.  
 2 This is pretty clearly outlined in the  
 3 Minnesota Department of Health Wellhead Protection  
 4 study that establishes a hydrologic connection between  
 5 those aquifers and the Canisteo Mine Pit; and there's  
 6 no mention of that Wellhead Protection study in this  
 7 draft EIS.

**7-03**

8 There were also numerous comments that were  
 9 submitted regarding human health. Most of those  
 10 comments came directly from a study that was  
 11 commissioned by Excelsior in 2005. In 2007 the New  
 12 England Journal of Medicine published an excellent  
 13 study of over 12,000 women, looking at the effects of  
 14 particulate matter on health. What that study showed  
 15 was that for every 10 microgram per cubic meter  
 16 increase in PM 2.5 there was a 70 percent increase in  
 17 the risk of heart attack and stroke, and that's  
 18 starting from a baseline of zero and below the air  
 19 quality standards.

20 A large majority of the physicians and nurse  
 21 practitioners in Itasca County submitted a letter in  
 22 opposition to this project and voiced concern about  
 23 their patients' health. Excelsior's study from 2005  
 24 clearly outlines the increased risks of illness and  
 25 premature death related to Mesaba's air emissions, and

**Responses**

**Comment 7-03**

Excelsior's 2005 study compared the health effects of the Mesaba Energy Project (IGCC technology) with those of a new, similar-sized supercritical pulverized coal (SCPC) power plant located in Central Minnesota. The study indicated that the IGCC plant would result in fewer health impacts than a SCPC. The purpose of that document was to provide a comparison of two technologies for impacts related to particulate matter and mercury and not to fulfill regulatory filings with the state. The EIS analyzed health risks under the required Minnesota Pollution Control Agency guidelines for an Air Emission Risk Assessment (AERA) that examines carcinogenic and non-carcinogenic risk levels of air pollutants and found that the plant would not exceed established risk thresholds. The human health risk assessment is contained in Section 4.17.2 (Volume 1 of the Final EIS) of Section 4.17, Safety and Health and Appendix C, Air Emissions Risk Analysis Data.

Note that based on agency comments on the Draft EIS, additional AERA modeling was conducted that, in general, increased the level of conservatism in the analysis. As discussed in Section 4.17 (Volume 1), the updated analysis determined that the chemical of potential concern emissions at the Mesaba Generating Station would be reduced by the inherently low polluting IGCC technology and many of the same process features that control criteria emissions. Also, the Final EIS has been revised to insert a missing sub-section heading (in printed Draft EIS copies), "4.17.2.3 Human Health Risks," for the text that addresses risks associated with air pollutants emitted by the project. Emissions of PM<sub>2.5</sub> from coal-fired power plants are generally attributed to the transformation SO<sub>2</sub> and NO<sub>x</sub> emitted from stacks into fine particulate matter downwind of those stacks. Since SO<sub>2</sub> and NO<sub>x</sub> emission rates from Phase I and Phase II of the Mesaba Energy Project will be among the lowest nationwide for any power plant using coal as a feedstock, PM<sub>2.5</sub> emissions and health effects would be expected to be low in comparison with such other plants. To provide further insight on potential health impacts from particulate matter, new text has been added to Section 4.17.2.3 (Volume1).

**Commenter 7 – Ed Anderson**

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1 those numbers are actually going to be low given recent  
2 research in this field.

3 In contrast, when I read through the draft  
4 EIS, there's health information about electro magnetic  
5 fields, and it gives a brief summary of the cancer and  
6 non-cancer health hazard indices. The majority of that  
7 text on health talks about the background rates of  
8 obesity, smoking, drinking, hypertension, other chronic  
9 illnesses that would be found in Itasca County and St.  
10 Louis County in Minnesota. It really has no bearing on  
11 this project right now.

12 The important issues, health related issues  
13 are really not discussed in the draft EIS. Excelsior  
14 actually did a better job of establishing the adverse  
15 health impacts than this draft EIS does; and in this  
16 respect it's grossly inadequate.

17 Although we believe that the Department of  
18 Energy's objectives related to their Clean Coal Power  
19 Initiative are misdirected, they actually do appear to  
20 be clear. I'm not as clear about the Department of  
21 Commerce's objectives. When I read their mission  
22 statement, in part it reads, "Ensuring equitable,  
23 commercial and financial transactions, reliable utility  
24 services, and advocating the public's interest before  
25 the PUC." The Mesaba Project does not appear to meet

**7-03  
(cont'd)**

**7-04**

**Responses**

**Comment 7-03 (cont'd)**

Section 5.2 (Volume 1) has also been revised to include new text on findings from revised cumulative air and health risk modeling efforts (see Appendix D [Volume 2] for more detailed updates to various cumulative analyses, including impacts to air quality and health risk).

**Comment 7-04**

Final EIS Section 1.4.1 (Volume 1) explains that DOE's purpose and need in this EIS is to demonstrate a specific, advanced coal-based technology selected competitively for co-shared funding under the CCPI Program. The CCPI legislation (Public Law No. 107-63) has a narrow focus in directing DOE to demonstrate the commercial viability of technology advancements related to coal-based power generation designed to reduce the barriers to continued and expanded use of coal (coal is required to provide at least 75 percent of the fuel for power generation). MDOC's responsibilities under the Minnesota Power Plant Siting Act are explained in Section 1.2.2 of the Final EIS, which describes the incentives established by the Minnesota Legislature for the location of innovative energy technology projects in the TTRA. 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 7 – Ed Anderson; Commenter 8 – Charles Decker**

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**7-04  
(cont'd)**

1 the objectives of the DOE or DOC by any stretch of the  
2 imagination; and we certainly don't feel that through  
3 this draft EIS that the DOC is advocating in the public  
4 interest.

5 This is the wrong project. It's in the wrong  
6 place. The people here today and the people who have  
7 submitted comments in the past really deserve to have  
8 those comments and concerns taken seriously. And we  
9 hope that that will be reflected in the final EIS.

10 Thank you. (Applause)

11 UNIDENTIFIED: Again; one, two, three.

12 (Applause)

13 BILL STROM: Thank you, Ed. Charlie Decker.

14 CHARLES DECKER: Good evening. I'm Charles  
15 Decker, D-e-c-k-e-r. I just have a couple comments to  
16 make. I'm a physician from Hibbing; and I talked here  
17 previously.

**8-01**

18 First of all, most of the things that I was  
19 going to mention have so eloquently been spoken to by  
20 the previous speakers, that I don't have very much to  
21 say, except I can sort of draw some conclusions from  
22 what they said, that, very briefly, as Dr. Anderson  
23 mentioned, it seems to be the wrong project in the  
24 wrong place. It would seem logical to me and to others  
25 that a project such as this should not be built in the

**Responses**

**Comment 8-01**

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 or geologic formations conducive to sequestration of CO<sub>2</sub>.

