

**U.S. Department of Energy  
in cooperation with  
Minnesota Department of Commerce**

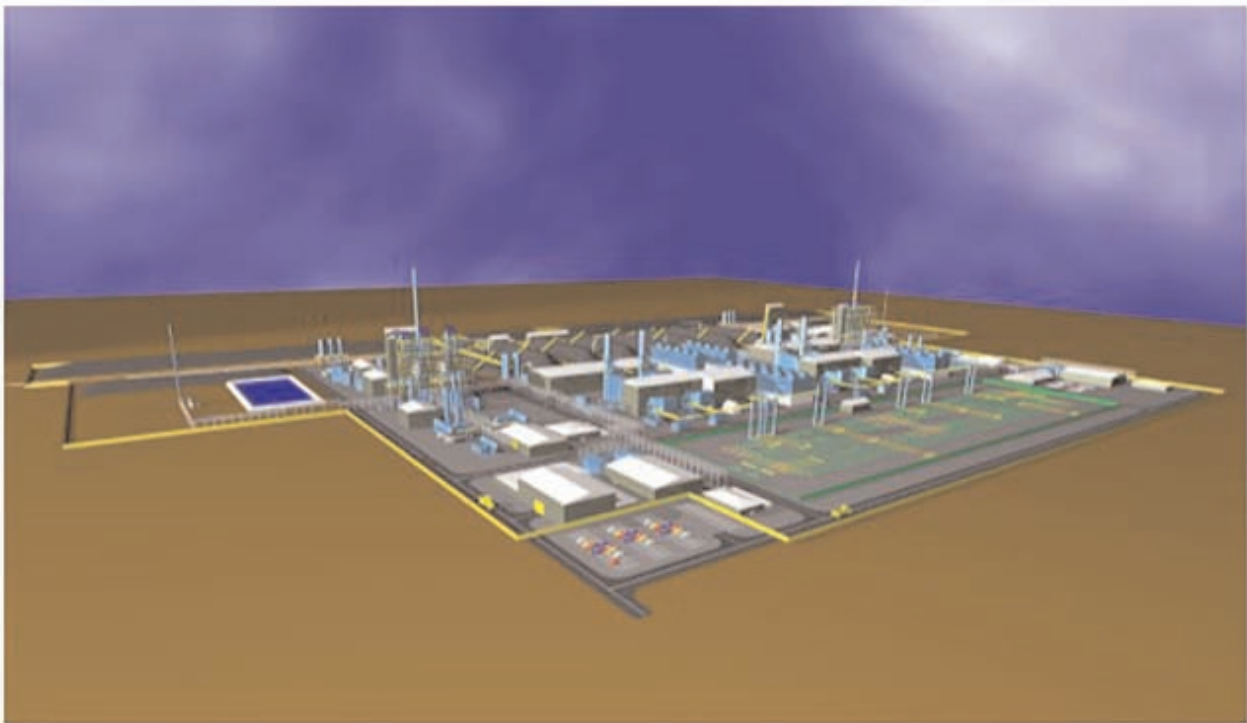
**MESABA ENERGY PROJECT**

**FINAL**

**ENVIRONMENTAL IMPACT STATEMENT**

**VOLUME 3: COMMENT RESPONSE DOCUMENT**

**DOE/EIS-0382  
MN PUC DOCKET # E6472/GS-06-668**



**NOVEMBER 2009**



**Office of Fossil Energy  
National Energy Technology Laboratory**







**VOLUME 3**  
**COMMENTS AND RESPONSES ON THE**  
**DRAFT ENVIRONMENTAL IMPACT STATEMENT**

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## 1. INTRODUCTION

The Draft EIS for the Mesaba Energy Project was published in November 2007. DOE and MDOC distributed copies of the Draft EIS to officials, agencies, Native American tribes, organizations, libraries and members of the public identified in the distribution list (Chapter 8 of Draft EIS Volume 1). MDOC announced the availability of the Draft EIS in the *EQB Monitor* on November 5, 2007 (Volume 31, Number 23, Page 9); DOE announced the Notice of Availability of the Draft EIS in the *Federal Register* (FR) on November 8, 2007 (72 FR 63169); and EPA published the Notice of Availability in the *Federal Register* on November 9, 2007 (72 FR 63579). This volume provides a summary of the public hearings, explains the methodology for receiving and coding comment documents, and provides responses to comments received.

DOE and MDOC jointly held two public hearings for the Draft EIS at the same locations as the scoping meetings. The hearings were held at the Taconite Community Center in Taconite, Minnesota on November 27, 2007 and the Hoyt Lakes Arena in Hoyt Lakes, Minnesota on November 28, 2007. DOE and MDOC advertised the hearings in the *Hibbing Daily Tribune*, *Grand Rapids Herald-Review*, and *Mesabi Daily News* on November 14 and 18, 2007, and in the *Duluth News Tribune* on November 18, 2007. Informal information sessions were held at the same locations prior to both hearings from 4:00 to 7:00 pm, during which time attendees were given information about the project and were able to view project-related posters.

Based on sign-in sheets, the Taconite hearing was attended by 107 individuals, and the Hoyt Lakes hearing was attended by 34 individuals. MDOC and DOE led the presentations and presided over the public hearings. The public was encouraged to provide oral comments at the hearings and to submit written comments to DOE or MDOC by January 11, 2008. A court reporter was present at each hearing to ensure that all oral comments were recorded and legally transcribed.

## 2. METHODOLOGY

In preparing the Final EIS, DOE and MDOC considered all comments to the extent practicable. An identification number was assigned to each originator of a comment (i.e., each commenter), including those expressed orally at the public hearings. Individuals who submitted comments in multiple separate submissions were assigned a separate commenter number for each submission. Each specific comment by the same commenter was assigned a sequential comment number; for example, Comment 82-20 refers to the 20<sup>th</sup> comment by the commenter assigned as number 82.

Based on the comments received on the Draft EIS, DOE and MDOC prepared responses and modified the EIS (Volume 1) and Appendices (Volume 2) where appropriate. The EIS was also revised based on DOE's internal technical and editorial review of the Draft EIS (i.e., changes made to the EIS that were not in response to a comment received). Section 3 provides a summary of the principal comments received on the Draft EIS.

Transcripts of both public hearings, as well as scanned images of the original comment documents in order by assigned commenter number, are included in their entirety in Section 4 of this volume. The commenters and their comments are identified and labeled on each comment document image beginning with the public hearing transcripts. All comment documents on the Draft EIS, as included in this comment-response volume, as well as any supporting attachments, have been entered into the administrative record for this EIS. Individual responses for each comment are provided on the right-side of each page in close proximity to the corresponding comment. In cases where subsequent comments address the same issue, references are made to the earlier comment number for appropriate responses. In some cases where a commenter addressed an issue that was the subject of a related comment by an agency having jurisdiction over the subject area, the response refers to the response given for the respective agency's comment even if it occurs later in the document.

### 3. DESCRIPTION OF COMMENTS RECEIVED

Oral comments were given by 28 individuals at the Taconite hearing and by 6 individuals at the Hoyt Lakes hearing. In addition, DOE and MDOC received 88 written comments, including 5 from Federal agencies, 4 from state agencies, 5 from Native American tribal organizations, and several from national and regional non-governmental organizations and other affiliations. After reviewing and analyzing the comments received, a list of issues was developed and each was assigned a category in Table Vol. 3-1.

**Table Vol. 3-1. Comment Categories**

<b>Comment Category</b>	<b>Abbreviation</b>
Aesthetics	AES
Air Quality – General	AQ
Air Quality – Climate Change	AQ-C
Air Quality – Visibility	AQ-V
Biological Resources	BIO
Community Services	COM
Cost	COST
Cultural Resources	CUL
Cumulative Impacts	CUM
Environmental Justice	EJ
Floodplains	FP
General	GEN
Geology & Soils	GEO
Land Use	LU
Materials & Waste Management	MWM
Noise	NOISE
Proposed Action & Alternatives	PAA
Purpose & Need	PN
Sequestration	SEQ
Safety & Health	SH
Socioeconomics	SOC
Support	SUP
Traffic & Transportation	TT
Utility Systems	UT
Wetlands	WETL
Water Resources	WR

Table Vol. 3-2 provides a listing of the commenters, their assigned identification numbers, their affiliations, and the issues raised by each. Comments made in general support for the project are also identified in the table.

**Table Vol. 3-2. Index of Commenters and Comment Categories**

<b>ID #</b>	<b>Name</b>	<b>Affiliation/Organization</b>	<b>Comment Categories</b>
1	Ross Hammond	Fresh Energy	AQ, SEQ, AQ-C
2	LeRoy Flug	Citizen	AQ, BIO, WR
3	Linda Castagneri	Citizen	SH, UT, AQ-V
4	Ron Gustafson	Citizen	COST, AQ,-C, SEQ, UT, SH, PN, COM
5	Bob Norgord	Citizen	UT, LU, SH, GEN, GEO, PN
6	Lee Ann Norgord	Citizen	WR
7	Ed Anderson	Citizens Against the Mesaba Project (CAMP)	GEN, WR, BIO, SH, PN
8	Charles Decker	Citizen	PN
9	Mary Munn	Fond du Lac Reservation	AQ, GEN
10	Mike Andrews	Itasca Economic Development Corporation	GEN, SUP
11	David Hudek	Citizen	WR
12	Sue Hutchins	Citizen	WR, SH, TT, AQ, BIO, AQ-C
13	Joan Beech	Citizen	AQ-C, SEQ
14	Harry Hutchins	Citizen	BIO, SEQ
15	Warren Shaffer	Citizen	WR
16	Andrew David	Citizen	SOC, EJ, PN, SH
17	Charles Grant	Citizen	SH
18	Kristen Anderson	Citizen	SEQ, PN
19	Amanda Nesheim	Citizen	WR, AQ, CUM, SEQ, GEN
20	Carol Overland	MNCoalGasPlant.com	GEN, AQ
21	Jeff Poenix	Citizen	TT, MWM
22	Karla Igo	Citizen	PAA, AQ-C
23	Gary Burt	Citizen	SH
24	Bob Igo	Citizen	GEN, WR, PN, SH
25	Judy Gunelius	Citizen	BIO
26	David Holmstrom	Citizen	AQ, UT
27	Darrell White	Citizen	SOC
28	Ron Gustafson	Citizen	GEN
29	Norm Voorhees	Ironworkers Local 512	SUP, GEN, SOC
30	Bob Tammen	Citizen	SOC
31	Jean Dallas	Citizen	GEN
32	Gordon Smith	Painters Local	SUP, SOC
33	Bill Whiteside	Citizen	PN, SOC, SH
34	Warren Koskiniemi	Citizen	SUP, SOC
35	Neil Ahlstrom	Metalcasters of Minnesota	PN
36	David Hudek	Citizen	BIO, AQ-C
37	Gail Matthews	Citizen	AQ-C, PAA, CUM, GEN
38	Lee Ann Norgord	Citizen	WR, BIO, SH, AQ-C, TT, NOISE

**Table Vol. 3-2. Index of Commenters and Comment Categories**

<b>ID #</b>	<b>Name</b>	<b>Affiliation/Organization</b>	<b>Comment Categories</b>
39	Mark Roalson	Citizen	PN, SOC, AES
40	Gail Matthews	Citizen	PAA
41	Steve Clark	Citizen	SOC, WR, COST, PAA, PN, AQ-C, GEN
42	Alvar Hupila	Citizen	AQ-C, WR, UT, GEN
43	Mark Mandich	Itasca County Commissioner	SUP, GEN
44	Bob Norgord	Citizen	UT, BIO, SH, GEN, GEO
45	Gail Matthews	Citizen	AQ-C, PAA
46	Randy Zupan	Citizen	PAA, GEN, SEQ
47	Frank Kirby	Citizen	PAA
48	Dennis A. Gimmestad	Minnesota Historical Society – State Historic Preservation Office	CUL
49	James W. Sanders and Jeff J. Smith	U.S. Forest Service	AQ-C, AQ-V, AQ, SOC, CUM
50	Cody Ekholm	Citizen	SUP, SOC, WR
51	Joseph Troumbly	Citizen	PN, GEO
52	Mary Anderson	Citizen	SUP, SOC
53	Ron Gustafson and Linda Castagneri	Citizen	GEN, COST, MWM, SEQ, UT, SH, WR, WETL, BIO, COST, AQ-V, AQ-C, TT, NOISE, AQ, COM
54	Jim and Tracy Weseloh	Citizen	PAA
55	Christopher W. Harm	NOAA's National Geodetic Survey	GEO
56	Mike Ives and Peter McDermott	Itasca Economic Development Corporation	GEN, SOC, PN
57	Michael T. Chezick	U.S. Department of the Interior	AQ, WETL, BIO
58	Timothy and Patricia Zoerb	Citizen	WR, AQ, GEN, SH
59	Harry Hutchins	Citizen	BIO, NOISE, AQ, SOC, AQ-C
60	Ryan Neururer	Citizen	GEN, SOC, BIO
61	Christian Charity Warrington	Citizen	PAA
62	Jennifer Biscardi	Citizen	PN, SOC, GEN
63	Sarah Copeland	Citizen	PAA
64	Miranda Hemsworth	Citizen	SOC, GEN
65	Dana L. Saville	Citizen	BIO, SOC
66	Kari Engen	Citizen	WETL, PAA
67	Darryl Sobey	Citizen	SEQ
68	Diana L. Storrs	Citizen	PAA
69	Meagan Wichterman	Citizen	BIO, WR, SOC, SH