**Commenter 8 – Charles Decker; Commenter 9 – Mary Munn**

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**Responses**

**8-01  
(cont'd)**

1 northwoods of Minnesota. It should be built somewhere  
2 where the coal is located, somewhere where carbon  
3 dioxide can be sequestered, dumped into the ground, as  
4 the one speaker said; and would not cost a fortune to  
5 make the product, as another speaker mentioned, the  
6 cost prohibitive for sale, the increased cost of power  
7 to the consumer.

8 I think that the Environmental Impact  
9 Statement should be reviewed very carefully, from the  
10 comments of the previous speakers, mentioning the  
11 particular things that Dr. Anderson mentioned so very  
12 eloquently.

13 I think you'll note that there is some  
14 opposition to this project, and the opposition gives  
15 some very scientific and logical conclusions tonight,  
16 and they're not strictly emotional outbursts. Thank  
17 you very much. (Applause).

18 BILL STROM: Thank you, Charles. Mary Munn.

19 MARY MUNN: Mary Munn, M-u-n-n. I'm here  
20 representing Fond Du Lac Reservation. I'm their  
21 recently hired program coordinator so I've only had a  
22 brief time to review some of the information. I would  
23 like to thank everybody for being here, and I really  
24 appreciate the concerned citizens. You guys have  
25 really done your homework.

**Commenter 9 – Mary Munn; Commenter 10 – Mike Andrews**

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9-01

1 I, too, am curious. Appendix B covers air. I  
2 had the understanding that PM 2.5 was the standard.  
3 And I would like clarification as to why it's PM 10 is  
4 what is being tested. I also was curious about the  
5 impact area and why is it considered a circle. With  
6 geographic information systems, modeling now can  
7 account for wind direction and average that out. If  
8 you have an east-west wind in a circle, and your plant  
9 is in the middle of the circle, well, your impact is  
10 going to be divided in half immediately upon what is  
11 going to fall out of the atmosphere.

9-02

12 And one other comment is that if the DOE is  
13 interested in clean coal, if this community is going to  
14 put up with the impacts or expect the impact of this  
15 coal generating facility, perhaps you could shut down a  
16 facility of equal magawatts elsewhere in the country.  
17 That's all. Thank you. (Applause).

18 BILL STROM: Thank you, Mary. Mike Andrews.

19 MIKE ANDREWS: My name is Mike Andrews,  
20 M-i-k-e A-n-d-r-e-w-s; and I represent Itasca  
21 Economic Development Corporation. It's a non-profit  
22 corporation whose mission is helping create quality  
23 jobs.

10-01

24 We have issued statements in the past in  
25 support of the Mesaba Project and Excelsior Energy, and

**Responses**

**Comment 9-01**

There are emission standards for both PM<sub>10</sub> and PM<sub>2.5</sub>. However, the standard for PM<sub>2.5</sub> was established more recently by EPA and, in the case where near-field measurements were not available for PM<sub>2.5</sub>, they were derived from PM<sub>10</sub> data using a multiplier based on research conducted by EPA (USEPA, 2005). Where far-field measurements are not available, an often-used approximation assumes that PM<sub>10</sub> is made up entirely of PM<sub>2.5</sub>.

The model takes meteorological data, such as wind direction, into account. The impact area that the model provided is not a circle but a series of contours representing various concentrations moving away from the power plant. However, in order to be conservative, the radius of a circle was based on the maximum distance from the power plant experiencing a particular concentration. That circle was provided as the area of potential impact in the EIS.

**Comment 9-02**

DOE does not have specific authority for the shutdown of individual power plants, which are privately or publicly owned, are part of the national electric generation and distribution network, and operate under existing permits. However, as advanced technologies such as IGCC become proven commercially, DOE expects that older and less-efficient coal-fueled power plants will be replaced by newer plants that are less-polluting.

**Comment 10-01**

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

**Commenter 10 – Mike Andrews; Commenter 11 – David Hudek; Commenter 12 – Sue Hutchins**

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**10-01  
(cont'd)**

1 we take public comments very seriously, and we will be  
2 submitting written statements after scrutinizing the  
3 draft Environmental Impact Statement. Thank you.  
4 (Applause)

5 BILL STROM: Thank you, Mike. David Hudek.

6 DAVID HUDEK: D-a-v-i-d H-u-d-e-k. I'm also  
7 one of the landowners on Diamond Lake. And also agree  
8 with some of the other comments previously speakers  
9 have pointed out.

**11-01**

10 One in particular is the EIS has not put in  
11 their scope the effects of groundwater and local wells.  
12 And since my well is going to be extremely close to the  
13 project, I want to know what the risks are with the  
14 mercury and lead possibly contaminating my personal  
15 well, as well as hundreds and even thousands of wells  
16 in this area, this county, and this state. That's it.  
17 Thanks. (Applause)

18 BILL STROM: Thank you, David. Sue Hutchins.

19 SUE HUTCHINS: I'm Sue Hutchins,  
20 H-u-t-c-h-i-n-s. I'm an instructor of biology and  
21 environmental science at Itasca Community College.

**12-01**

22 The Environmental Impact Statement talks a lot  
23 about our environment, but let's remember that the coal  
24 has to come from somewhere. And surface mining for  
25 coal has devastated communities in the Appalachian

**Responses**

**Comment 11-01**

As explained in response to Comment 6-01, the proposed use of enhanced ZLD at the West Range Site would eliminate discharges of process and blowdown waters to surface waters, thereby eliminating the potential for discharges affecting public or private wells.

**Comment 12-01**

The effects of commercial coal mining are generally well known and well described and are not within the scope of this project. The Mesaba Energy Project does not aim to change mining techniques and, for the proposed project, DOE has no decisions that would affect coal mining techniques. However, it should be noted that the Mesaba Energy Project is not proposing to use Appalachian coal, or any other coal that would be mined via mountaintop removal. The primary fuel for the Mesaba Energy Project would be Powder River Basin Coal. The text in the Final EIS (Section 4.3.2.2 [Volume 1]) has been updated to include the incremental increase in impacts associated with transportation of this coal (about 1.5%) due to the Mesaba Energy Project.

The response to Comment 6-01 describes the use of enhanced ZLD at the West Range Site to eliminate discharges to surface waters.

Sections 4.3.2.6 and 4.17.2.3 (Volume 1) address the impacts of the Mesaba Energy Project's mercury emissions on fishable waters and fish consumption.

Sections 2.2.3.1 and 4.3.2.2 (Volume 1) of the Final EIS have been updated to include a subsection with discussions regarding truck and train emissions associated with the Mesaba Energy Project. Train emissions (see table below) would predominantly be as a result of delivery of feedstock to operate the power station.

Emissions from trains delivering feedstock for Phase I and II of the Mesaba Energy Project:

	CO <sub>2</sub> (tpy)	SO <sub>2</sub> (tpy)	NO <sub>x</sub> (tpy)	PM (tpy)	CO (tpy)
West Range	150,000	1.5	2,300	80	410
East Range	170,000	1.7	2,600	90	460

These emissions are calculated based on the worst-case scenarios of the maximum annual tonnage of feedstock delivery (i.e., partial slurry quench on 100% sub-bituminous coal) from the farthest distance source

**Commenter 12 – Sue Hutchins**

45

1 Mountains. They have mountaintop removal. 7 percent  
2 of the area has been just cleared. They dump the waste  
3 into valleys or streams. 1200 miles of streams have  
4 already been buried or polluted.

5 If you mine coal underground, we've all heard  
6 of the disasters, the mine cave-ins that kill our  
7 miners. Black lung disease still kills a thousand  
8 former coal miners every year in the United States. So  
9 let's look at these environments also. Every step of  
10 the way coal is dirty. It's not funny -- (applause) --  
11 it's not funny, but every time I hear the words "clean  
12 coal," I just have to laugh. Coal is not clean.

13 We have impurities. We have acids, heavy  
14 metals that have to be removed from the coal. These  
15 can leach into surface water and underground water.  
16 When you transport coal, the trains and the trucks and  
17 the barges that carry coal are run on diesel fuel.  
18 Diesel releases particulates. It's a major source of  
19 nitrogen oxide. And soot, the blowing coal dust as it  
20 goes through our towns, the increased train traffic  
21 will bring more soot to our air. There will be more  
22 mercury in our water. One of the assignments I give my  
23 students is to look up their favorite lake and see if  
24 they can eat the fish from it. And students are always  
25 surprised to find that maybe they should only be eating

**12-01  
(cont'd)**

**Responses**

**Comment 12-01 (cont'd)**  
(i.e., Powder River Basin).

Truck emissions (see table below) would predominantly occur as a result of transporting slag and ZLD salt from the power station and the greatest distance of truck transportation. Slag production at the power station would depend on the amount of feedstock used. Total ZLD salt production would depend on the water quality of the water source, which is lower at the East Range Site.

Emissions from trucks transporting solid byproducts and waste from Phase I and II of the Mesaba Energy Project:

	CO <sub>2</sub> (tpy)	SO <sub>2</sub> (tpy)	NO <sub>x</sub> (tpy)	PM (tpy)	CO (tpy)
West Range	7,700	0.1	60	0.8	7
East Range	8,100	0.1	61	0.8	7

The worst-case scenario of feedstock use and ZLD salt production were used to calculate truck emissions. Detailed discussion of worst-case situations used in the Mesaba Energy Project's NEPA analysis is provided in Table 2.1-1 of the EIS.

Except for NO<sub>x</sub>, emissions from the trains and trucks are much smaller than those from operation of the power plant; therefore, impacts would be considered negligible. Although NO<sub>x</sub> emission rates are comparable to those from the power plant operations, the impacts from the train and truck emissions would be far less than those of the power plant because the trains and trucks are mobile. Unlike a stationary source in which the emissions are localized, the emissions from the trains and trucks would be dispersed over a large area and distance and, depending on the speed of the train or truck, wind and other meteorological factors, localized impacts would be negligible.

**Commenter 12 – Sue Hutchins; Commenter 13 – Joan Beech**

**12-01  
(cont'd)**

1 one fish a month.  
2 I'm also a parent. I have to watch how much  
3 fish I feed my 10-year-old daughter because she will  
4 have children some day, I hope, and mercury will effect  
5 her nervous system and can be passed on to her unborn  
6 children.

**12-02**

7 The true cost of coal is not being addressed.  
8 We are told that this is a very cheap, one of the  
9 lowest cost ways to met electricity demand. But this  
10 assumes that this power plant can release carbon  
11 dioxide into the air with no penalty. Many of the  
12 nation's largest power companies openly acknowledge  
13 that limits on carbon emissions are coming, they're  
14 inevitable. When even modestly priced CO2 allowances  
15 are included in the cost production, coal quickly loses  
16 it's position as the lowest cost option.

17 Building more coal-fired power plants does not  
18 make sense enviromentally or economically when these  
19 costs are factored in. We've been ignoring the true  
20 costs, and with climate change we cannot afford to keep  
21 making this dangerous mistake. Thank you. (Applause)

22 BILL STROM: Thank you, Sue. Joan Beech.

23 JOAN BEECH: Joan Beech, J-o-a-n B-e-e-c-h,

**13-01**

24 rural Bovey. As a citizen I speak, not only for  
25 myself, but also for my children and grandchildren,

**Responses**

**Comment 12-02**

DOE is the Federal agency charged with responsibility to ensure that the U.S. develops sources of energy to maintain economic prosperity and national security. The department oversees numerous programs and projects that are intended to achieve these objectives, including fossil energy, nuclear energy, renewable sources, and energy conservation. According to reports by the Energy Information Administration, the cost of coal per million Btu has consistently been lower than for oil or natural gas since 1979. See also response to Comment 102-30 for additional discussions regarding the economic impacts of CO<sub>2</sub> emissions.

Section 1.2.1 (Volume 1) notes that more than 50 percent of the nation's electricity generation is fueled by coal and nearly half of existing plants are more than 30 years old. Replacement of coal-based power generation by other energy sources is a long-term proposition at best. Currently, IGCC technologies offer the best opportunities among coal-fueled plants to capture concentrated CO<sub>2</sub> emissions. The efficiencies of CO<sub>2</sub> capture attainable at older coal-fired plants are substantially lower. Section 5.2.8 (Volume 1) of the Final EIS discusses the potential CO<sub>2</sub> emissions from the Mesaba Energy Project and its potential contribution to global CO<sub>2</sub> emissions rates. Also included in this section of the Final EIS are discussions of the overall CO<sub>2</sub> impacts to the global environment.

See response to Comment 1-02 regarding the potential for future CCS implementation at the Mesaba plant. DOE is actively pursuing methods of reducing CO<sub>2</sub> emissions, including development of carbon sequestration technology through its Carbon Sequestration Program (see [http://www.netl.doe.gov/technologies/carbon\\_seq/index.html](http://www.netl.doe.gov/technologies/carbon_seq/index.html)). Other than enhanced oil recovery, sequestration options have not been demonstrated at the scale required for the proposed project. Sequestration options for all regions of the country are still under investigation in DOE's Carbon Sequestration Program (DOE, 2006). Through its Regional Carbon Sequestration Partnerships, which is a collaboration involving government, industry, universities, and international organizations, DOE will determine the most suitable technologies, regulations, and infrastructure needs for carbon capture and sequestration. With regard to costs of CCS, DOE's goal is to reduce the increase in cost of electricity associated with CCS such that coal will continue to be cost-competitive in the future and an important component of the nation's energy mix.

**Comment 13-01**

See response to Comment 12-02, which addresses the same concern.