**Table Vol. 3-2. Index of Commenters and Comment Categories**

<b>ID #</b>	<b>Name</b>	<b>Affiliation/Organization</b>	<b>Comment Categories</b>
70	Bridgitte Ross	Citizen	PN, GEN
71	Betty Dodson	Citizen	COST
72	Alvin Donnell	Iron Range Council of Native Americans	GEN
73	Dorothy Stish	Citizen	GEN
74	Nancy LaPlaca	Citizen	PAA, GEN
75	Amanda Nesheim	Citizen	Nearly All
76	Matt Langan	Minnesota Department of Natural Resources	WR, BIO, GEN, LU, WETL, CUM
77	Jean and Herb Halverson	Citizen	BIO, PAA, SEQ, COST, WR, AES, AQ, GEN
78	Mary Erickson	Citizen	SOC, AQ, SH, COST, SEQ
79	Richard Twaddle	Citizen	SEQ
80	Andrew David	Citizen	SOC, EJ
81	Jim and Steph Shields	Citizen	SEQ, BIO, AQ, PN
82	Ed Anderson	CAMP	Nearly All
83	Robert Evans	Excelsior Energy	AQ
84	John Linc Stine	Minnesota Department of Health	WR
85	Colleen Blade	Citizen	GEN
86	David Dahl	Citizen	BIO, WR
87	Nathaniel Hart	Citizen	AQ-C, SEQ, PAA
88	Chad Karjala	Citizen	WR, BIO
89	Willard Karjala	Citizen	AQ-V
90	Glenn Perry	Citizen	SEQ
91	Darrell White	Citizen	WR
92	Delores White	Citizen	WR, BIO
93	Dr. Gregory Chester	Citizen	PAA, COST
94	William A. Hanson	Citizen	SOC
95	Frank R. Weber	Citizen	Nearly All
96	Edward and Susan Stish	Citizen	SOC, LU, WR, BIO, SEQ, WETL, TT, COM, GEN
97	Darren Vogt and Dave Woodward	1854 Treaty Authority	GEN, BIO, SEQ, AQ-V, AQ, WR, CUM, CUL, PN
98	Brandy Toft	Leech Lake Band of Ojibwe	PN, AQ-V, AQ, BIO, WR, SH, GEN
99	Wayne Dupuis	Fond du Lac Band of Lake Superior Chippewa	AQ, GEN, PN, AQ-C, SEQ, TT, PAA, AQ-V, WR, CUM
100	Darin Steen	Bois Forte Tribal Government	PN, SOC, COST, AQ, WR, CUM, GEN
101	Harry E. Gallaher	Lockridge Grindal Nauen P.L.L.P.	WR
102	Kristin Henry	Sierra Club, North Star Chapter	Nearly All
103	Carol Overland	MNCoalGasPlant.com	Nearly All
104	Margaret Haapoja	Citizen	GEN

**Table Vol. 3-2. Index of Commenters and Comment Categories**

<b>ID #</b>	<b>Name</b>	<b>Affiliation/Organization</b>	<b>Comment Categories</b>
105	Jeff J. Smith	Minnesota Pollution Control Agency	AQ, AQ-V, SH, AQ-C, CUM, WR, WETL, MWM
106	Cynthia Driscoll	Citizen	SEQ
107	Paul J. Milinovich	Swan Lake Association	WR, AQ
108	Kevin Reuther	Minnesota Center for Environmental Advocacy	GEN, AQ-C, PN, SOC
109	Dave Hudek	Citizen	WR, GEN, NOISE, AQ, AQ-C
110	William E. Berg	Citizen	AQ, SH, GEO, WR, BIO, WETL, SOC, MWM, PAA, SEQ, GEN
111	Alan Walts	EPA Region V	GEN, PN, PAA, WETL, AQ, WR
112	Paul Minerich	Citizen	PN
113	Helene (Perry) Berg	Citizen	GEN, SEQ, AQ, SH, PAA
114	Darlene J. Swanson	Quan-Tec-Air, Inc.	PAA
115	Norman W. Deschampe	Grand Portage Reservation Tribal Council	SEQ, AQ-V, AQ, SH, WR, CUM, GEN, PN, CUL
116	Robert J. Whiting	Army Corps of Engineers, St. Paul District	PAA, WETL, GEN, PN, AQ, BIO, UT, TT, CUM, WR, AQ-V, AES, SH
117	Janet L. Brandon	Citizen	SOC, SEQ
118	Concerned Individual	Citizen	AQ, SEQ, PAA
119	Ly Her	Citizen	BIO, SH
120	Larry Johnson	Citizen	WR
121	MEHHED	Citizen	PAA
122	Bob Tammen	Citizen	SOC

#### **4. COMMENT LETTERS AND INDIVIDUAL RESPONSES**

The remainder of this volume provides scanned images of the comment documents and DOE's individual responses to the comments. This section begins with the transcripts of the public hearings for the Draft EIS (November 27, 2007 in Taconite, Minnesota and November 28, 2007 in Hoyt Lakes, Minnesota) and continues with the comment documents received by DOE.



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# P U B L I C M E E T I N G

on the  
DRAFT ENVIRONMENTAL IMPACT STATEMENT

for the  
MESABA ENERGY PROJECT

PUC Docket: E6472/GS-06-688

hosted by  
Minnesota Department of Commerce  
and  
Department of Energy

held at  
Taconite Community Center  
Taconite, Minnesota  
November 27, 2007; 7:00 p.m.

REPORTED BY:  
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1                   P R O C E E D I N G S

2                   BILL STROM: Good evening, folks. My name is  
3 Bill Storm. I'm the project manager with the  
4 Department of Commerce, Energy Facility Permitting  
5 Unit. We are hosting this meeting tonight jointly with  
6 the Department of Energy. The meeting tonight is on  
7 the draft Environmental Impact Statement that was  
8 released jointly by the Department of Commerce and the  
9 Department of Energy.

10                  Before I begin, there's a few things I'd like  
11 to go over with you concerning items on the front desk.  
12 First of all, there's a sign-in sheet there that I ask  
13 you to fill out if you wouldn't mind. It allows me to  
14 track the participation at these meetings. It also has  
15 a spot that you can check if you want to be put on the  
16 mailing list if you're not already on the mailing list.  
17 So that's on the front desk. If you haven't filled it  
18 out, it will be there through the presentation.

19                  There is also a comment sheet. As I said,  
20 tonight's meeting is to solicit comments on the draft  
21 Environmental Impact Statement. The deadline for  
22 comments is January 11. From the Department of  
23 Commerce's end, if you want to submit a comment on the  
24 draft Environmental Impact Statement, you're going to  
25 have an opportunity to speak tonight, but officially if

1 you want to submit a written comment, I've provided a  
2 comment sheet. It's a fold and staple type sheet with  
3 a stamp on it and it will get mailed right to me.

4                  You can also e-mail me or write on your own  
5 personal stationery. These are just for your  
6 convenience. Again, these are on the front table.

7                  Also on the front table are the blue cards.  
8 Again, the reason we're here tonight is to solicit  
9 comments and questions on the draft Environmental  
10 Impact Statement. We ask that you preregister if you  
11 would like to speak. I will give my presentation. The  
12 Department of Energy will give their presentation.  
13 Then we will turn it over to the audience, and I will  
14 be calling on people from the cards. Once I go through  
15 all the cards, I will then call on the audience if  
16 there's somebody who wants to speak who hasn't filled  
17 out a card or if someone who spoke and wants to speak  
18 again.

19                  Also on the table out front is a copy of my  
20 slides for tonight's presentation. I will also put  
21 these slides on my website. So you can get them there  
22 or at the table.

23                  As I said, tonight's meeting is on the Mesaba  
24 Energy Project, IGCC power station proposal. And we  
25 are here tonight to solicit comments on the draft

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1 Environmental Impact Statement that the DOC, Department  
2 of Commerce and the Department of Energy has jointly  
3 released.

4 If you send me correspondence, I ask that you  
5 put the Docket Number on for this particular project.  
6 There are two dockets that are associated with the  
7 Mesaba Energy Project. There's a PPA docket, and then  
8 there's the siting/routing docket. This draft  
9 Environmental Impact Statement is part of the siting  
10 docket, which is listed up there. We're holding two  
11 meetings, one tonight and one tomorrow night.

12 Tonight's agenda, my portion and the DOE's  
13 portion will be relatively short tonight. I'm going to  
14 run you quickly through the process, where we started  
15 from, where we're at and what we're likely to see in  
16 the future as far as the state process.

17 The DOE, Richard Hargis and Jason Lewis will  
18 speak on the DOE's role in this project, and then we  
19 will turn it over for your comments.

20 Just as a reminder of the state's role in  
21 this project, the Minnesota Public Utilities Commission  
22 is the authority in this project. They are the ones  
23 who will be issuing a site permit for the facility, a  
24 route permit for the transmission line and a route  
25 permit for the pipeline. And this slide shows the

6

1 regulations that that falls under, that authority comes  
2 from.

3 As a reminder, if anybody is here from the  
4 scoping meeting, you've seen this slide. This slide is  
5 just to show the relationship between the Department of  
6 Commerce, Energy Facility Permitting, and the Minnesota  
7 Public Utility Commission. Minnesota Public Utility  
8 Commission is the ultimate final decision-maker. The  
9 Department of Commerce, Energy Facility Permitting, we  
10 serve as administrative capacity to that agency. We  
11 administer the public forums, we develop the record, we  
12 develop the environmental review documents, and we  
13 present the case to the PUC for a final decision. The  
14 PUC regulates wind projects, large energy projects,  
15 which this plant falls under, power lines and  
16 transmission lines.

17 I just want to do a short overview of the  
18 process to show where we're at. Excelsior Energy on  
19 June 19th, 2006, Excelsior Energy submitted an  
20 application to the PUC for a power plant, a  
21 transmission line and a pipeline. On July 28, 2006,  
22 the PUC accepted the application as complete. On  
23 August 1st, 2006 the Department of Commerce at the  
24 behest of the Public Utility Commission formed a  
25 Citizen Advisory Task Force. On August 22nd and 23rd

7

1 the Department of Commerce, Energy Facility Permitting  
2 staff held public information meetings and  
3 Environmental Impact Statement scoping meetings.  
4 September 7th, 2006 the Citizen Advisory Task  
5 Force submitted their recommendations to the Department  
6 of Commerce. On September 13th, 2006 the Environmental  
7 Impact Statement scoping decision was released by the  
8 Department of Commerce. That scoping decision was  
9 developed based on the input that we received at the  
10 initial public information scoping meeting that we had  
11 back in August. Then November 5th, 2007 the DOC and  
12 the DOE released the draft Environmental Impact  
13 Statement, which brings us to this meeting here, which  
14 is to solicit -- again, I'm going to repeat this like  
15 20 times -- to solicit comments from the public on the  
16 draft Environmental Impact Statement.  
17 This just goes through the milestones that we  
18 completed so far in that process. Normally the process  
19 is a year-long process, but with a site this complex,  
20 you can see that we're going to be past that year  
21 timeline.  
22 What's coming up in the future? If you  
23 remember the schematic, if you look at the diagram  
24 here, the handout, the schematic, the next major  
25 milestone that we have coming up is the close of the

8

1 comment period on the draft EIS. As I said, we're  
2 going to ask you to come up to the mike and make  
3 comments tonight on the draft Environmental Impact  
4 Statement.  
5 Additionally, there are comment sheets that I  
6 mentioned where you can send your comments or you can  
7 send your comments e-mail or on your personal  
8 stationery to me. The one thing I want you to keep in  
9 mind is that January 11th, 2008 is the deadline to have  
10 your comments into either the DOC or the DOE.  
11 As I look into the future and we look through  
12 that schematic of the milestones, we do have some  
13 tentative dates, target dates of when we think things  
14 are going to happen.  
15 The next major public forum will be the  
16 contested case hearing. We'll be back up here at  
17 Taconite and Hoyt Lakes with an ALJ, administrative law  
18 judge, presiding over the contested case hearings.  
19 These hearings will be on the whole project. So the  
20 public will be allowed to speak on their concerns,  
21 their issues, their pros or cons of the project, to an  
22 ALJ. The ALJ will assemble a record and make a  
23 recommendation on the adequacy of the draft  
24 Environmental Impact Statement. He'll make a  
25 recommendation on which site to select, which routes to

9

1 select, and that will come back to me, Department of  
2 Commerce, Energy Facility Permitting, and then I will  
3 put together briefing papers and present them to the  
4 PUC, Public Utilities Commission, for a final decision.

5 Again, the PUC will be making three decisions;  
6 one, the adequacy of the Environmental Impact  
7 Statement; two, which site, route for the transmission  
8 line, and route for the pipeline should be selected;  
9 and then issuing of a permit and any permit conditions  
10 that they deem should be part of that permitting  
11 process.

12 If you want to track the documents for this  
13 project, if you want to see the draft Environmental  
14 Impact Statement, if you want to see other public  
15 comments that came up in the first process, if you want  
16 to review the scoping decision that was released by the  
17 Commissioner of the Department of Commerce, or if you  
18 want to see other public documents that may come up in  
19 this process, you can go to the PUC website that's been  
20 maintained by the Department of Commerce, Energy  
21 Facility Permitting staff at this address. And when  
22 you go to this website, you will see -- although this  
23 is old, there's much more documents on this website now  
24 -- but you'll see this kind of page that lists all the  
25 documents. The documents will be p-d-f so you can

10

1 click on them and open them up and review them.

2 I want to talk a little bit about logistics  
3 for talking tonight. I'm going to ask that each person  
4 who wants to speak please be brief, five minutes per  
5 speaker. If we have a additional time at the end after  
6 we run through the cards and run through the hands that  
7 show and you still want to speak again, I'll be more  
8 than glad to call on you again. I'm going to take  
9 preregistered speakers first, so if you know you want  
10 to see speak now, fill out a blue card, give it to  
11 Suzanne, my assistant out there at the table, and I'll  
12 call on you and and you can speak.

13 We are preparing a transcript. Kate is our  
14 court reporter here. She is preparing a transcript, so  
15 it's important that when you step to the mike, you  
16 state your name, spell it, speak clearly, be respectful  
17 of myself, the DOE and the other members of the  
18 audience. It's important that you speak clearly,  
19 calmly so the court reporter can see your face, as well  
20 as hear you clearly.

21 Additionally, the purpose of the meeting  
22 tonight is to collect comments on the draft  
23 Environmental Impact Statement. So I'm going to ask  
24 you as much as possible to focus your comments on items  
25 in the draft Environmental Impact Statement that you

11

1 would either like to see clarified in the final  
2 document, final Environmental Impact statement, or  
3 areas where you think the draft Environmental Impact  
4 Statement is lacking and you would like more  
5 information flushed out. So if we can keep our  
6 comments on topic, that would be greatly appreciated,  
7 and help us move the process along, give everybody a  
8 chance to speak.

9 Again, you'll be given a chance to comment  
10 tonight. You can also submit written comments for the  
11 record. I want to emphasize that the written comments  
12 have to be submitted by January 11th, 2008. You can  
13 submit your comments to me at the Department of  
14 Commerce, again, either e-mail, filling out a comment  
15 sheet and mailing it to me, or your own personal  
16 stationery. The DOE is going to speak after me, and  
17 you can also submit comments do the DOE, so there's  
18 kind of two tracks going along.

19 If you submit comments to either of us, it  
20 will get captured into the record. So don't feel you  
21 have to submit them to both of us. Whatever you feel  
22 is most convenient. The comments I get will be  
23 incorporated into Rich's, and the comments Rich gets  
24 will be incorporated back to me.

25 That's all I have to say for now. I'm going

12

1 to turn it over to the DOE and then we'll have time for  
2 your comments.

3 JASON LEWIS: My name is Jason Lewis. I am  
4 from the U.S. Department of Energy, and it's a pleasure  
5 to be here tonight, and I'm glad to see that there's a  
6 large turnout. If shows a lot of interest in the  
7 project, which is always a pleasure to see.