**Commenter 13 – Joan Beech; Commenter 14 – Harry Hutchins**

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**13-01  
(cont'd)**

1 knowing that CO2 is the culprit of greenhouse gases.  
2 Many of the speakers have spoken very eloquently about  
3 carbon capture and sequestration. As we look at the  
4 Environmental Impact Statement, we realize that if it  
5 is true -- it is definitely true that CO2 is the  
6 culprit, then why has this project continued to be on  
7 the docket? It does say in the Impact Statement that  
8 Excelsior has not established a detailed design for  
9 carbon capture and sequestration. If it is really true  
10 that we, as the State of Minnesota, want to reduce our  
11 emissions by 15 percent by the year 2015 and 80 percent  
12 by 2025, why are we allowing this project to go  
13 forward, and to be the state's second largest polluter  
14 and one that has no realistic hope for carbon capture  
15 and sequestration? Thank you. (Applause)

16 BILL STROM: Thank you, Joan. Harry Hutchins.

17 HARRY HUTCHINS: My name is Harry Hutchins,  
18 H-u-t-c-h-i-n-s, I live in Grand Rapids, Minnesota. I  
19 also teach at Itasca Community College in the natural  
20 resource program there.

**14-01**

21 Now, there's a few things that come to my mind  
22 after I looked at the biological section of the EIS, in  
23 that they looked at primarily the flora and fauna and  
24 the effects on that. And there were some, I felt, some  
25 pretty major rewrites that need to be done; and whoever

**Responses**

**Comment 14-01**

Sections 3.8 and 4.8 (Volume 1) of the EIS have been updated with additional information.

**Commenter 14 – Harry Hutchins**

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**14-01  
(cont'd)**

1 wrote this needs do to go back and take a look at some  
 2 of the new research. Some of it was things that they  
 3 must have heard during college, and they're very  
 4 generic statements. Some of the new information that's  
 5 out was not put into this, and if it was, it would have  
 6 been a very big rewrite of this section. So I think  
 7 these people, whoever wrote this, need to take a look  
 8 at this again.

**14-02**

9 A couple of things. If you look at CO2  
 10 production and we look at what's happening with global  
 11 climate change, for example, Dr. Lee Fralick from the  
 12 University of Minnesota, the forestry ecologist there,  
 13 has stated many times over the last few years that the  
 14 one tree, if any tree, if you picked one tree that's  
 15 going to lose, it's going to be black spruce. And with  
 16 global climate change, black spruce is the one that's  
 17 fading away from Minnesota the quickest. And that is  
 18 one of the key species that's part of the species mix  
 19 that Blandin Paper Company uses.

20 We can't just throw away our forest's health  
 21 for one project like this. And every time we add more  
 22 CO2 and we begin to change this environment more and  
 23 more, we're going to start to lose some of the flora  
 24 and fauna no matter what this paper says that's  
 25 currently written.

**Responses**

**Comment 14-02**

Section 5.2.8 (Volume 1) has been added in the Final EIS to discuss the effects of global climate change regionally, nationally and globally. DOE recognizes that the emissions of the Mesaba Energy Project do contribute incrementally to these effects. However, there are no reliable models currently available to accurately assess the impacts of GHG emissions from a single, discrete source on climate change.

Section 5.2.6 (Volume 1) describes the cumulative impacts on wildlife habitat of the Mesaba Energy Project combined with other reasonably foreseeable actions in the West Range and East Range areas. This discussion addresses the potential for habitat fragmentation. While construction of the Mesaba Energy Project would be expected to impact bird species adversely through habitat loss and degradation, habitat loss from the project would constitute a small fraction of the total available habitat at either the West or East Range Site and would not eliminate all suitable nesting habitat for bird species. As discussed in Section 4.8 (Volume 1), mitigation of effects could include coordination with MNDNR to avoid grading and clearing activities during the nesting/rearing season, when species would be most susceptible to impacts. Predation of ground-nesting birds would increase along the newly cleared utility corridors primarily due to the increased presence of edge species such as raccoons and opossums; however, the overall amount of forest edge created and the abundant amount of interior forest habitat would not create a noticeable decline in these bird populations. Studies have shown that nesting success rates of ground-nesting birds increase within 328 feet of the forest edge. In addition, studies have shown that predation due to edge effect is lower in forest-dominated landscapes compared to agricultural-dominated landscapes, as factors such as brood parasitism by brown-headed cowbirds is lessened (Manolis et al., 2002).

**Commenter 14 – Harry Hutchins**

49

**Responses**

1           They talk about, for example, things like, oh,  
2 well, let's take a look at the fragmentation that  
3 occurs by the power line right-of-ways and the trains.  
4 And they make it sound like, well, the animals will be  
5 gone temporarily, but they'll come back. Or all of a  
6 sudden some grassland species will move into what was  
7 once a forested region. Where do they come from? It's  
8 so vague, it's hard to know. Do they fly in from 200  
9 miles away up by Bagley and come in out of the prairie  
10 and all of a sudden start to occupy what was once a  
11 forested region and is now a new grassland that was  
12 created by this fragmentation?

**14-02  
(cont'd)**

13           we also need to realize that these birds,  
14 especially, are major predators on caterpillars that  
15 are the larvae that defoliate our trees on. The birds  
16 are so important to forest health. They come up here  
17 for three months out of the year, and they come up here  
18 from the tropics and they breed and they eat insects,  
19 primarily caterpillars. And these are the things that  
20 defoliate our trees, and if we don't have them here --  
21 and they're not going to be here if we continue to  
22 fragment our forest, because the edge predators will  
23 increase and will move in and will start getting the  
24 ground nests and the low nests of many of these new  
25 tropical species. We've already seen a decline in many

**Commenter 14 – Harry Hutchins**

50

**14-02  
(cont'd)**

1 of our ground nesting birds here. So I suggest these  
2 people go and take a look at some of the new  
3 information that's out there from the Natural Resource  
4 Research Institute. It's too much for me to go into  
5 right here.

**14-03**

6 I want to close with two things. One of them  
7 is there was a Citizen Advisory Group that the state  
8 put together in 2000, and they created a landscape  
9 plan; over 70 citizens from the north central part of  
10 Minnesota. And that landscape plan, it was okayed, and  
11 it was passed by the Forest Resource Council, which was  
12 set up by the governor and the State of Minnesota. And  
13 they got forest policy in this state, and one of the  
14 things they said was for the north central part of  
15 Minnesota, that we would not have any loss of forest  
16 land, and we'll try to maintain our contiguous forest  
17 areas. And this is a big contiguous forest area. So  
18 we have a policy not to do that. Let's follow it and  
19 not fragment it with these lines and a new power plant  
20 and things like that.

**14-04**

21 And I'll end with this: Some of you may have  
22 had a chance to go out in October, the first week in  
23 October, at Gustavus University down in St. Peter. And  
24 there they have the annual conference, Nobel  
25 Conference, and this year it was on global climate

**Responses**

**Comment 14-03**

The landscape plan for North Central Minnesota (Recommended Desired Outcomes, Goals and Strategies – North Central Landscape Region: A Report to the Minnesota Forest Resources Council [amended January 27, 2004]) was developed to maintain long-term sustainable forest practices in North-Central Minnesota. The four main goals for desired future forest condition set forth in the plan include:

- 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 land use conflicts (hereafter referred to as “natural resource emphasis areas”).
- In large blocks of contiguous forestland, retain critical natural shoreline on lakes for scenic, wildlife, water quality, and other natural resource values.

The third point above indicates a goal for retention of large blocks of contiguous forest within “natural resource emphasis areas.” The plan defines these areas as “large blocks of contiguous forest land that have minimal inclusion of conflicting land uses. They have been created and/or retained for natural resource and ecological benefits and to minimize land use conflicts...which encompass national forests, state forests, county memorial forests, and other large, contiguous blocks of forest land through mutual agreement.” The project impact areas do not fall within these “natural resource emphasis areas.” As discussed in Section 3.8 (Volume 1), there were no old-growth or mature conifer forests observed during the field reconnaissance at the West Range Site and the eastern half of the West Range Site had been harvested for timber in 2005 and portions of the western half of the West Range Site exhibited evidence of logging activities within the past 10 to 20 years. At the East Range Site, timber harvesting is the primary land use, and has influenced the composition and dynamics of the forest cover on the site. A portion of the uplands within the East Range Site were clear-cut within the previous five years. Large areas are virtually devoid of tree cover due to recent clear-cutting.

**Commenter 14 – Harry Hutchins; Commenter 15 – Warren Shaffer**

51

**14-04  
(cont'd)**

1 change. And everyone of the six speakers there,  
2 including the comments from MIT, said that we should  
3 have an immediate, an immediate band on any coal-fired  
4 power plants in the United States until we learn how to  
5 sequester CO2. And we haven't seen it with this  
6 project, and we don't know how do it yet. So it should  
7 be an immediate band here, as it is everywhere else in  
8 the United States. Thank you. (Applause)

9 BILL STROM: Thank you, Harry. Warren  
10 Shaffer.

11 WARREN SHAFFER: My name is Warren Shaffer,  
12 S-h-a-f-f-e-r. On Tuesday, November 13th, 2007, using  
13 the Table of Contents, I read portions of the  
14 Environmental Impact Statement for the Mesaba Energy  
15 Project. I was particularly interested in the effects  
16 of the project on the Canisteo Mine Pit and Trout Lake,  
17 usually Canisteo Mine Pit is abbreviated CMP. Mr.  
18 James Walsh, hydrologist with the Minnesota Department  
19 of Health Wellhead Protection Program, has established  
20 that the two bodies of water, Canisteo Mine Pit and  
21 Trout Lake, are hydrologically connected. He likened  
22 the water movement between CMP and Trout Lake to a pan  
23 with water in it. He said if you tilt the pan up one  
24 way, the water will move to the other side of the pan,  
25 and vice versa. If the Canisteo Mine Pit water level

**15-01**

**Responses**

**Comment 14-04**

See response to Comment 12-02, which addresses the same concern.

**Comment 15-01**

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. Thus, no pollutants would be discharged into any surface waters, which would eliminate the majority of water quality concerns at the West Range Site as originally discussed in the Draft EIS, including risks to hydrologically connected private wells and aquifers. Sections 2.2.2.3, 2.2.3.2, and 2.3.1.3 (Volume 1) of the Final EIS have been updated to describe the use of the enhanced ZLD system at the West Range Site. Section 4.5 (Volume 1), Surface Water Resources, has been revised to reflect use of the enhanced ZLD system. Additionally, following publication of the Draft EIS, MNDNR announced its plans to construct a gravity outflow device from the CMP to the Prairie River that would allow the CMP to be maintained at an MNDNR-determined maximum water level (Scenic Range News Forum, 2009).

**Commenter 15 – Warren Shaffer**

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**Responses**

1 is higher than Trout Lake's water level, water will  
2 flow toward Trout Lake. If you reduce the water level  
3 of the Canisteo Mine Pit below 1288 feet below sea  
4 level, the height of Trout Lake, water will flow from  
5 the lake to the mine pit.

6 That means that any effect on the Canisteo  
7 Mine Pit will have an effect on Trout Lake. If you  
8 introduce contaminates into the mine pit and the pit is  
9 higher than the lake, the contaminates will reach Trout  
10 Lake. Prior to mining 65 percent of the CMP watershed  
11 supplied water to Trout Lake. As the pit fills, it has  
12 been the intention to restore that water to its  
13 original pathway by allowing pit water to again flow to  
14 Trout Lake. Under Excelsior Energy's plan CMP water  
15 will be held at or below the level necessary to permit  
16 CMP to flow to Trout Lake, thus perpetuating the  
17 diminished natural watershed.

18 Mr. Walsh was explicit that the Wellhead  
19 Protection Program does not offer protection for  
20 private wells. He did specify that the municipal  
21 aquifers for Coleraine and Bovey and all the private  
22 wells around Trout Lake are connected to both the  
23 Canisteo Mine Pit and Trout Lake. Some protection of  
24 the water used by Coleraine and Bovey may be offered by  
25 their water purification systems. No such protection

**15-01  
(cont'd)**

**Commenter 15 – Warren Shaffer**

53

**Responses**

1 is available for the private wells.

2 According to the Environmental Impact

3 Statement prepared for the Mesaba Energy Project, water

4 is to be drawn from the Canisteo Mine Pit and blowdown

5 water is returned to the pit between 810 gallons per

6 minute, and 4190 gallons per minute is the sustainable

7 withdrawal flow for the water balance modeling. That's

8 Table 4.5-2.

9 Water returned to the pit is expected to be

10 350 gallons per minute during Phase 1 operations and

11 2650 to 3500 gallons per minute during Phase 2. That's

12 from Table 4.5-2, footnote (e). Roughly those figures

13 are reflected in Figure 4.5-2, the system description

14 for the water use of the plant.

15 On Page 4.5-15 the Environmental Impact

16 Statement states that the anticipated discharges are

17 expected to be within water quality criteria standards

18 without mixing except for hardness, total dissolved

19 solids, sulfate and conductivity. Within the CMP

20 levels of these four parameters would rise over time

21 during the operation of the power station and approach

22 or exceed water quality standards.

23 But on Page 4.5-3, total dissolved solids

24 would be below 700 milligrams a liter for 26 years,

25 perhaps the life of the plant. 700 milligrams per

**15-01  
(cont'd)**

**Commenter 15 – Warren Shaffer; Commenter 16 – Andrew David**

54

**Responses**

**15-01  
(cont'd)**

1 liter is the standard, not for water for human  
2 consumption, but for water for irrigation.