8 I have a couple slides just to talk about  
9 what our involvement is, what our program is about.

10 I'm going to deviate a little from my prepared speech.  
11 The Department of Energy has interest in a wide  
12 portfolio of power generation technologies; solar,  
13 wind, hydrogen, natural gas, coal, nuclear, you name  
14 it. There are various different groups in the  
15 department that are focused on each of those. Rich and  
16 I come from the office of fossil energy and our  
17 assignment is coal.

18 Our purpose is to show that coal can be used  
19 in a more efficient and environmentally compliant way  
20 than it has been in the past. The program that we  
21 administer is the Clean Coal Power Initiative. It was  
22 established by Congress through public law in 2001.  
23 Its purpose is to implement national energy policy to  
24 ensure the nation's energy security and improve the  
25 environmental stewardship of power generation using

13

1 fossil energy.

2 The program is a cost-sharing program. The  
3 projects in it are not government projects. The  
4 government does not own the power plant at the end of  
5 it. The projects are industry projects submitted to  
6 the government for potential cost sharing, and are  
7 evaluated. So that is based on their projects' ability  
8 to meet the national energy policy goals.

9 We're interested in a suite of technologies  
10 that are associated with clean coal, the concept of  
11 clean coal. Those include improved combustion  
12 technology, gasification of coal to synthesis gas and  
13 then end-of-pipe type pollutant emission controls.  
14 This particular project focuses on gasification.

15 It's not a grant program in that we provide  
16 cost share funding and are no longer interested in the  
17 activity. We have an interest in that we hope to gain  
18 information that verifies the applicability and the  
19 readiness of the clean coal technology and make that  
20 information public, to the public at-large, and to  
21 others in industry in the hope that it will accelerate  
22 the commercialization of that more efficient, more  
23 environmentally compliant technology. And, as I said,  
24 it's not an acquisition program in that the government  
25 doesn't own the facility at the end.

14

1 This is just to show you that the existing  
2 portfolio of our projects and the type of projects that  
3 we have involved include three gasification projects,  
4 two more in addition to this, projects to better use  
5 the coal by-product or the ash so it is no longer  
6 considered waste, but is used in commercial  
7 applications; projects to improve the heat rate of low  
8 range coals like lignite; and then some combustion  
9 projects, et cetera.

10 From the DOE's perspective, the project we're  
11 here to discuss tonight, Mesaba Energy Project, the  
12 tasks ongoing are those that are necessary to provide  
13 the data back to the federal government and the State  
14 of Minnesota, so that we can complete the National  
15 Environmental Policy Act process and the state  
16 permitting process, both of which are integrally  
17 related.

18 I want to point out that in the draft  
19 document you will see a section for mitigation options,  
20 which are currently not in the plant design basis.  
21 It's typical in these types of projects, as the  
22 regulatory process goes forward, that some of those  
23 mitigation options may move forward, become part of the  
24 plant design basis, and so what is reflected here will  
25 not necessarily be what the final plant type proposed

15

1 to the Commission takes place. But in the interim, if  
2 there are mitigation options that carry forward and  
3 become part of the plant design basis, that will be  
4 reflected in the final EIS.

5 We will turn it over to Rich now, and he'll  
6 describe the DOE NEPA process. Thank you for coming.  
7 We're very much interested in your comments relative to  
8 the contents of the EIS and whether or not you feel  
9 that we have addressed all the points of interest.

10 RICHARD HARGIS: Thanks, Jason. Before we get  
11 to your comments, I'd just like to say a few words  
12 about the Federal National Environmental Policy Act, or  
13 NEPA process. Before I get started, I want to  
14 introduce two other members of the DOE team who are  
15 here. George Pokanic -- stand up, George. George is a  
16 project engineer on the project, but he's also taken  
17 the responsibility of coordinating the state historic  
18 preservation office consultation, as well as the Native  
19 American tribe treaty consultations. Bernadette Ward  
20 is also here with us. Bernadette is public affairs  
21 representative with the National Energy Technology  
22 Laboratory.

23 Why have a public meeting? Well, obviously  
24 the main purpose tonight is to get oral comments from  
25 you on the draft EIS that we prepared. We're looking

16

1 for comments from you on the impacts that were  
2 addressed in the draft EIS, as well as the emphasis  
3 that was given to the critical issues. Your comments  
4 are very important to us in ensuring that we have  
5 properly considered all the environmental issues before  
6 making a final decision on DOE's continued support for  
7 the project under the Clean Coal Power Initiative.

8 Your comments will be recorded and a  
9 transcript will be prepared. You can also provide  
10 written comments, as Bill said, to either Bill at the  
11 Minnesota Department of Commerce or to me at the  
12 Department of Energy during the comment period, which  
13 ends on January 11, 2008.

14 Please note that part of the federal process  
15 is that your name and address will be included in the  
16 final EIS unless you specifically request that this  
17 information be withheld.

18 The driving force of the federal  
19 environmental review process is the National  
20 Environmental Policy Act, or NEPA, and it does apply to  
21 all federal actions by federal agencies. The mandate  
22 is to make environmental information available to both  
23 the public, as well as the federal officials before  
24 final decisions are made in any major federal action  
25 that could significantly affect the quality of the



18

1 The federal notice of availability was  
2 actually published in the Federal Register on November  
3 9th of this year. Copies of that notice are available  
4 as handouts on the table when you came in. Federal  
5 regulations require a 15-day advance notice from the  
6 notice of availability to the meetings, public hearings  
7 that we have on the draft EIS here and Hoyt Lakes  
8 tomorrow.

9 Normally the federal comment period is 45  
10 days, but given the time of year, the holidays and the  
11 size of the documentation, we extended that comment  
12 period to something like 63 days, to January 11 of  
13 2008. Then after the comment period closes, we'll  
14 start preparing the final EIS, and that final EIS will  
15 have a separate section in it that lists every comment  
16 that we receive on this document, as well as the  
17 specific response to each and every comment that's  
18 provided.

19 After the final EIS is prepared, we issue a  
20 notice of availability. That also gets put in the  
21 Federal Register. And there's a 30-day minimum waiting  
22 period between the notice of availability and the final  
23 record of decision can be issued

24 Now, this is the same slide that Bill had up,  
25 logistics. We'll start the public comment portion of

17

1 human environment.

2 The emphasis here is on making well-informed  
3 decisions and take proper consideration of the  
4 environmental consequences. We want to focus on truly  
5 significant issues, and that's what we've tried to do  
6 in preparing this draft EIS, taking into consideration  
7 the comments you provided and others provided in the  
8 scoping process that we had.

9 This is just a flow chart of where we are in  
10 the process, in the federal EIS process. The federal  
11 scoping began with the notice of intent to prepare an  
12 EIS that was published in the Federal Register back in  
13 October, on October 5th, 2005.

14 We then held two scoping meetings, here and at  
15 Hoyt Lakes, in October of that year. We knew at the  
16 time this would be a joint process with the State of  
17 Minnesota, but the state process couldn't start until  
18 they actually got the site permit application, which  
19 wasn't submitted until later in 2006.

20 We also invited other federal agencies to  
21 participate in this process as cooperating agencies.  
22 And as a result, the Army Corps of Engineers and the  
23 U.S. Forest Service agreed to be cooperating agencies,  
24 and they participated in the preparation of the draft  
25 EIS you have now.

## Responses

### Commenter 1 – Ross Hammond

19

1 the hearing, and my guess is we're going to have a  
2 large number of people commenting tonight. We'd  
3 appreciate it, if you would, limit your initial  
4 comments to five minutes, as Bill said. Once everybody  
5 has a chance to speak, we'll stick around until all the  
6 comments are heard.

7 If you preregistered, Bill will have a comment  
8 card here. We'll call you to the microphone. State  
9 your name and spell it for the court reporter. And  
10 please, as Bill said, please try to focus on the  
11 contents of the draft EIS, be as specific as possible,  
12 because what we want to do is be able to provide a  
13 specific response to the specific comments you have.

14 Bill, do you want to start the public  
15 comments?

16 BILL STROM: I'm going to call, using the  
17 preregistration cards. When I call your name, please  
18 step to the mike, state your name, spell it; and as we  
19 said numerous times, speak clearly as much as possible.  
20 Try to limit your comments to specific items in the  
21 draft Environment Impact Statement. Be respectful of  
22 the people around you and the court reporter. She has  
23 a tough job.

24 First person, Ross Hammond.

25 ROSS HAMMOND: Hi, my name is Ross Hammond,

**Commenter 1 – Ross Hammond**

20

1 R-o-s-s H-a-m-m-o-n-d. I'm an engineer, and I have 30  
 2 years of experience in the power industry. I was a  
 3 member of the Citizens Advisory Task Force last year  
 4 with the Department of Commerce. I'm also here  
 5 representing Fresh Energy, which is a group in St.  
 6 Paul. We're working on global warming solutions.

7 So to get to the point about the EIS. As I  
 8 start reading through it, I call attention to Table  
 9 2.1-1, which is in Chapter 2; and there were a number  
 10 of numbers that caught my attention. One is mercury,  
 11 .027 tons of mercury per year emissions. I want  
 12 everybody to think about that, because this is supposed  
 13 to be clean coal technology.

14 The other one, which is a big issue now with  
 15 what's coming in from China, but lead is 0.03 tons of  
 16 lead per year that will be emitted from this facility,  
 17 and a lot of that is going to go into the nearby area.

18 Then the number that really surprised me, it  
 19 says carbon dioxide, 10.6 tons per year for  
 20 sub-bituminous coal. And I kind of thought, umm,  
 21 that's interesting; and 9.4 tons if they burn  
 22 bituminous coal. But if you go to Page 2-33 in Section  
 23 2.2.3-1 it says 10.6 million tons of carbon dioxide on  
 24 sub-bituminous coal and 9.4 million tons on the  
 25 bituminous coal. So I guess I'd like Excelsior to

**Responses**

**Comment 1-01**

"Clean coal technologies" refer to advanced coal utilization technologies that are environmentally cleaner, and in many cases, more efficient and less costly than conventional coal-utilization processes. The integrated gasification combined cycle (IGCC) technology that would be used in the IGCC Power Station is considered a clean coal technology because it would have a substantial overall emissions reduction advantage (less sulfur dioxide [SO<sub>2</sub>], oxides of nitrogen [NO<sub>x</sub>] and mercury [Hg] emissions) when compared to existing conventional coal-fired power plants. Additionally, the combined total lead (Pb) emissions from Phase I and Phase II (0.03 tons per year) of the Mesaba Energy Project are well below the U.S. Environmental Protection Agency's Prevention of Significant Deterioration (PSD) significance threshold of 0.6 tons per year. Therefore, the IGCC Power Station would not be considered a major source of Pb emissions (see 40 CFR 52.21[b][21][i]). Total Hg emissions from the power plant would be minimized through pre-combustion clean up of the power plant's gaseous fuel – a pollution prevention concept characterizing IGCC technology – by use of demonstrated, state-of-the-art Hg control technology capable of achieving the highest Hg removal rates in the coal-fueled power generation industry.

The combined total carbon dioxide (CO<sub>2</sub>) emissions expected from Phase I and Phase II of the Mesaba Energy Project are 10.6 million tons per year for sub-bituminous coal and 9.4 million tons per year for bituminous coal. The label for the correct unit of measure was inadvertently omitted from Tables S-2 and 2.1-1 (Volume 1) of the Draft EIS; however, the quantity was stated correctly in Sections 2.2.3.1, 4.3.5.6, and 5.1.2 (Volume 1) of the Draft EIS. Tables S-2 and 2.1-1 (Volume 1) of the Final EIS has been revised for clarification.

1-01

**Commenter 1 – Ross Hammond**

21

**Responses**

**1-01  
(cont'd)**

1 clarify which is correct.

2 And I would ask further, the purpose of the  
3 project, which is stated throughout, is talking about  
4 developing technology to burn coal that can capture  
5 carbon dioxide. And why do we want to capture the  
6 carbon dioxide? Because we want to be able to put it  
7 into the ground, not into the air. The project does  
8 mention possibly being ready to do this, pipelines  
9 going to North Dakota, 265 to 400 miles or longer.

**1-02**

10 And I guess my point is that the Environmental  
11 Impact Statement is not complete unless all of the  
12 equipment and all of these pipelines are shown. Where  
13 are these pipelines going to go, whose property are  
14 these pipelines going to cross? All of that should be  
15 in the Environmental Impact Statement, otherwise the  
16 Environmental Impact Statement is not complete. So I  
17 believe that should be in there.

18 And if the project does not store the carbon  
19 dioxide -- as I was thinking about this, I sort of  
20 thought about walking into a car dealership and there's  
21 a brand new shiny car, but it's sitting up on blocks.  
22 And the salesman says, but the car is ready for wheels  
23 but you're not going to get any wheels yet. I kind of  
24 thought, that's sort of like this project. It's ready  
25 to capture carbon dioxide, but we're not going to

**1-03**

**Comment 1-02**

As outlined in Section 5.1.2.1 (Volume 1), the carbon capture and sequestration (CCS) plan presented by Excelsior in Appendix A1 (Volume 2) does not constitute a detailed design for transport and geologic storage of CO<sub>2</sub>. The Mesaba Energy Project, as proposed in the Joint Application to Minnesota Public Utilities Commission (PUC) and in the cooperative agreement with DOE, did not include the implementation of a CCS plan during startup and demonstration. CCS was not a requirement for projects solicited in Round 2 of the Clean Coal Power Initiative (CCPI) Program. In the absence of specific regulatory requirements (i.e., CAA permit limitations) or economic incentives (i.e., carbon trading) for CO<sub>2</sub> emissions, utilities and industries cannot reasonably be expected to implement processes that have no economic justification. Rate-payers cannot be expected to bear the increased costs without a legal basis; hence, utility regulators would not approve them. As stated in Section 1.2.2 (Volume 1), Minnesota Statute 216B.1694 (the "innovative energy project" statute) requires the project to make a "good faith effort" to secure funding from the DOE or U.S. Department of Agriculture (USDA) to conduct a demonstration project at the facility for either geologic or terrestrial carbon sequestration. As described in Section 2.2.1.3 (Volume 1) and Appendix A1 (Volume 2), Excelsior has contracted with the Plains CO<sub>2</sub> Reduction Partnership (one of seven regional partnerships funded by DOE) to investigate a CCS project involving Mesaba. If and when CCS is implemented at some future time during the commercial operation of the Mesaba Generating Station, a detailed design, including engineering, geotechnical, and environmental studies, and permitting to comply with applicable laws and regulations would be completed. Pipeline routing for CO<sub>2</sub> transport would be subject to an EIS prepared for the PUC under Minnesota Rules Chapter 7852 (entitled "Pipeline Routing"). It is also likely that this action would require a Federal EIS with potential Federal involvement by DOE, U.S. Army Corps of Engineers (USACE), and/or other Federal agencies.

**Comment 1-03**

As stated in the EIS, the Mesaba Generating Station, Phase I and II without CCS, would emit approximately 9.4 to 10.6 million tons per year of CO<sub>2</sub> and would be the second largest producer of CO<sub>2</sub> emissions in Minnesota. However, as stated in response to Comment 1-02, although the Mesaba Energy Project would be designed to be CO<sub>2</sub> capture-ready, CCS is not part of the scope for this project. DOE is actively pursuing methods of addressing CO<sub>2</sub> emissions, including development of carbon sequestration technology through its Carbon Sequestration Program ([http://www.netl.doe.gov/technologies/carbon\\_seq/index.html](http://www.netl.doe.gov/technologies/carbon_seq/index.html)).

**Commenter 1 – Ross Hammond; Commenter 2 – LeRoy Flug**  
 22

**Responses**

**1-03  
 (cont'd)**

1 capture the carbon dioxide. So if they do not capture  
 2 carbon dioxide, it is going to be the second biggest  
 3 polluter of carbon dioxide in the state and it's going  
 4 to be just an expensive power plant. Thank you very  
 5 much. (Applause.)

6 BILL STROM: Thank you, Ross. Next we have  
 7 LeRoy Flug. Please step to the mike. Remember to  
 8 state your name and spell it for the court reporter.

9 LEROY FLUG: My name is LeRoy Flug. L-e-R-o-y  
 10 F-l-u-g. I'm looking at these books, and they're about  
 11 six inches thick and filled with how much pollution is  
 12 going to go here and how much is already polluted. And  
 13 what I don't understand is why the state environmental  
 14 people aren't there. They tell us here people taking  
 15 the same sample, same spot. I see nothing in there  
 16 about frogs, fish, anything else. How are we going to  
 17 ever set a guideline? We know nothing of what's  
 18 already there. And to me it means nothing until the  
 19 state puts their stamp on it. Is this supposed to be  
 20 from the feds, is it from the state? Where do all  
 21 these figures come from? I'd like an answer to that.  
 22 Thank you. (Applause).

23 BILL STROM: Thank you, LeRoy. Linda  
 24 Castagneri.

25 LINDA CASTAGNERI: My name is Linda

**Comment 2-01**

As described in Chapter 1 (Volume 1), the Mesaba Energy Project EIS has been prepared jointly by DOE and MDOC to meet the requirements of the National Environmental Policy Act (NEPA) and the Minnesota Power Plant Siting Act. The document has been distributed to all Federal and state regulatory agencies responsible for protecting natural resources and issuing required permits. Chapter 6 (Volume 1) outlines the various regulatory and permit requirements applicable to the project. Chapter 3 (Volume 1) describes the existing conditions of environmental resources in the respective planning areas for the West Range Site and East Range Site. Chapter 4 describes the anticipated impacts of the project on the same environmental resources. On the basis of this EIS, the MDOC will recommend to the PUC whether to issue permits for the Mesaba Energy Project at the West Range Site or the East Range Site or recommend that permits not be issued. The EIS will support DOE's decision whether to provide additional funding for the demonstration of the project under the CCPI Program. Other Federal and state agencies will consider the impacts outlined in this EIS when making respective permitting decisions under regulations subject to their jurisdiction.

**Commenter 3 – Linda Castagneri**

23

1 Castagneri. L-i-n-d-a C-a-s-t-a-g-n-e-r-i.  
2 I'm going to start with referring to my  
3 initial comments that I submitted on November 7th,  
4 2005, to the Department of Energy, regarding safety and  
5 health. And I am here tonight not just about my lungs,  
6 but about the lungs of everyone who lives here.  
7 I have lost a portion of my lung due to an  
8 unknown tumor, and as I talked about in 2005, for those  
9 of us who were born and raised in this part of the  
10 state, we were exposed to many chemicals. And I asked  
11 and requested that very specific items be considered.  
12 And in reviewing the draft EIS, I, too, agree that the  
13 most important things need to be addressed, and I do  
14 not feel or agree that they have been addressed in this  
15 draft Environmental Impact Statement, particularly  
16 regarding respiratory health, which I referenced many  
17 times in my comments, nor are they taken into any sort  
18 of really in-depth study.  
19 When I look at Table S-6, it talks about the  
20 electric magnetic field, and it says, "The electric  
21 magnetic field exposure from utility lines would fall  
22 below the 2 kilowatt, monthly kilowatt volt minimum  
23 limit at the edge of the right-of-way. There would be  
24 no permanent residence located in areas exceeding  
25 that," period.

3-01

**Responses**

**Comment 3-01**

Based on input from the public scoping meetings, the EIS considered the potential health impacts associated with EMF exposure, including the Henshaw Effect, in Sections 3.17.5.3 and 4.17.3 (Volume 1). The "Henshaw Effect," associated with Professor Denis L. Henshaw of England, relates to the potential for aerosol pollutants or airborne particulates to become charged by HVTLs and other EMF sources causing them to adhere to surfaces more readily, including human skin and respiratory tissue. Professor Henshaw and colleagues at the University of Bristol and other institutions have been researching this potential health risk from EMF for over 10 years. Although results obtained by these researchers suggest the potential for increased deposition of particles charged by HVTLs on human skin, a causative effect of this exposure on human health risks has not been demonstrated. Moreover, a recent study (Jeffers, 2007) could not support the hypothesis that ion exposure from HVTL charges increases lung deposition of airborne particles.

After reviewing more than two decades of research on the health effects of EMF, the National Institute of Environmental Health Sciences (NIEHS, 1999) concluded: "...there is weak evidence for possible health effects from extremely low frequency EMF exposures, and until stronger evidence changes this opinion, inexpensive and safe reductions in exposure should be encouraged." More recently, the same Federal agency (NIEHS, 2002) also concluded: "Over the past 25 years, research has addressed the question of whether exposure to power frequency EMF might adversely affect human health. For most health outcomes, there is no evidence that EMF exposures have adverse effects. There is some evidence from epidemiology studies that exposure to power-frequency EMF is associated with an increased risk for childhood leukemia. This association is difficult to interpret in the absence of reproducible laboratory evidence or a scientific explanation that links magnetic fields with childhood leukemia. EMF exposures are complex and come from multiple sources in the home and workplace in addition to power lines. Although scientists are still debating whether EMF is a hazard to health, the NIEHS recommends continued education on ways of reducing exposures." Also, in a very recent publication, the New Zealand National Radiation Laboratory (NZNRL, 2008) concluded: "In spite of all the studies that have been carried out over the past thirty years there is still no persuasive evidence that the [EMF] fields pose any health risks. The results obtained show that if there are any risks, they must be very small."

## Responses

### Comment 3-01 (cont'd)

Scientific literature clearly evidences that substantial research has been, and continues to be, conducted by academic laboratories, as well as the most qualified health research organizations in the world, including the National Institute of Environmental Health Sciences (within the National Institutes of Health) and the World Health Organization, into the potential health risks from EMF exposure. In spite of these efforts, there are no established health criteria or quantifiable impact assessment methods currently accepted for determining adverse effects to human health with respect to EMF exposure or the Henshaw Effect. Therefore, the EIS evaluated the magnetic and electric fields that would be generated within and at the edge of the right-of-way in comparison to existing standards and guidelines established by Minnesota and other states as described in Section 4.17.3.

### Commenter 3 – Linda Castagneri

24

### 3-01 (cont'd)

1 Well, when I look at that chart over there  
2 for the proposed high voltage transmission lines, I  
3 happen to own property, I happen to be one of those  
4 receptors. And again, I'm going to go back to my  
5 initial comments in 2005. I do not believe that the  
6 respiratory issues have been addressed by the  
7 Environmental Impact Statement. There are some  
8 comments, just very global comments, talking about the  
9 Henshaw effect, and it delves into -- really, it's sort  
10 of like what you would pull off a website or really  
11 that sort of type of, I would call it, encyclopedia  
12 information, but really does not address those items  
13 that I brought up.

14 But there is a very interesting comment on  
15 Page 4.17-12. "Since the research regarding the  
16 Henshaw effect and its potential health implications in  
17 real-world conditions is inconclusive at this time, any  
18 potential health effects from charged particles  
19 resulting from high voltage transmission lines  
20 introduced by the proposed action cannot be  
21 quantitatively ascertained in this EIS." And I  
22 disagree, and I am requesting that both agencies go  
23 back to the drawing board. It is reasonable to expect  
24 studies to be conducted. If we have adequate funding  
25 to fund a high risk demonstration plant, there exists

**Commenter 3 – Linda Castagneri**

25

**3-01  
 (cont'd)**

1 in this country adequate funding to study properly and  
 2 make appropriate comments regarding these health  
 3 issues.

4 The second issue I would like to address is  
 5 visibility. Section 5.2.9 of the draft EIS states,  
 6 "Minnesota Power reductions would potentially offset  
 7 visibility impacts related to the Mesaba Energy  
 8 Project."

**3-02**

9 And I have been a senior manager in project  
 10 management for more than 15 years; and when I read  
 11 these type of comments, I again would like to have  
 12 addressed by the draft EIS document, because I do not  
 13 think it's been addressed, whose responsibility is it  
 14 for visibility? We continue to work with a company  
 15 that has never produced a kilowatt of energy, and yet  
 16 expect the branded utilities in the State of Minnesota  
 17 to purchase their product and now solve -- provide the  
 18 solution for negative impacts.

19 And I request the core values of Excelsior  
 20 Energy be reviewed. What corporation would expect the  
 21 branded marketplace utilities to purchase their product  
 22 and solve their problems? Thank you. (Applause)

23 BILL STROM: Thank you, Linda. Next, Ron  
 24 Gustafson.

25 RON GUSTAFSON: Ron Gustafson. R-o-n

**Responses**

**Comment 3-02**

DOE understands that the Federal Land Managers (FLMs) do not consider reductions by other sources to be "offsets" for visibility impacts of the Mesaba Energy Project. The discussion in Section 5.2.2.3 (Volume 1) relating to 'offsets' has been revised. Ultimately, the MPCA must address cumulative visibility impacts as part of its responsibilities under the Regional Haze Regulation. Section 5.2.2.2 in the Final EIS identifies such responsibilities and how the project would be designed to be an integral component in supporting them.

Note that since publication of the Draft EIS, revised air modeling analysis was conducted in light of comments on the Draft EIS to accurately evaluate Mesaba Energy Project impacts on air quality and Air Quality Related Values (AQRVs) in Class I areas near the West Range and East Range sites, including the BWCAW, VNP, and IRNP. In correspondence with the FLMs, Excelsior received concurrence on an updated modeling protocol (see Section 4.3.1.1) and, subsequently, additional air quality modeling was performed, which is discussed in Section 4.3 (Volume 1) and Appendix B (Volume 2) of the Final EIS. Additional cumulative air quality modeling was also performed and is discussed in Section 5.2.2 (Volume 1) and Appendix D1 (Volume 2) of the Final EIS.



**Commenter 4 – Ron Gustafson**

26

4-01

1 G-u-s-t-a-f-s-o-n. I'd like to talk about carbon  
 2 capture as listed in the draft EIS and also emergency  
 3 response and also on the carbon CO2 pipeline. And many  
 4 of these documents are from Appendix 2 of the DOE.  
 5 "Carbon dioxide emissions will be 214 million  
 6 tons over the commercial life of the generating  
 7 station. Excelsior may, may install carbon dioxide  
 8 capture transport or sequestration at some point during  
 9 the 20 year life of the plant."  
 10 Where is the accountability for this? Are  
 11 they going to sequester carbon or are they not? What  
 12 is the cost of that to the customers? I've asked them  
 13 that the DEIS include the cost for generation,  
 14 transmission and distribution, the cost per kilowatt to  
 15 residents, residential use, small commercial  
 16 businesses, large commercial businesses and others.  
 17 Without a detailed plan and design for carbon  
 18 capture, how can the true cost of this project ever be  
 19 determined? Two administrative law judges came to the  
 20 same finding. The Public Utilities Commission stated  
 21 that the Mesaba Project is not in the best interest of  
 22 the citizens of Minnesota. And the DOE, in Appendix  
 23 A2, it says, "Carbon capture and sequestration is not  
 24 feasible for the Mesaba Energy Project." And that's in  
 25 the documents in the DEIS. Yet they may do it at

**Responses**

**Comment 4-01**

The power purchase agreement for the Mesaba Energy Project has been assigned a separate PUC Docket Number E6472/M-05-1993. The PUC has not approved any power purchase agreement or agreements relating to the Mesaba Energy Project, and the specific final revenues and costs for the project cannot be determined until an agreement has been settled.

As stated in response to Comment 1-02, Excelsior submitted to the PUC a "Plan for Carbon Capture and Sequestration" for the Mesaba Energy Project, which is included in Appendix A1 (Volume 2) of the Final EIS. The plan provides information about the potential costs and economic effects of CCS scenarios that could be implemented for the project to the extent that these costs can be determined in the absence of regulations or incentives aimed at controlling CO<sub>2</sub> emissions. In Appendix A2 (Volume 2), DOE states that, in the absence of such regulations or incentives, the "...imposition of CCS on the project will effectively make the cost of electricity non-competitive" and, therefore, CCS "... is not considered feasible for the Mesaba Energy Project at this time" (i.e., for the CCPI demonstration). However, Appendix A2 also states that "CCS was not a requirement of the [CCPI] Round 2 announcement, was not proposed in Excelsior's application submitted in response to the announcement, nor is it included within the project as negotiated and awarded in the DOE Cooperative Agreement." With respect to the potential economic effects of CCS on the Mesaba Energy Project, DOE also concludes in Appendix A2: "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."

Responses

27

Commenter 4 – Ron Gustafson

4-01  
(cont'd)

1       sometime.

2               Appendix 2A also states that "Carbon capture,

3       advanced turbines will not be available by the Mesaba

4       in-service date. Even if turbines were available, it

5       would result in substantial capital cost, reduce plant

6       efficiently and increase cost of electricity by as much

7       as 40 percent." Again, that was Department of Energy,

8       Appendix 2A.

9               There are no geological reservoirs capable of

10       sequestering CO2 in the State of Minnesota. The cost

11       to move CO2 via pipeline will significantly increase

12       the cost of electricity. And Excelsior seems to hang

13       their hat on the CO2 sequestration to pipe into oil

14       fields to improve their production of oil. And as

15       stated by the Department of Energy, carbon dioxide

16       injection for enhanced oil recovery, or EOR, are

17       economically-driven operations to increase oil

18       production, not necessarily scientifically-driven to

19       prove the technical feasibility of sequestering carbon.