3 I spent less than an hour and a half looking  
4 at Mesaba Energy Project's EIS. I'm not a trained  
5 hydrologist or an engineer. As a member of the Western  
6 Mesabi Mine Planning Board I was assured by Mr. Robert  
7 Evans that Excelsior Energy had no plans to discharge  
8 water into the Canisteo pit. But Mr. Evans' assurances  
9 are not reflected in the Environmental Impact  
10 Statement. Mr. Walsh's study of the wells, watershed  
11 and aquifers establishes the connection between these  
12 waters, the Canisteo Mine Pit and Trout Lake. The  
13 possible negative effects of the project on the waters  
14 surrounding the project are substantial, not  
15 inconsequential. Because of this I request a more  
16 thorough investigation be performed to establish the  
17 effects of the Mesaba Project on water quality in the  
18 Canisteo Mine Pit, Trout Lake and the corresponding  
19 aquifers. Thank you. (Applause)

20 BILL STORM: Thank you, Warren. Andrew David.

21 ANDREW DAVID: Good evening. Andrew David,  
22 A-n-d-r-e-w D-a-v-i-d. I would like to thank you for  
23 the opportunity to come here and speak tonight. Thank  
24 you for listening. It's my hope that my words and all  
25 of our words are heard beyond the walls of this

**Commenter 16 – Andrew David**

55

1 building.

2 I'd like to make some comments on Sections

3 4.11 and 4.12, respectively socioeconomics and

4 environmental justice. Section 4.11 analyzes the

5 economic impact of building Phase I and Phase II of the

6 Mesaba Energy Project; particularly impact of

7 construction and continued operation to have employment

8 income, business population and housing. In order to

9 do this the EIS used a study called the UMD BBER study,

10 University of Minnesota-Duluth. They used IMPLAN

11 software modeling. I'd like to point out that this

12 plan -- and if you review the EIS, please look at this

13 plan and review it as well, not just take it as a

14 footnote. This plan is a benefit study only. It is

15 not a cost benefit analysis. Okay. No cost was ever

16 attributed. So as a benefit study -- I should point

17 out that even the authors recognized -- if you go to

18 the last page, even the authors will say that they

19 recognize this is not a cost benefit analysis, and they

20 caution against using their study as a complete view of

21 the impacts of building Mesaba Phase I and Phase II.

22 The BBER Study is misleading in stating the

23 economic value of Itasca County or the seven-county

24 wide range of influence. That's because most of the

25 economic values supposedly coming to the area in the

16-01

**Responses**

**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 stated in Section 4.11.1.2 (Volume 1) of the Final EIS, the Bureau of Business and Economics Research (BBER) at the University of Minnesota at Duluth 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 results are described in Section 4.11.2 (Volume 1) of the Final EIS, which points out that 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. However, 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 seven-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.

As explained in Section 1.6.4 (Volume 1), although DOE's CCPI Program co-funding and potential loan guarantee will apply only to Phase I of the Mesaba Energy Project, Phase II, which is a duplicate of the Phase I facility, is considered a connected action. MDOC's state EIS must address the project as submitted in the joint permit application, which includes both phases of the Mesaba Energy Project. Because Phase II is inextricably linked to the successful performance of Phase I, the impacts of both phases are assessed as a whole in this EIS. However, at the request of USACE (see Comment 116-05), the Final EIS has been revised as appropriate to describe the potential impacts of Phase I separately from the impacts of the combined two-phased project.

**Commenter 16 – Andrew David**

56

1 form of cost for coal, transportation, profits,  
2 rentals, interest, et cetera, will actually be accrued  
3 where those services are provided or purchased. That's  
4 not going to happen in Itasca County. Most wages will  
5 be provided in Itasca County, although roughly 20  
6 percent are estimated to be private non-residents.

7 Most of the construction of plant operation  
8 positions will be filled by people outside of Itasca  
9 County. That number will rise if construction is a  
10 union job. It has direct negative impacts on housing  
11 in the area during the construction period.

12 If you reference Page 4.11-4, the EIS states  
13 that long-term housing requirements are not viewed as  
14 an issue, low number of jobs added to the area.  
15 However, the EIS does find that depending on the  
16 percentage of construction jobs that could be filled by  
17 existing residents, the influx of workers from outside  
18 the region could create a demand for rental housing and  
19 lodging that may exceed available capacity.

20 The other thing I want to point out is that  
21 when you talk about housing and rental housing  
22 availability for construction workers, this entire EIS  
23 is done without considering the potential for Minnesota  
24 Steel, which is a much larger project, will require  
25 much more in terms of housing and construction workers,

**16-01  
(cont'd)**

**Responses**

**Comment 16-01 (cont'd)**

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 did not anticipate that the potential impacts would be significant, even considering cumulative effects including construction of the Mesaba Energy Project.

With respect to the claimed inequities in considering impacts at regional and local levels, the consideration of these different regions of influence is reasonable. The economic and employment benefits predicted by BBER's study cannot be measured accurately at the level of a local community or neighborhood. Therefore, these beneficial effects are presented for the 7-county Arrowhead Region defined in Section 3.11, although it is anticipated that certain economic benefits to local retail establishments for goods and services would result. However, most adverse effects of plant construction and operations on local communities and residents can be predicted based on their proximities to project features (plant equipment, 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.

**Commenter 16 – Andrew David**

57

**Responses**

1 and is going to be virtually next door. Both of these  
2 go in, there will definitely be a housing shortage.

3 Most, if not all, the discussion in this  
4 section references dollars and employment that will be  
5 gained if Mesaba Phase I and II are built. Therefore,  
6 the economic benefits are being over-estimated given  
7 the scope of the proposed building. The permitting  
8 process is asking only for Phase I, yet the economic  
9 analysis is offering figures for Phase I and II  
10 combined. We need to see in the EIS that accurately  
11 compares all the costs and benefits just for Phase I.

12 Considering that the economic impact is  
13 thought to be a seven-county region, or even throughout  
14 Minnesota -- at one point that statement is made. But  
15 areas that might be adversely affected are considered  
16 to be individual blocks within the census tract or just  
17 along HVTL corridors and utility right-of-ways. This  
18 is inequitable.

19 The socioeconomic analysis is incomplete.  
20 Another example, the Mesaba Project has yet to get its  
21 project to market and cannot do that without an HVTL  
22 that runs from northern Minnesota, where the power is  
23 to be generated, to the Twin Cities, St. Cloud area,  
24 where the power is supposedly needed. This analysis  
25 does not cover the cost, nor the impact of creating

**16-01  
(cont'd)**

**Commenter 16 – Andrew David**

58

**16-01  
(cont'd)**

1 additional cross-state transmission lines. If we take  
2 Ross Hammond's example of the car for sale, we find  
3 that car not only is on blocks without tires, but it  
4 doesn't have a transmission. Other than that, it's  
5 ready to go.