20               "Excelsior has not established a detailed

21       design for carbon capture or sequestration." A direct

22       quote from the Department of Energy, Appendix 2A. And

23       interestingly enough, two ALJs, administrative law

24       judges, found the same thing, as did the Public

25       Utilities Commission.

**Commenter 4 – Ron Gustafson**

28

**Responses**

**Comment 4-02**

The Draft EIS discussed the potential future CCS plan for the Mesaba Energy Project commercial operation in Section 5.1.2, including information about the regulation of CO<sub>2</sub> pipelines. If and when CCS is implemented at some future time during the commercial operation of the Mesaba Generating Station, a detailed design, including engineering, geotechnical, and environmental studies, and permitting to comply with applicable laws and regulations would be completed. As noted in response to Comment 1-02, it is anticipated that pipeline routing for CO<sub>2</sub> transport would be subject to an EIS prepared for the Minnesota PUC with possible Federal involvement by DOE, USACE, and/or other Federal agencies, and potential involvement by the Canadian government. As with other pipeline permitting processes, landowners potentially affected by eminent domain or other impacts would be identified and notified.

**Comment 4-03**

Because there are no specific regulatory requirements or economic incentives for the implementation of CCS on the Mesaba Energy Project at this time, specific customers for captured CO<sub>2</sub> have not been identified. However, as stated in Appendix A1 (Volume 2): “In a carbon-managed economy, large sources of CO<sub>2</sub> emissions that can economically achieve significant greenhouse gas (GHG) reductions will likely be the major source of CO<sub>2</sub> offsets for other economic sectors whose only meaningful alternative for achieving reductions may be the purchase of GHG offset credits.” Furthermore, as stated in Section 5.1.2 (Volume 1): “It is expected that if CO<sub>2</sub> capture and storage were implemented at some time in the future [for the Mesaba Energy Project], a more detailed analysis would be conducted, including detailed design and engineering, environmental and geotechnical studies, and permitting necessary to comply with appropriate laws and regulations.”

**4-01  
(cont'd)**

1 I'm requesting my comments be reviewed and  
2 evaluated in the draft EIS as stated.  
3 The carbon capture sequestration plant  
4 submitted by Excelsior Energy is merely a paper desktop  
5 theoretical exercise lacking specific detailed design  
6 for carbon capture transport or sequesstration.  
7 Excelsior's carbon capture/sequestration plan is merely  
8 a conceptual scenario with no established time line,  
9 cost estimate or cost impact analysis to rate payers.  
10 It's a pipe dream. They may do it at some point during  
11 the 20 year life, but we don't know how much it's going  
12 to cost and how much it's going to affect major  
13 industries of our state due to the increased cost of  
14 electricity. That's a big question that needs to be  
15 answered.

**4-02**

16 I'd also like to talk about the CO2 pipelines  
17 as proposed or as submitted. CO2 compression and  
18 transport is a pipe dream. CO2 pipelines are  
19 considered hazardous liquids. The proposed Route 1  
20 will travel through 41 towns and communities and Indian  
21 Reservations. What are the potential dangers to all  
22 receptors along the route of the 400 miles plus of this  
23 line? How many property owners will be affected by  
24 eminent domain easements?

**4-03**

25 Who specifically are the customers? Are there

**Commenter 4 – Ron Gustafson**

29

**4-03  
 (cont'd)**

1 any purchase agreements in place for this piped CO2, or  
 2 is it they may be available, they may not? You hear  
 3 that word "may" a lot in these documents. A separate  
 4 and detailed EIS should be developed along the entire  
 5 proposed pipeline routes.

6 I would also like to talk about emergency  
 7 response. During the scoping period in October of '05,  
 8 I submitted some requests on emergency response. And I  
 9 thank the DOE and the Department of commercial for  
 10 listing those statements in the draft EIS. I did the  
 11 anthrax response for the postal service, the State of  
 12 Minnesota, working in the main processing plants in  
 13 Duluth, Minneapolis, St. Cloud, Minnesota, in the event  
 14 that if we had another terrorist attack, that we now  
 15 detect anthrax. And I worked with the public health  
 16 and I worked with the first responders, who I have a  
 17 tremendous respect for, and we put together a viable  
 18 plan response for the public health to protect the  
 19 public and our employees in the event of another  
 20 terrorist anthrax attack.

**4-04**

21 So I kind equated that to what would happen if  
 22 there was a major disaster in this plant, or explosion,  
 23 how would we handle that with basically small fire  
 24 departments and first responders in this geographic  
 25 area? And the response in the meeting I asked listing

**Responses**

**Comment 4-04**

Section 4.13.2.2 (Volume 1) states that the "...Mesaba Generating Station would be subject to an Emergency Response Program to be developed in compliance with OSHA Standard 1910.120, which would include an Emergency Response Plan (1910.120[q])." The implementation of this plan, including the provision of onsite emergency equipment and the training of personnel at the generating station, would be the responsibility of the project sponsor. Section 4.17.4 (Volume 1) addresses the potential effects on human health and safety from potential releases of toxic and hazardous materials caused by an intentional destructive act, which represents a worst-case emergency condition at the plant. In the event of such an incident, the respective Itasca or St. Louis County Director of Emergency Management would have principal responsibility for coordinating the response as stated in Sections 4.13.3.2 and 4.13.4.2 (Volume 1). Otherwise, as also explained in those sections, potential incidents and injuries occurring during operation of the Mesaba plant are not expected to increase demand on medical services substantially beyond available capacities in the respective West Range and East Range communities.

The anticipated need for an increase in Taconite's volunteer fire department staff to 20 individuals was based on a comparison to the City of Cohasset, where the Minnesota Power Clay Boswell plant is located. The emergency response staff of that city has adequately responded to the levels of incidents experienced at the Boswell plant, which provides a reasonable basis for comparison to the Mesaba plant. The population in the City of Cohasset is approximately 2,587, while the combined population of Taconite, Bovey, and Coleraine is approximately 2,181. It is expected that the costs associated with additional personnel, training, and equipment for local and regional emergency response agencies would be the responsibilities of the respective jurisdictions and their taxpayers.

## Responses

### Commenter 4 – Ron Gustafson

30

4-04  
(cont'd)

1 the emergency is quite disappointing, and is, quite  
2 frankly, is unacceptable.

3 The response was that the City of Taconite  
4 should increase their volunteer firefighters from 12 to  
5 20. That was their response. The draft EIS did not  
6 address the issues of emergency response. It merely  
7 stated that the City of Taconite may need to increase  
8 the complement from 12 to 20. It basically states the  
9 City of Cohasset never had a problem, therefore we  
10 never will either. That is unacceptable to me.

11 A complete study should be conducted to  
12 determine the levels of needed emergency response and  
13 of the equipment and what training these firefighters  
14 need, our fine men and women who first respond, before  
15 they enter the facility and risk their lives to respond  
16 to an emergency situation. It's insulting to them.

17 (Applause)

18 Further I'd like to ask, how will additional  
19 equipment and staffing be funded? Will local taxpayers  
20 have to bear the burden? And this is a particular  
21 point; Excelsior Energy successfully lobbied the  
22 Minnesota legislature for an exclusive exemption to the  
23 energy plant personal property tax. This exemption  
24 will shift the costs of any additional staffing,  
25 equipment and training of first responders to local

**Commenter 4 – Ron Gustafson; Commenter 5 – Bob Norgord**

31

**4-04  
 (cont'd)**

1 communities and taxpayers who have already voted  
 2 against an increase of tax levy for schools because the  
 3 tax burden is so tremendous in this county already.  
 4 So I end my comments, if I went over five  
 5 minutes, I'm sorry. But that's what I had to say.  
 6 Thank you. (Applause)

7 BILL STROM: Thank you, Ron. Bob Norgord.

8 BOB NORGORD: My name is Bob Norgord. B-o-b  
 9 N-o-r-g-o-r-d. In the EIS they talk about the Nashwauk  
 10 PUC supplying gas to the Excelsior project. As per  
 11 Minnesota Session Laws 1997, Chapter 21.SF504, I'll  
 12 read it to you here. "An act relating to local  
 13 government permitting the City of Nashwauk to own and  
 14 operate a gas utility. Be it enacted by the  
 15 legislature of the State of Minnesota: The City of  
 16 Nashwauk may construct and use one gas distribution  
 17 line connecting an area recently acquired by the city  
 18 and not currently served by a natural gas utility, with  
 19 a natural gas pipeline serving the region, solely for  
 20 the purpose of operating this gas line and distributing  
 21 gas to customers located in the recently acquired  
 22 area," which means that Nashwauk can't supply the gas  
 23 for the Excelsior project, which in turn means that  
 24 Excelsior will have to put in their own line. Their  
 25 preferred route parallels the preferred route of the

**5-01**

**Responses**

**Comment 5-01**

The natural gas pipeline action in 1997 referenced in this comment is out of date. Section 2.3.1.4 (Volume 1) of the Draft EIS explained that the Nashwauk PUC submitted a permit application in 2007 to construct and operate a 24-inch natural gas pipeline that would follow essentially the same route as the natural gas pipeline proposed by Excelsior for the Alternative 1 alignments between Blackberry and Taconite. The NPUC indicated in its application that it intended to supply natural gas to the proposed Minnesota Steel facility and would be seeking other industrial customers. Excelsior has indicated that it would enter into negotiations with the NPUC to purchase natural gas from the pipeline in the event that the permit would be approved and the pipeline constructed in sufficient time to be available for use by the Mesaba Energy Project. Sections 1.6.4, 2.1.2.1, and 2.3.1.4 have been updated in the Final EIS to provide the latest information about the proposed Nashwauk pipeline. The potential impacts from constructing the natural gas pipeline required for the Mesaba Energy Project at the West Range Site are described for the various resource subjects in Chapter 4 of the Final EIS (Volume 1). In the event that Excelsior were to reach agreement with the NPUC to purchase natural gas for the Mesaba Energy Project, the natural gas pipeline proposed by Excelsior for Phase I and Phase II of the Mesaba Energy Project would not be needed. Note that after publication of the Mesaba Draft EIS, the Minnesota PUC issued a Pipeline Route Permit dated April 16, 2008 for Nashwauk Public Utilities Commission to construct the pipeline.

## Responses

### Comment 5-02

The consideration of residences within a 300-foot radius of alternative natural gas pipelines was intended specifically for the purposes of assessing the potential impacts during construction and is not based on safety factors. As stated in Section 2.2.5.4 (Volume 1) of the EIS, the Minnesota Office of Pipeline Safety has jurisdiction over safety standards for natural gas pipelines. Pipeline facilities would be designed, operated, and maintained in accordance with DOT Minimum Federal Safety Standards in 49 CFR Part 192, which defines and specifies the minimum standards for operating and maintaining pipeline facilities. The regulations require an Emergency Plan that would provide written procedures to minimize hazards from a gas pipeline emergency. State and Federal standards for construction, inspection, and maintenance of these pipelines have reduced the potential for explosions to a very low level. These standards have enabled thousands of miles of natural gas pipelines to crisscross the U.S., many of which are in proximity to densely populated areas.

The use of the utility corridors by landowners would be subject to certain restrictions whereby landowners would agree not to build any structures in the easement (or within setback requirements, where applicable) or remove any land cover from above the pipeline without the consent of the pipeline owner. The permanent rights of way for natural gas pipelines applicable to the Mesaba Energy Project would be 70 feet in diameter.

## Commenter 5 – Bob Norgord

32

### 5-01 (cont'd)

1 Nashwauk line. So they'll have to clear -- if they  
2 take the same easement as what the Nashwauk line would  
3 take, we'd be looking at clearing 200 feet of land 12  
4 miles, which amounts to 290 acres of land being  
5 cleared, 145.5 of this attributed to the Mesaba  
6 Project.

7 In some instances this natural gas pipeline  
8 would deprive landowners of the right to build or put  
9 their septic systems on their open spaces. The EIS did  
10 not take into consideration the fact that additional  
11 land would have to be cleared to allow for homes and  
12 septic systems to take the place of the open land  
13 utilized by the pipeline.

14 The EIS also does not mention that the blast  
15 area for a 24-inch line is 500 feet. This was  
16 established at a pipeline safety meeting at the Sawmill  
17 Inn in Grand Rapids this summer. They only mention  
18 homes within 300 feet of the proposed line. So with  
19 this knowledge each future home builders will have to  
20 clear an area well beyond the 500 feet.

21 And when they come to the west side of Twin  
22 Lakes, as these lines are planned, the preferred  
23 routes, they are trying to squeeze between Swan River  
24 and Twin Lakes, which would pretty well take up all the  
25 land between those two bodies of water. People with

### 5-02

## Commenter 5 – Bob Norgord

33

5-02  
(cont'd)

1 land in that area wouldn't be able to build on that  
2 land.  
3 No one can say that these natural gaslines  
4 won't explode. The Panhandle Eastern pipeline  
5 explosion near Springfield, Illinois on April 29th,  
6 2007 is but one example. There was another one a few  
7 years ago in Deer River. A 36-inch line, I think it  
8 was, exploded in front of a lady's house, in the Burbee  
9 residence in rural Deer River. Mrs. Burbee had a heart  
10 attack and passed away at that time.

5-03

11 There are other possible routes that could be  
12 taken that have less of an impact on wildlife and  
13 humans. One route is a route submitted by Michael  
14 Karna, 21205 Bluebird Drive, Grand Rapids, Minnesota.  
15 This route follows mostly tax forfeited land, nine  
16 sections of it, and an existing high voltage  
17 right-of-way. There are wetlands involved, but the  
18 pipelines have traditionally been able to overcome the  
19 difficulty of wetlands. I'm submitting here a letter  
20 by Mr. Karna describing that route. I also have here a  
21 copy of Minnesota Statute Session Law 1997, which I'll  
22 submit.

23 Another route would connect the Great Lakes  
24 gas line just north of Highway 2 in Cohasset, and it  
25 would follow the high voltage lines that go right

## Responses

### Comment 5-03

Options for natural gas pipeline routes have been described in the Draft EIS and updated in the Final EIS (Volume 1, Sections 2.3.1.4 and 2.3.2.4). The pipeline route proposed by Mr. Karna was submitted as an alternative for consideration in the route permitting process for the Nashwauk-Blackberry Pipeline Project (Docket No. PL,E-280/GP-06-1481). The Minnesota PUC ultimately rejected Mr. Karna's route and issued a permit for Nashwauk PUC's preferred pipeline route, which closely follows the route of Natural Gas Pipeline Alternative 1 analyzed in Mesaba Energy Project EIS. The route proposed by Mr. Karna was never formally submitted for consideration as an alternative for the Mesaba Energy Project, and the Citizens Advisory Task Force convened by MDOC for this EIS did not identify any additional pipeline routes to be analyzed. However, even if Mr. Karna's route had been submitted and considered, there is no reason to believe the outcome would have differed from that of the Nashwauk-Blackberry Pipeline Project. Furthermore, as explained in Section 2.1.2.1 (Volume 1) of the Final EIS, Excelsior plans to enter into negotiations with the Nashwauk PUC for the purchase of natural gas for the Mesaba Energy Project in lieu of building a separate pipeline.



**Responses**

**Comment 5-04**

Excelsior explained its process for the screening of potential sites for the Mesaba Energy Project in the Taconite Tax Relief Area (TTRA) in Appendix F1 (Volume 2). "Reasonable proximity to a major natural gas pipeline" was one criterion.

**Commenter 5 – Bob Norgord**

34

**5-03  
 (cont'd)**

1 through the Butler Tac site, so there's already a  
 2 right-of-way there.

3 I have a copy of the Citizen Advisory  
 4 Committee report for the proposed Nashwauk Blackberry  
 5 natural gas pipeline, which I will also submit for your  
 6 review. It discusses five possible alternative routes,  
 7 and the sixth route has since been identified and added  
 8 to the list.

**5-04**

9 It should be noted that in an Excelsior  
 10 Energy press release dated 8-29-05 it says under  
 11 "Advantages of the preferred site, the site is located  
 12 in close proximity to existing infrastructures,  
 13 including adequately sized natural gas pipelines."  
 14 This statement is just another example of spin that  
 15 Excelsior is willing to put on things to make the facts  
 16 fit the project.

17 At a recent meeting of the Itasca County  
 18 Planning and Zoning, a subcommittee was formed that  
 19 included John Engesser of the Minnesota DNR Mines and  
 20 Minerals Division and several mining engineers. Their  
 21 mission was to identify the exact location of the iron  
 22 ore body and to devise a map to be implemented in a  
 23 mine overlay district. The object of the mine overlay  
 24 district is to prevent development over the ore body  
 25 and to preserve the land for future mining.

**Commenter 5 – Bob Norgord**

35

**Responses**

**Comment 5-05**

DOE acknowledges that the West Range Site would be located adjacent to bedrock containing the Biwabik Iron Formation. The Biwabik formation has been the historic source of the taconite extracted from the Arcturus and Coleraine mine pits. In addition, the proposed pipeline corridors, HVTL easement, and railroad would cross sections of the Biwabik formation. However, Section 2.2.2.1 (Volume 1) states that Excelsior holds the option to purchase the West Range Site, which allows for purchase of mineral rights extending beyond the station footprint and acquisition of easements for the associated facilities under commercially reasonable terms. In addition, Figure 3.4-2 shows that the bedrock would be at depths between 50 and 200 feet below the surface of the earth. It is unlikely that the Arcturus or Coleraine mines would be extended to County Highway 7, Big and Little Diamond Lakes, and the proposed utility corridors. See also response to Comment 76-01 regarding the potential for future resumption of mining in the Canisteo Mine Pit (CMP).

**5-05**

1 Through test borings and other data it was  
 2 shown that the next and only logical place for mining  
 3 in the near future would be in the area starting at the  
 4 old Arturas Mine just east of Scenic 7 and traversing  
 5 west to the Canisteo Mine pit. And I have a map here  
 6 showing that. This means that the Mesaba Project's  
 7 infrastructure, railroad spur, process water lines,  
 8 potable water lines, wastewater lines, high voltage  
 9 transmission lines all would interfere with the mining  
 10 in the area.

11 I've included in Exhibit D a report that was  
 12 done by members of the Natural Resources Research  
 13 Institute and Richard Ojakangas of the Department of  
 14 Geological Sciences, University of Minnesota-Duluth.  
 15 It states that "Even though the access to the mineral  
 16 resource itself is crucial, attention must also be paid  
 17 for keeping land available for things like ancillary  
 18 facilities, tailings basins and stockpiles, including  
 19 land north of the iron formation where the bedrock is  
 20 Archean granite."

21 Since the Mesaba Project was planned in close  
 22 proximity to and north of the iron ore body, it would  
 23 jeopardize the ability to mine that area, depriving the  
 24 state, county and schools of badly needed funds.

25 Putting this information along with the fact

Commenter 5 – Bob Norgord; Commenter 6 – LeeAnn Norgord

36

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**

37

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

## 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

38

### 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

**Commenter 7 – Ed Anderson**

39

**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).

## 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

40

### 7-03 (cont'd)

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.

### 7-04

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

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>.



Responses

Commenter 8 – Charles Decker; Commenter 9 – Mary Munn

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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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**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.

**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 megawatts 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

**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

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

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

**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**

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**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**  
 47

**Responses**

**Comment 14-01**

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

**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 14-02

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

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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

## Commenter 14 – Harry Hutchins

49

14-02  
(cont'd)

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?

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.

**15-01**

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

**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).

Responses

Commenter 15 – Warren Shaffer

52

15-01  
(cont'd)

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

Responses

Commenter 15 – Warren Shaffer

53

15-01  
 (cont'd)

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

Responses

Commenter 15 – Warren Shaffer; Commenter 16 – Andrew David

54

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

16-01

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

**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

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

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,

**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.

Responses

Commenter 16 – Andrew David

57

16-01  
(cont'd)

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



## 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

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.

### 16-02

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 (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.

**Commenter 16 – Andrew David**

59

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

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

## Commenter 16 – Andrew David

60

16-02  
(cont'd)

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

## 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

61

17-01

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.

## Responses

## Commenter 17 – Charles Grant

62

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.

## Responses

### Comment 18-01

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

### Commenter 18 – Kristen Anderson

63

18-01

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, accept 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

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

64

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

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.

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**

**19-02**

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

**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.

**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.

**Commenter 19 – Amanda Nesheim**

65

**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 CO<sub>2</sub>. 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 CO<sub>2</sub>. So the enhanced oil recovery



**Commenter 19 – Amanda Nesheim; Commenter 20 – Carol Overland**

66

**19-03  
(cont'd)**

1 emissions actually completely out process the amount  
2 that is actually sequestered. Thank you. (Applause)  
3 BILL STROM: Thank you, Amanda. Carol  
4 Overland.  
5 CAROL OVERLAND: I'm Carol Overland, C-a-r-o-l  
6 O-v-e-r-l-a-n-d, as in express. I'm here on behalf of  
7 MCGP or MnCoalGasPlant.com. I just blasted in 1200  
8 miles, so I'm a little in la-la land. So I'll be quick  
9 and submit written comments later.

**20-01**

10 But for the record I want to really clearly  
11 state, because this was an issue in the Chisago  
12 project, I looked at the scoping decision and then  
13 looked at the EIS, and there's some things that don't  
14 exactly cross all fronts. So I'm going to do a  
15 detailed review of that and send that in. The things  
16 that are in the scoping decision need to be addressed.  
17 And so that's a simple requirement.

**20-02**

18 Also it was kind of telling that -- on Page  
19 1-9, where it's talking about state involvement in this  
20 project. It mentions Docket Number GS-06-668, and  
21 there's no mention about 5-1993. It seems to me that's  
22 a pretty important part of the state involvement in  
23 this project.

**20-03**

24 PM 2.5, yeah, it's not here. It's not in any  
25 air permit that I've seen in the State of Minnesota.

**Responses**

**Comment 20-01**

See response to Comment 7-01, which addresses the same concern.

**Comment 20-02**

The EIS for MDOC addresses decisions relating to the Joint Permit Application (PUC Docket Number E6472/GS-06-668). The power purchase agreement is the subject of separate PUC Docket Number E6472/M-05-1993, which MDOC has stated is not a subject for this EIS.

**Comment 20-03**

Although PM<sub>2.5</sub> emissions from the proposed power plant were not modeled, near-field PM<sub>2.5</sub> concentrations were extrapolated from the PM<sub>10</sub> concentrations. This methodology is based on research indicating that multipliers in the range of 0.06 to 0.11 can be used to infer or scale PM<sub>2.5</sub> concentrations from PM<sub>10</sub> data (USEPA, 2005). As noted in response to Comment 9-01, in instances where far-field concentrations of PM<sub>2.5</sub> were concerned, 100% of PM<sub>10</sub> was considered to be PM<sub>2.5</sub>, thereby producing conservatively high impacts to compare with regulatory thresholds. To provide further insight on potential health impacts from particulate matter, new text has been added to Section 4.17.2.3 (Volume1). See also response to Comment 7-03, which addresses the source of PM<sub>2.5</sub> from power plants.

Responses

Commenter 20 – Carol Overland

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20-03  
(cont'd)

1 And the State of Minnesota MPCA realizes that it's not  
2 in compliance with the Federal Rules.  
3 Now, Federal Rules are in their own kind of a  
4 mess because of a recent circuit court decision. But  
5 the PM 2.5 hasn't been addressed, and it needs to be  
6 done more specifically. But there's a (inaudible)  
7 process about that. But this is inadequate. It  
8 doesn't address that. And 2.5 is just the tip of the  
9 iceberg. And those much smaller particles, as I've  
10 said, are the ones that are really dangerous. So those  
11 things need to be addressed.  
12 And, you know, one of the great parts of this  
13 work is watching everybody grow up in the process and  
14 hearing all these great comments. And those of you who  
15 have made comments, I really urge you to submit them in  
16 writing, give them all the documentation you possibly  
17 can, rent a truck if you have to to get that to them,  
18 so they can't say they don't know. Get them this  
19 information, bombard them with information so it will  
20 be included and addressed. They need to address the  
21 comments we make. So make very specific written  
22 comments with a lot of documentation and have fun.  
23 It is a bit of a farce to be going through it  
24 at this point, because as LeRoy Koppendrayner said, and  
25 as many of you have quoted him; this dog won't hunt;

## Responses

### Commenter 20 – Carol Overland

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1 you can keep it as a pet but it needs training; you  
2 know, you're out of here. And here we are, you're  
3 wasting our time doing this. I find that really  
4 offensive. (Applause) Got that, Pat, and I forgot to  
5 bring Pat's (inaudible) home for Christmas, so I'll  
6 have to send it to you. So please put everything in  
7 writing and send documentation. Thank you. (Applause)

8 BILL STROM: Thank you, Carol. That's all the  
9 preregistered cards I have. I will now go and call on  
10 -- if you raise your hand, I'll call on you if you want  
11 to speak. But before I do that, the court reporter  
12 asked to take a few minutes break. So let's take three  
13 minutes. And then I'll call on people. If you want to  
14 speak and haven't filled out a card, if you raise your  
15 hand, I'll call on you.

16 (Brief recess.)

17 BILL STROM: We're going to go back on the  
18 record and see if there are anymore comments.  
19 Okay. We went through all the preregistration cards of  
20 people who want to speak. Is there anybody who hasn't  
21 signed a card and would like to speak, please raise  
22 your hand. Sir, would you step to the mike, state your  
23 name, spell it.

24 JEFF POENIX: Good evening. My name is Jeff  
25 Poenix, P-o-e-n-i-x. I have no prepared comments, but

**Commenter 21 – Jeff Poenix**

69

1 plan to submit them in writing. Whether it's fortunate  
2 or not, I seem to represent kind of the younger  
3 generation of the area, and I'm not sure why that is,  
4 but it is what it is.

5 Basically I just want to reiterate a couple  
6 points and ask for clarification on a couple others.  
7 One of them is in -- I don't have it with me 4.17  
8 regarding transportation. And that one is -- it was  
9 stated that there would be four train loads per day  
10 through the area. And my question is, for  
11 clarification, would that be four round trips or four  
12 total? And if it is only four total, kind of rough  
13 math, that would be 4800 miles one way to where the  
14 coal actually is and then double that for the return  
15 trip. And if this is an Environmental Impact  
16 Statement, then I feel that carbon dioxide as a  
17 regulated greenhouse gas that should be taken into  
18 consideration when we mine and transport the coal from  
19 1200 miles away.

20 A couple other things, I believe in 4.16, and  
21 that would be the hazardous and non-hazardous  
22 materials. Not much has been discussed about this as  
23 far as the transportation and handling of the hazardous  
24 and non-hazardous materials. I guess, very basically,  
25 it's been stated that these materials would be recycled

**Responses**

**Comment 21-01**

Sections 4.15.2.2 and 5.2.7 (Volume 1) state that a maximum of two unit trains per day (i.e., two roundtrips per day) would be required to transport coal during normal operation; however, the average scenario would be 1.25 round trips a day. As discussed in response to Comment 12-01, Section 4.3.2 (Volume 1) has been updated to address emissions from rail and truck transport, including CO<sub>2</sub> emissions.

See also response to Comment 12-01 regarding transportation-related emissions and new text in Section 5.2.8 (Volume 1), which discusses greenhouse gases and CO<sub>2</sub> impacts.

**Comment 21-02**

The feasibility to recycle materials and waste generated at the proposed plant will be determined by MPCA. See Comment 105-50 by MPCA regarding beneficial use determination. Non-hazardous materials identified by state and county recycling goals, or defined in the Environmental Management System and a Pollution Prevention/Waste Minimization Program would be packaged for recycling by onsite employees.

Transport of hazardous and non-hazardous materials would primarily be by truck, although rail could be an option depending on the type of waste and the disposal or treatment facility being used. When a site alternative is selected and design plans are finalized, Excelsior will identify specific hazardous and non-hazardous waste treatment, storage or disposal facilities to accept waste from the plant.

**21-01**

**21-02**

Responses

Commenter 21 – Jeff Poenix; Commenter 22 – Karla Igo  
70

21-02  
(cont'd)

1 and re-used when feasible; and my question is who would  
2 determine feasibility of the recycling and re-use of  
3 these materials? Is it an on-site employee? Is it CEO  
4 of the project? Who would it be?

5 Then in regards to the transportation of these  
6 hazardous and non-hazardous materials, would the  
7 transportation be via the train or by truck transport?  
8 And there's a lot of vagueness in regards to where  
9 these things would go. There are statements that say  
10 if possible X would go to X location, but it doesn't  
11 provide alternatives if these locations aren't  
12 possible. There's a lot of things to the extent of  
13 plans are in the works to provide storage of these  
14 hazardous and non-hazardous materials, whether it's  
15 landfill or otherwise.

16 I guess those are very briefly my comments.  
17 And as I said, I'll be more thorough when I write them  
18 and submit them. Thank you. (Applause)

19 BILL STROM: Thank you. Anyone else? Raise  
20 your hands. Yes, ma'am.

21 KARLA IGO: Hello, my name is Karla Igo,  
22 K-a-r-l-a I-g-o. And I'm a mom, and that's why I'm  
23 here. And I can probably say why there's not many  
24 young people here, because we're all chasing our kids  
25 and trying to keep all the balls in the air with them.