6 General comments on Section 4.12,  
7 Environmental Justice. The region of influence for the  
8 environmental justice analysis is incredibly narrow and  
9 does not match the region of influence used for the  
10 socioeconomic analysis. Moreover, my guess is that  
11 neither of these would match the size of the region of  
12 influence for the environmental impact. In other  
13 words, if we took the environmental impact area, how  
14 come that's not being used for the economic analysis  
15 and the environmental justice analysis? The three  
16 should be in line.

17 "The regions of influence for environmental  
18 justice are determined for each resource area by the  
19 potential for minority and low-income populations to  
20 bear a disproportionate share of high and adverse  
21 environmental impacts from activities within the  
22 project area." The EIS then goes on to define the  
23 project area as census tract 9810 for the West Range  
24 and census tract 140 for the East Range site. If the  
25 economic analysis can be extended to a seven-county

**Responses**

**Comment 16-02**

As stated in Section 3.12 (Volume 1) of the Final EIS, environmental justice in DOE environmental decision making requires the fair treatment of all peoples regardless of race, ethnicity, and income or education levels. 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 equipment, 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. 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 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 Taconite Tax Relief Area in part because of the economic challenges experienced there.

With respect to the comment on the adequacy of consideration for potential adverse health risks from plant operations, Section 4.17 (Volume 1) describes these risks to local populations (the heading for Section 4.17.2.3 was inadvertently lost in printed copies of the Draft EIS) based on the AERA. 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.

**Commenter 16 – Andrew David**

59

1 area, why is the environmental justice analysis limited  
2 to a single census tract for each site?

3 Environmental region of influence or  
4 environmental project area for the Mesaba Project is  
5 undoubtedly larger than a single census tract. If this  
6 is true, the environmental justice analysis, which is  
7 charged with assessing the health effects, risks and  
8 rate of hazardous exposure and potential cumulative  
9 adverse exposures must take a larger geographic area  
10 into consideration.

11 Northern Minnesota in general and Itasca  
12 County in particular is the center for the  
13 environmental region of influence. Residents of Itasca  
14 County will bear the burden of any increased health  
15 effects, any increased health risks or rates or be  
16 affected by cumulative or multipule adverse exposures  
17 from the environmental hazards.

18 The electricity generated here will be sent to  
19 the Twin Cities metro area where it's needed. Northern  
20 Minnesota does not need this electricity but is being  
21 asked -- no, if this goes forward, its being required  
22 to accept any health burden that its generation would  
23 impose. On that basis alone, the environmental justice  
24 analysis should compare the environmental region of  
25 influence, which would include all of Itasca County and

**Responses**

**Comment 16-02 (cont'd)**

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.

**16-02  
(cont'd)**

**Commenter 16 – Andrew David**

60

**Responses**

1 much larger, with the Twin Cities Metro area being the  
2 control room. Then the environmental justice analysis  
3 can evaluate whether the proposed action or alternative  
4 would cause disproportionately high and adverse effects  
5 on minority or low-income populations in the region of  
6 influence.

7           The environmental justice analysis outside of  
8 the construction sites, HVTL corridors and utility  
9 right-of-ways presented in this EIS is inadequate. The  
10 EIS looked at the potential for adverse health risks in  
11 a wider radius for the respective project sites. But  
12 the term wider radius was never defined, and the only  
13 reference made was to the effect that additional  
14 mercury deposition would have on subsistence fishing on  
15 Diamond Lake. Surely the environmental impact area is  
16 much larger and, therefore, the environmental justice  
17 area must also be larger.

18           There was no effort made to include any other  
19 health risks, such as particulate matter; VOCs, NOX,  
20 SOX, or other heavy metal contamination from airborne  
21 deposition, nor consider their impact here individually  
22 or as cumulative or multiple adverse exposures as  
23 required in the method of analysis. Thank you.

24 (Applause.)

25           BILL STROM: Thank you, Andrew. Charlie

**16-02  
(cont'd)**

**Commenter 17 – Charles Grant**

61

1 Grant.

2 CHARLES GRANT: Good evening. My name is  
3 Charles Grant. C-h-a-r-l-e-s G-r-a-n-t.

4 As a former teacher of physics and  
5 mathematics, I'd like to share with you something  
6 that's happening and has been going on for the last few  
7 years in studying the size of particles and how it  
8 impacts on our health. We think of things like  
9 asbestos and other contaminates that we all know about  
10 living on the Iron Range as being no-nos. But the  
11 problem is not so much whether or not it's asbestos.  
12 It's the size of the particle that we are breathing.  
13 And if you create an environment, which we will if this  
14 plant is built, where a huge amount of particle  
15 distribution will take place in the shipping of it, in  
16 the handling of it, and in the ultimate burning of it,  
17 we will have thousands of tons of particles, some of  
18 which will be smaller than 10 microns.

19 Now, a micron is an extremely small division  
20 of measurement. If you took a piece of human hair and  
21 cut it in half and looked at the cross-section of it,  
22 and said, well, let's blow that up to about two and a  
23 half inches in diameter so we can get a better study of  
24 it, one micron would be so small that you couldn't see  
25 it. You would have to use magnification.

17-01

**Responses**

**Comment 17-01**

See response to Comment 7-03, which addresses the same concern. Additionally, based on the results of the AERA in Appendix C (Volume 2) of the Final EIS, although there would be PM<sub>2.5</sub> emissions, the levels and impacts would not exceed the state's risk threshold limits. To provide further insight on potential health impacts from particulate matter, new text has been added to Section 4.17.2.3 (Volume1).

**Commenter 17 – Charles Grant**

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**Responses**

**17-01  
(cont'd)**

1           Now, the harmful particle size is between ten  
2           and one micron in size. If we allow them to build this  
3           plant, our children and grandchildren are going to have  
4           in their lungs a large increase in the amount of this  
5           particulate that they breathe. So no matter if they  
6           sequester the CO2 and we stop them from polluting the  
7           environment as far as global warming is concerned, I'm  
8           a little bit more concerned about my grandchildren and  
9           their exposure to potential cancer. So when you think  
10          of the project, think of a two and a half inch section  
11          of hair and then talk about one micron and ask how are  
12          they going to deal with that, because if they don't  
13          have filters and they have to be what they call HEPA  
14          filters, which are extremely expensive and demand a lot  
15          of attention, we are going to be polluted no matter  
16          what we want to do. Thank you. (Applause)

17                 BILL STROM: Thank you, Charles. Kristen  
18                 Anderson.

19                 If you prepared written statements -- I see  
20                 some of you are reading from written statements -- if  
21                 you have prepared written statements, the court  
22                 reporter would appreciate if you could submit them to  
23                 us, we'll give them to her with your name and address  
24                 on them, and we'll send them back to you if you so  
25                 desire.

**Commenter 18 – Kristen Anderson**

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1 Thank you, Kristen. Go ahead.