## Responses

### Comment 22-01

Future decisions by the PUC to issue permits for new power plants will take the Next Generation Energy Act requirements for greenhouse gas reductions into consideration (see additional discussion in responses to Comment 105-29 by MPCA and Comment 108-02 by the MCEA). The Final EIS (Volume 1) addresses greenhouse gases specifically in Sections 2.2.1.3 (under Potential Carbon Capture Retrofit), 2.2.3.1 (under Emissions of Greenhouse Gases), and 5.2.8 Greenhouse Gases and Climate Change. As stated in the EIS, the Mesaba Generating Station, Phases I and II without carbon capture and sequestration, would emit approximately 9.4 to 10.6 million tons per year of CO<sub>2</sub>. PUC does not have specific authority to shut down individual power plants, which are privately or publicly owned, part of the national electric generation and distribution network, and operate under existing valid permits. However, both DOE and PUC expect that as advanced technologies such as IGCC become proven commercially, older and less-efficient coal-fueled power plants will be replaced by newer plants that provide the potential for capture and geologic storage of CO<sub>2</sub>.

### Comment 23-01

See response to Comment 4-04, which addresses concerns regarding worst-case emergency conditions at the power plant as provided in Section 4.17.4 (Volume 1) of the Final EIS. Additionally, see response to Comment 7-03, which addresses the concerns about increased PM<sub>2.5</sub> emissions as provided in Appendix C (Volume 2) of the Final EIS.

## Commenter 22 – Karla Igo; Commenter 23 – Gary Burt

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1 And it's very hard for me to be here at seven minutes  
2 after 9:00 on a week night, but I felt this is an  
3 important thing for our future generation, and that's  
4 why I'm here.

5 I would just like to ask a question or have  
6 this comment for the record. On May 25th of 2007 our  
7 governor signed the Next Generation Energy Act. The  
8 goal of that act and that law is that by the year 2015  
9 we will reduce greenhouse gas emissions in our state by  
10 15 percent. That's eight years away. I would like to  
11 see addressed what will happen building another 600  
12 megawatt power plant in our state without closing  
13 another one? There has to be some kind of study that  
14 can be done to determine, are we even going to have a  
15 chance at dropping our emissions by 15 percent? It  
16 says 30 percent 10 years later. I just can't see how  
17 adding more CO<sub>2</sub> in the air is going to help us. So I  
18 would like to see something in the Environmental Impact  
19 Statement that looks at how can we make sure that we're  
20 not going to break a law that has been signed. Thank  
21 you. (Applause)

22 BILL STROM: Thank you for your comment. This  
23 gentleman here.

24 GARY BURT: Hi, Gary Burt, G-a-r-y B-u-r-t.  
25 I'm going to try to draw a slight analogy here. I

22-01

23-01

## Responses

## Commenter 23 – Gary Burt

72

23-01  
(cont'd)

1 volunteer for the animal shelter in this area and this  
2 past week weekend I was out live-trapping cats at a  
3 local trailer court. Apparently none of the cats were  
4 feral. They were all, I believe, pets that were  
5 abandoned. So in essence what I am doing in the  
6 live-trapping of cats, is I am cleaning up someone  
7 else's mess.

8 And I have yet to hear any information as to  
9 what's going to happen with the results or what the  
10 price tag is going to be in terms of particulates and  
11 how that affects the health of people down the road,  
12 the water quality, all of the environmental  
13 consequences. I have yet to hear anybody address the  
14 possible consequences of the decision we're going to  
15 make in the near future about this coal plant. And I  
16 can't see how you can make that kind of a decision  
17 without providing for what's going to happen, you know,  
18 if we have some negative consequences.

19 The Three Mile Island plant that what was  
20 so-called a minor disaster, ended up costing over 390  
21 million dollars to clean up. And who paid for that? I  
22 doubt very much that it was the corporate executives of  
23 the plant. My guess is they passed all of the price of  
24 the cleanup on to their customers. And I'm very  
25 concerned that this is what's going to happen here if

## Responses

### 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 45-page Summary at the beginning of Volume 1 attempts to do so. Tables S-4 and S-5 describe the key features of the project and alternatives considered, respectively, for the West Range and East Range Sites. Table S-8 provides an objective comparison of impacts by resource subject and project feature for both alternative sites and quantifies potential impacts to the extent practicable for consideration by decision-makers, elected officials, agencies, Native American tribes, interested organizations, and the public. Appendix F1 (Volume 2) describes the potential sites that were considered by the project proponent and the bases by which they were screened out of the selection process.

### Commenter 23 – Gary Burt; Commenter 24 – Bob Igo

73

#### 23-01 (cont'd)

1 we don't start working or start trying to figure out  
 2 what's going to happen regarding the consequences of  
 3 these decisions. Thanks. (Applause)  
 4 BILL STROM: Thank you. This gentleman over  
 5 here, please.  
 6 BOB IGO: Hi, my name is Bob Igo, B-o-b  
 7 I-g-o. I guess I'd like to start out saying, everybody  
 8 that spoke tonight, great job. A lot of eloquent  
 9 speakers. We heard from natural resource teachers,  
 10 biologists, physicists. So far the only people that  
 11 I've heard of -- and I've been following this, I don't  
 12 know, a couple years now at least, however long it's  
 13 been going on. The only people I know for sure that  
 14 are really wanting this, I think it's kind of the IGCC,  
 15 I'm not sure anymore now, and Excelsior. And what I'm  
 16 wondering here is -- I haven't had a chance to read  
 17 this entire Environmental Impact Statement. I've been  
 18 a little caught up in that whole living and raising  
 19 kids thing.

#### 24-01

20 I think any time you're going to wreck a lake,  
 21 it's probably a bad idea. If it's going to wreck one  
 22 lake, it's probably not a good idea. Why this keeps  
 23 getting milled around and around and around -- I don't  
 24 know if I heard anybody just say, you know -- it seems  
 25 to be less than 20 people that want this and an entire



## Responses

## Commenter 24 – Bob Igo

74

24-01  
(cont'd)

1 community that don't. But for some reason there's  
2 still all kinds of money and resources and man-hours  
3 going into this thing. I don't know. Just an idea.  
4 I'm not an physicist or a chemist or an attorney, but  
5 maybe a better place for this would be, I don't know,  
6 over next to Boswell where there's already power  
7 transmission lines and they're already hauling in coal.  
8 I don't know. Just an idea.  
9 In any event, I guess, to keep this more  
10 directive towards the Department of Energy and the  
11 Public Utilities Commission and Department of Commerce,  
12 who's involved now, too, I challenge you guys to just  
13 throw the whole thousand page EIS Statement out the  
14 door because it's intuitively obvious, even to a casual  
15 observer like me from listening to everything that's  
16 been said here tonight, that it sounds like a bunch of  
17 rhetoric and vagueness. Maybe challenge you guys to  
18 come up with maybe a two-page document that, yes, this  
19 is a good idea; or no, it's not. That's kind of where  
20 I'm at with it. I think -- I don't know.  
21 I guess another question would be, has anybody  
22 that had anything to do with the drafting of this  
23 statement, have they been at Canisteo in a boat? Has  
24 anybody been back to any of this land or seen what it  
25 looks like or what kind of shape it's in? Is it a

## Responses

### Commenter 24 – Bob Igo

75

24-01  
(cont'd)

1 brown zone? (Applause) Is it a place where you might  
2 want to go fishing? I've been back where they want to  
3 put up this power plant, I've been back there.  
4 (Inaudible) some old mining site, a brown zone. Well,  
5 I don't know, there's maple back there I can't get my  
6 arms around, and I'm a pretty good sized guy. If it  
7 was brown, it was brown in like 1900; it's not anymore.  
8 Canisteo is drop dead gorgeous.  
9 It just kind of makes you wonder. It seems  
10 that -- I don't know. I don't see the spoils going to  
11 a victor here. I don't see anybody wanting it, but,  
12 like I say, maybe kind of IGCC and Excelsior Energy.  
13 It just doesn't seem like a good idea.  
14 And if we're really going to use a tool like  
15 an Environmental Impact Statement to make some kind of  
16 a knowledgeable decision, I think it can be condensed  
17 down considerably and put in terms that I can read to  
18 my 6th grader and he'd go, yeah, dad that doesn't sound  
19 like a very good idea. I just thought somebody needed  
20 to kind of get rid of the eloquence and all the big  
21 numbers and sequestration and blah, blah, blah, blah.  
22 And like I say, being a dad, I try to keep things  
23 simple because my oldest son is only 11. I try to use  
24 very simple analogies, like, you know, bud, if you  
25 don't take mom's vase down off the mantle, the chances

## Responses

### Comment 25-01

As stated in response to Comment 6-01, the project proponent has decided to employ an enhanced ZLD system at the West Range Site, which would eliminate discharges of process water and cooling tower blowdown into any water bodies. The integrity of the CMP should not be compromised and the pit would still support lake trout that have been stocked by MNDNR in the past. See additional discussion in response to Comment 76-07 by MNDNR.

## Commenter 24 – Bob Igo; Commenter 25 – Judy Gunelius

76

24-01  
(cont'd)

1 of breaking it are zero.

2 If we don't build this plant here, the chances

3 of us getting lung cancer, I'm sure, are going to be

4 much less. That's the way I look at it, and I wanted

5 to go on record and say that and challenge the

6 departments that be to come up with something I can

7 read to my 6th grader and he's going to be able to

8 follow it and everybody else in the community will,

9 too, without spending the next six months trying to

10 muddle through a thousand pages of stuff that just

11 still seems kind of vague and out there; if we do this

12 and if we kind of do that, maybe this will happen. I

13 don't know.

14 Last time I got a building permit and I had a

15 septic plan, they didn't let me do that. I had to tell

16 them exactly how many bedrooms and how many bathrooms

17 and how many square feet; and if I didn't, they'd just

18 say, well, go ahead, come back when you've got all of

19 that stuff. And I guess that's what I'm kind of

20 saying; come back and talk to me when you got all the

21 numbers. Thanks a lot. (Applause)

22 BILL STORM: Thank you.

23 JUDY GUNELIUS: Judy Gunelius, J-u-d-y

24 G-u-n-e-l-i-u-s, Bigfork.

25 Short and sweet. A picture is worth a

25-01

**Commenter 25 – Judy Gunelius; Commenter 26 – David Holmstrom**

77

**25-01  
(cont'd)**

1 thousand years. Everything has been addressed  
2 beautifully. I just have a picture to show you. And  
3 this fish, this lake trout came out of beautiful  
4 pristine Canisteo Pit, which should be here for a long  
5 time. I'm 68. I hope my grandchildren see it.  
6 (Applause)

7 BILL STROM: Would anyone else like to speak?  
8 This gentleman right here.

9 DAVID HOLMSTROM: I'm David Holmstrom,  
10 H-o-l-m-s-t-r-o-m. And both my wife and I have  
11 reviewed different parts of the draft Environmental  
12 Impact Study, and I would be subject to cold dinners  
13 for the rest of the winter if I didn't bring to your  
14 attention the deficiency that she found. In one of the  
15 segments that she read, and I believe it's Figure  
16 4.3.5.6 it references some numbers from the  
17 Intergovernmental Panel on Climate Change. For those of  
18 you who might not recognize that name, that's the  
19 organization that was the co-winner of the Nobel Peace  
20 prize this past year.

**26-01**

21 The report from the IPCC that was referenced  
22 in the document was their report from 2001. There's a  
23 new report out in 2007 by that panel. And I think if  
24 the Environment Impact Study is going to represent  
25 accurate data, they need to use the more current report

**Responses**

**Comment 26-01**

New text in Section 5.2.8 (Volume 1) of the Final EIS has been added and discusses the range in average surface temperature increase at the end of the current century based on the 2007 IPCC report, which has been added to the references.

**Commenter 26 – David Holmstrom**

78

**26-01  
 (cont'd)**

1 from the IPCC in their references in this report.  
 2 Secondly, the portions of the report that I  
 3 read dealt with the handling of wastewater, not cooling  
 4 down or blowdown water, not production water, but  
 5 actual human wastewater generated by the plant. And  
 6 the report went into some detail about the fact that  
 7 the sewage pumping station here in Taconite is not  
 8 sufficiently large to handle the volume of wastewater  
 9 that will be produced. No discussion, however, was  
 10 available, at least in the portions that I read, about  
 11 whether the sewage treatment plant, the  
 12 Coleraine/Bovey/Taconite sewage treatment plant, which  
 13 is on the other side of the pumping station in  
 14 Taconite, has the capacity to deal with the volume of  
 15 wastewater that the plant will generate.  
 16 Again, I think that if the Environmental  
 17 Impact Study is going to accurately reflect some of the  
 18 problems attendant to the location of this plant, some  
 19 discussion of whether the sewage treatment plant just  
 20 outside of Coleraine and Bovey, essentially on the  
 21 shores of Trout Lake, has sufficient capacity to handle  
 22 the wastewater that will be generated by the plant.  
 23 The third issue that was in one of the  
 24 sections that I read had to do with proposed routing of  
 25 high voltage transmission lines. And I saw in the

**26-02**

**26-03**

**Responses**

**Comment 26-02**

New text has been added to Section 4.14.3.3 (Volume 1) to reflect the project proponent's proposal to improve regional water quality by sponsoring equipment additions to local WWTFs and by funding analytical studies to quantify the extent to which such WWTF improvements lessen the mass and concentration of phosphorus and mercury released.

**Comment 26-03**

Sections 4.10.3.1 and 4.10.4.1 (Volume 1) and Table 4.10.6 of the EIS provide information on the number of property owners that would be affected by the proposed alternative routes for the transmission lines. As stated in Section 1.5.2.2 (Volume 1), the HVTL Route Permit Application (part of the Joint Permit Application) must identify the names of each owner whose property is within any of the proposed routes.

**Commenter 26 – David Holmstrom; Commenter 27 –  
Darrell White; Commenter 28 – Ron Gustafson** 79

**26-03  
(cont'd)**

1 portions that I read no description of the number of  
2 property owners that would be affected by any of the  
3 proposed alternatives for the routing of those  
4 transmission lines. I think that's a major deficit in  
5 the accuracy of this report.

6 I thank you for your attention. (Applause)  
7 BILL STROM: Thank you. Anyone else care to  
8 speak? This gentleman here.