2 KRISTEN ANDERSON: I'm Kristen Anderson.

3 K-r-i-s-t-e-n A-n-d-e-r-s-o-n. I feel like what I'm  
4 going to say is going to reiterate what a lot of other  
5 people have already said about IGCC technology. As we  
6 learn about this type of technology over the years,  
7 over the months especially, we've learned that the main  
8 benefit of this type of technology is its ability to  
9 capture for sequestration. And a lot of analogies have  
10 been used for the Mesaba Project tonight. I was going  
11 to use Wal-Mart in the middle of the Mojave Desert, but  
12 I kind of like the car, except I'd like to add that  
13 there's no roads involved, either.

14 We understand that Minnesota, geologically  
15 speaking, is in one of the worst places in the entire  
16 United States for known areas of sequestration. And we  
17 have to put that in our Environmental Impact Statement.  
18 That's huge. The reason we do IGCC is for the capture  
19 and sequestration. That cannot be ignored and those  
20 costs need to be involved also.

21 I'm quoting a recent article from the Medulla  
22 Independent, and it's Governor Schweitzer, I believe.  
23 He is somebody who is for IGCC. And he says the future  
24 of clean coal electrical generation lies in IGCC plants  
25 built near the mouths of coal mines and near geologic

**Responses**

**Comment 18-01**

See responses to Comments 8-01 and 1-02, which address the same concerns.

18-01

**Commenter 18 – Kristen Anderson; Commenter 19 –  
Amanda Nesheim**

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1 structures capable of sequestering the vast amounts of  
2 CO2 the process creates. And he says, Montana, for  
3 example, is in a great position to lead the way on  
4 these fronts. I think that he says it. What he says  
5 is very clear -- and the PUC chair people have said  
6 this also.

**18-01  
(cont'd)**

7 In addition to saying this is the wrong time,  
8 they have said this is the wrong place for this type of  
9 technology. While this technology might have merit, it  
10 would appear that the technology is in the wrong place.  
11 We don't have a sequestration site near us. And for  
12 the magnitude of the project being proposed, is it  
13 responsible for us to move forward in the wrong place  
14 at this magnitude? Thank you very much (Applause)

15 BILL STROM: Thank you, Kristen. Amanda  
16 Nesheim.

17 AMANDA NESHEIM: Amanda Nesheim, A-m-a-n-d-a  
18 N-e-s-h-e-i-m. In the EIS it was mentioned zero liquid  
19 discharge for the East Range site. I would just like  
20 to say that our water resources here are just as  
21 important to us as anybody else in the East Range site  
22 or anywhere where this proposed plant might be built,  
23 and that zero liquid discharge should be mandatory.

**19-01**

24 Cumulative air quality effects are poorly  
25 outlined in the DEIS. MSI already exceeds the class

**19-02**

**Responses**

**Comment 19-01**

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.

**Comment 19-02**

Both the Mesaba Energy Project and MSI are below the Class I increment for NO<sub>x</sub>. As stated in Section 5.3.2.2 (Volume 1) of the Draft EIS, an option for offsetting emissions of SO<sub>2</sub> and NO<sub>x</sub> from Phases I and II of the Mesaba Generating Station is through allowance purchases or controls placed on previously uncontrolled or poorly controlled air emission sources. The total combined SO<sub>2</sub> and NO<sub>x</sub> emissions of both the Mesaba Generating Station and the MSI are a small fraction of the reductions of those emissions by recent and ongoing environmental retrofit projects in Minnesota (such as the Metro Emissions Reduction Project, Boswell Unit 3 retrofit, and Arrowhead Regional Emissions Abatement project). It is possible that offsets in an amount sufficient to comply with regulatory requirements would be available for both Mesaba Generating Station and MSI. However, the MPCA would determine the amount of SO<sub>2</sub> and NO<sub>x</sub> allowances that the Mesaba Generating Station would have to purchase. See also response to Comment 3-02 for information on the Cap and Trade Program.

**Commenter 19 – Amanda Nesheim**

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**19-02  
(cont'd)**

1 one limit for nitrous oxides and is supposed to buy  
 2 nitrous oxide offsets to meet its permit requirement.  
 3 It is unlikely these offsets will be able to be  
 4 purchased. Since Mesaba is behind MSI in the permit  
 5 line, Mesaba must have a nitrous oxide emission of zero  
 6 or purchase 100 percent of their nitrous oxide offset  
 7 in addition to what MSI is supposed to buy. The DEIS  
 8 makes no mention of this problem.

9 Why does the DEIS have such gross omissions  
 10 with regard to cumulative effects? And why does the  
 11 air quality modeling give no input assumptions/data.  
 12 Why does air quality information use modeling that  
 13 gives low/conservative estimates?

**19-03**

14 Another thing that I would like to point out  
 15 that was in the EIS, carbon capture and sequestration  
 16 again. The Mesaba Energy Project's plan is for 30  
 17 percent sequestration. The EIS statement says that 33  
 18 percent is actually only sequestered. 33 percent of 30  
 19 percent amounts to 1,029,400 tons of CO2. That is less  
 20 than 1 percent of the over 10 million tons that are  
 21 going to be emitted by this IGCC plant. And on top of  
 22 that, in the enhanced oil recovery they're talking  
 23 about 8.7 million barrels of oil to be recovered.  
 24 Those 8.7 million barrels of oil will emit annually  
 25 4,350,000 tons of CO2. So the enhanced oil recovery

**Responses**

**Comment 19-03**

Table 5.1-1 (Volume 1) summarizes the estimated annual amounts of CO<sub>2</sub> captured under CCS scenarios 1 and 2 for the Mesaba Energy Project Phases I and II, which are described in Section 5.1.2 (Volume 1). At 30 percent, scenario 1 could capture 3,180,000 tons per year. At 90 percent, scenario 2 could capture 9,540,000 tons per year. The estimate for the percentage of CO<sub>2</sub> remaining stored when used in enhanced oil recovery (EOR) in this section of the EIS (originally 33 to 60 percent) has been revised to reflect actual experience at the Weyburn CO<sub>2</sub> Monitoring and Storage Project in Saskatchewan, Canada, which yielded a 93 percent storage rate for CO<sub>2</sub> supplied by the Dakota Gasification Company plant. The 93 percent figure is the result of testing and modeling, which indicated that 100 percent of the CO<sub>2</sub> supplied by the Dakota Gasification Company would remain in geologic storage, but that the CO<sub>2</sub> emissions resulting from the electricity consumption of the compressors that re-inject CO<sub>2</sub> removed with extract oil would be equivalent to 7 percent of the stored CO<sub>2</sub>. Conservatively assuming a net 90 percent storage rate and use of 100% sub-bituminous coal, the Mesaba scenarios could achieve sequestration rates of 2,862,000 to 8,586,000 tons per year of CO<sub>2</sub>, respectively. It should be recognized that oil extracted through EOR using captured CO<sub>2</sub> from Mesaba would probably be recovered regardless of the project involvement, because there is a growing economic incentive to do so.