9 DARRELL WHITE: My name is Darrell White,  
10 D-a-r-r-e-l-l W-h-i-t-e. Everything has been said, so  
11 I can't say nothing about it. There's only one section  
12 I'm concerned about. Last July I went down to  
13 Minnesota PUC, and Julie Jorgensen, CEO of Excelsior,  
14 was giving a little talk in front of them, and she said  
15 this plant will create 70 jobs. Are we giving up  
16 everything for 70 jobs? Put this down to rest and  
17 quite wasting my tax dollars. (Applause)

**27-01**

18 BILL STROM: Anyone else like to speak?

19 RON GUSTAFSON: Just a brief comment; and it's  
20 the amazing elephant in the room, and the elephant in  
21 the room is Excelsior Energy is proposing this plant  
22 for one reason and one reason only, to make money, to  
23 make a profit. And we have to ask ourselves, is this  
24 where we take a stance and correct the mistakes our  
25 generation has made in relationship to the environment,

**28-01**

**Responses**

**Comment 27-01**

The Final EIS (Volume 1) describes the anticipated project employment for construction in Section 2.2.4.4 and for operations in Section 2.2.5.3. See also response to Comment 16-01, which addresses concerns regarding economic impacts.

**Comment 28-01**

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

Responses

Commenter 28 – Ron Gustafson

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28-01  
 (cont'd)

1 or do we want to keep pouring public money to a group  
 2 of lobbyists and lawyers who have never produced a  
 3 kilowatt of energy and sacrifice our environment and  
 4 the health of us and of future generations to come?  
 5 (Applause)  
 6 BILL STROM: Anyone else who would like to  
 7 speak? Going once, twice -- okay. I want to thank you  
 8 all for coming here. I want to remind you that the  
 9 comment period, end of the comment period is January  
 10 11, 2008. You can send your comments either to me or  
 11 to Richard. We're going to share -- we're in this  
 12 together. We're going to share comments.  
 13 I want to encourage you, if you submit  
 14 comments, make them specific on issues and concerns you  
 15 have about the draft Environmental Impact Statement.  
 16 And keep in mind, if you reflect back to that flow  
 17 chart that I showed you, a milestone that we have  
 18 coming up is the contested case hearing, and in that  
 19 hearing process comments, generic comments about the  
 20 technology or the government spending money, they're  
 21 more appropriate for that forum. When you submit your  
 22 written comments to either me or Richard, to the extent  
 23 possible, try to focus on deficiencies, areas that need  
 24 clarification of the draft Environmental Impact  
 25 Statement.

## Responses

The comments raised in the following pages for the remainder of the public hearing at Taconite are considered to be part of an open question and answer forum more commonly associated with Minnesota's State EIS hearing process. Because these questions were essentially answered by the moderators as indicated in the transcript, or were otherwise considered to be rhetorical in nature, responses have not been provided in this document.

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1 UNIDENTIFIED: Where is that contested case  
2 hearing likely to be held?

3 BILL STROM: We will hold one here and one in  
4 Hoyt Lakes; and that will be with an ALJ presiding.  
5 Yes, sir, in the back.

6 UNIDENTIFIED: I understand this is a meeting  
7 with the Department of Commerce, which is a state  
8 organization, and the Department of Energy, which is a  
9 federal organization. How does this EIS get reviewed?  
10 Who accepts it or doesn't accept it? Do they accept  
11 the whole thing as is or do they accept parts of it?  
12 How does this work? What happens?

13 BILL STROM: I can speak to the state process,  
14 and I'll let Richard speak to the federal process.  
15 When I went through the schematic, the final decision  
16 point in that schematic was the PUC making a final  
17 decision. As I said, they will make a decision on  
18 three things; the first one being the adequacy of the  
19 Environmental Impact Statement. So that is a decision  
20 point for the PUC at the state level. Richard, do you  
21 have anything to add for the feds?

22 RICHARD HARGIS: Well, the whole idea here was  
23 to have a joint process, a joint document that would  
24 satisfy both purposes. Our purposes is to get  
25 environmental information out to the public and to the



## Responses

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1 federal officials that have to make a decision on  
2 whether we go forward with funding under the Clean Coal  
3 Power Initiative. Bill has his purpose in terms of  
4 providing recommendation to the Public Utilities  
5 Commission. The Corps of Engineers is also a  
6 cooperating agency. They have their own goals and  
7 their purposes. The Forest Service is involved. So  
8 we're all trying to make this one document that  
9 satisfies a lot of purposes.

10 BILL STROM: Yes, Linda.

11 LINDA CASTAGNERI: The question I have is  
12 regarding when you're asking us to address our  
13 comments. I guess the question I would like to ask, if  
14 you can explain to me, is who is like the bridge  
15 between all these different groups of people? And is  
16 there like a critical think group that then looks at  
17 these comments and decides how they're going to address  
18 the responses to them, because I guess that's really  
19 the concern that I have; is that I think that we put in  
20 a tremendous amount of personal effort and energy into  
21 this, very sincere effort to have these questions and  
22 comments addressed. And I know you're telling us to do  
23 this again. But what I'm asking is I want to know on  
24 the accountability side between all these various  
25 groups of people, who is monitoring and providing

**Responses**

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1 oversight to see that these comments are actually being  
2 addressed so that when this final document appears,  
3 right, that it just isn't a punishment exercise that  
4 we've all gone through and you all hand over this piece  
5 of paper.

6           So I think it's really fair that someone has  
7 to tell us in a public forum who is providing oversight  
8 on our comments and looking at them, because I just  
9 don't get a warm and fuzzy feeling that the people in  
10 Washington, D.C., right, have a heartbeat on what  
11 happens in Itasca County. And I just think that  
12 there's a link. Everything links in life, and I don't  
13 see this link occurring here. Sorry. But I want to  
14 know who's looking at my comments. (Applause)

15           BILL STROM: Okay, Linda. I can speak from  
16 the state's standpoint. The PUC on this docket, the  
17 siting and routing docket, as I said, has to make three  
18 decisions; the adequacy of the Environmental Impact  
19 Statement, whether to issue a site permit to Excelsior  
20 and what conditions should be in that permit; and the  
21 selection of which site and which routes get selected.  
22 The environmental information, the public comments come  
23 in, they come into me at the state level. I evaluate  
24 them. I use my expertise and my background to carry  
25 those that I think have merit forward, and they get

**Responses**

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1 carried forward, and I make recommendations. For  
2 example, on the scoping documents, I reviewed the  
3 public comments. I carried those that I thought had  
4 merit forward, made a recommendation to the  
5 Commissioner of the Department of Commerce. The  
6 Commissioner of the Department of Commerce is the  
7 decision-making authority for the scoping decision.

8 Now, as we move through the process, we  
9 produced a scope, we produced a draft of our  
10 Environmental Impact Statement. We will go into a  
11 contested case hearing where people who still have  
12 remaining issues with the process, with the  
13 environmental documents, get to speak that to an ALJ,  
14 another impartial view person. That ALJ will then  
15 write a report with findings of fact of the whole  
16 record, and this will be a big one, findings of fact,  
17 recommendations and conclusions.

18 His recommendations and conclusions will be  
19 the adequacy of the Environmental Impact Statement,  
20 whether a permit should be issued for the site and the  
21 two routes, pipeline and transmission line, and any  
22 conditions that he thinks came out of the record that  
23 should be incorporated in that permit; and that will  
24 come back to me. I will review that, and then I will  
25 put together briefing papers with my recommendations to

## Responses

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1 the PUC.

2 The forum that takes, when I present the case  
3 to the PUC, I provide all the findings of fact, with  
4 the judge's report. I then provide my analysis of it,  
5 and then I give the PUC options. You know, one option  
6 may be what I believe, but another option coming out of  
7 record, and I present it to the PUC and then they  
8 select. Those things that fall within the three  
9 decision points they have to make, they select them.  
10 They may concur with my recommendation that Hoyt Lakes  
11 is the preferred site. They may not. They may  
12 determine that neither site is appropriate, okay? They  
13 may determine that the Environmental Impact Statement  
14 is not accurate and send me back through the process to  
15 address a deficiency there. And they may decide  
16 they're going to issue a permit, they're going to issue  
17 it for this site here in Taconite, and these are the  
18 conditions we want; and one of the conditions could be  
19 we want zero discharge on the west site. They can say  
20 that they want that as a condition.

21 You as public in the contested case forum, not  
22 this one -- this forum deals with the draft EIS -- you  
23 can tell the ALJ, I don't want the project or you can  
24 say, as a condition of the permit, if it gets that far,  
25 I want zero discharge for the West Range site. So you

**Responses**

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1 can suggest things that you think have merit for permit  
2 conditions.

3 Does that sort of cover it for you, Linda, a  
4 little bit?

5 LINDA CASTAGNEIR: Well, we're just confused  
6 because we put these comments in and we just did not  
7 see them addressed in the draft, and I just don't want  
8 this all of a sudden to be just done and then --

9 BILL STROM: It may be that you've submitted  
10 -- I'm not going to get into details of it because I  
11 want to go home sometime tonight -- it may be that you  
12 submitted comments that I didn't believe had merit, and  
13 I didn't carry them forward. The contested case  
14 hearing is that forum for you to bring that up, and  
15 say, well, I don't think Bill did what I asked Bill to  
16 do or didn't deep enough. You might say, well, I  
17 brought up the Henshaw effect. Bill incorporated a  
18 little bit of that in the draft EIS. I don't think he  
19 want far enough. Your Honor, I'm asking that we have  
20 more information on this.

21 I think I just created a monster here. I  
22 don't want to get too far afield on issues that don't  
23 have to do with the draft Environmental Impact  
24 Statement because you people have families and you want  
25 to get home to, and so do we, frankly. So if you have

## Responses

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1 a comment or question that's on the draft Environmental  
2 Impact Statement, bring it up. If you have a comment  
3 on the process, when we close, talk to me informally  
4 about it, and I can go over the process.

5 UNIDENTIFIED: Just one sentence; so you're  
6 the guy? Everything is going right to you? There's  
7 not a committee? You're it? You're the straw that  
8 stirs the drink?

9 BILL STROM: Well, we did have a task force on  
10 this process, but I am the guy.

11 UNIDENTIFIED: You're it.

12 UNIDENTIFIED: So there's no checks and  
13 balances; it's you?

14 BILL STROM: Well, remember there are other  
15 permitting agencies after me. I'm sure we have people  
16 from the DNR, water appropriation group here. The PCA  
17 will have to issue an air permit. These are other  
18 people who have permitting authority after my permit,  
19 but they're running consecutively. The air permit is  
20 already in. The groundwater permits are in. So I'm  
21 getting feedback from these agencies already.

22 LOREE MILTICH: I'm Loree Miltich, L-o-r-e-e  
23 M-i-l-t-i-c-h. I'm wondering, who did the modeling  
24 processes, the CALPUFFS and all the -- do you do that?  
25 Does the DOE, or does Excelsior?

## Responses

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1 BILL STROM: That data was generated from  
2 Excelsior and their consultants and reviewed through us  
3 and the DOE consultant.

4 LOREE MILTICH: But the state hasn't reviewed  
5 the actual modeling figures? Because when I was  
6 looking at it, I was concerned, as an elementary  
7 schoolteacher, well, here's the results but I want to  
8 see the work, because there's a lot of assumptions  
9 built in. When I looked at Minnesota Steel's, they're  
10 just adjacent, and the background ambient air, the  
11 number for the threshold and stuff, there were  
12 discrepancies, they weren't the same and yet they're  
13 the same air. So I'm wondering who's got oversight  
14 over the modeling. Or is Excelsior just feeding you  
15 guys their numbers? I feel concerned.

16 So do you take responsibility for -- even the  
17 DOE says that CALPUFF should be looked at with really  
18 understanding its limitations. And there was no  
19 verbiage, there was no words talking about the  
20 limitations of these various modeling programs, where  
21 you were coming up with the numbers. So who has  
22 accountability for the modeling and the number -- well,  
23 no, put it this way; garage in, garage out.

24 RICHARD HARGIS: If you're asking for us to  
25 put an explanation in there as to where we got the

## Responses

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1 numbers, what we did in terms of doing an independent  
2 verification of those numbers, we can explain that in  
3 the EIS. I understand your concern. You need to know  
4 that DOE stands by the numbers in the EIS, and so does  
5 the Department of Commerce. It's not just Excelsior's  
6 numbers being handed to you. And we'll make sure we'll  
7 make that clear in the EIS.

8 ANDREW DAVID: Andrew David. Sorry if I  
9 opened up a can of worms, but I was curious. Some of  
10 the comments that Linda made and some that Ed made  
11 about the draft scoping for the EIS and efforts that  
12 went in; and if I understood you correctly, you said  
13 that you took those and you brought things that you  
14 thought had merit to the, I guess I want to get this  
15 right, is it the head of the Commerce Department?

16 BILL STROM: Commissioner of the Department of  
17 Commerce.

18 ANDREW DAVID: Commissioner of the Department  
19 of Commerce, and then a decision was going to be made  
20 as to what was going to be in and what was going to be  
21 out in this EIS. Can you tell me without getting into  
22 specifics if things you brought to that Commissioner  
23 were not included? In other words, did you bring to  
24 the Commissioner a report that said, there are items in  
25 here that I think have merit, and the Commissioner



## Responses

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1 said, I don't believe that and left them out?

2 BILL STROM: That did not happen.

3 ANDREW DAVID: That did not happen. So  
4 everything that came forward you reviewed and you  
5 decided what had merit and what didn't. And all that  
6 that had merit came into this draft EIS proposal, is  
7 that correct?

8 BILL STROM: Correct.

9 ANDREW DAVID: Thank you.

10 BILL STROM: Yes, sir.

11 GARY BURT: Gary Burt. Is there going to be a  
12 revised EIS before the court hearings, what did you  
13 call that, the --

14 BILL STROM: Contested case hearing.

15 GARY BURT: Yes, contested case hearing; is  
16 there going to be a revised EIS; and if not, when is a  
17 revised EIS going to be issued?

18 BILL STROM: There is not a revised EIS.  
19 There is a final EIS, and the final EIS is, we take the  
20 comments we received tonight, the comments we received  
21 during the comment period, and we address them. We  
22 explain our position, we answer the questions to the  
23 best of our ability. And that section gets put onto  
24 the draft EIS, and that becomes the final EIS.

25 GARY BURT: And that will happen when?

## Responses

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1 BILL STROM: We're hoping to get the final EIS  
2 out March 7th.

3 GARY BURT: And if we disagree with that, what  
4 do we do then?

5 BILL STROM: In the state process there's no  
6 second bit of the apple in the final EIS, but what you  
7 can do is, when I present the case to the PUC, which  
8 I'm hoping to do May 22 -- again, these are tentative  
9 dates -- that's a public meeting. You can come to that  
10 meeting and you can address the question of adequacy of  
11 the Environmental Impact Statement at that point.

12 GARY BURT: Thank you.

13 BILL STROM: Yes, sir. Please step to the  
14 mike.

15 ALMER PEDERSON: My name is Almer Pederson,  
16 P-e-d-e-r-s-o-n. Assuming on this EIS now, this  
17 committee that's reviewing this sits down and looks at  
18 everything that's been said and everything's been  
19 reviewed, put in place and say, hey, let's try it.  
20 What happens? Who overrides him?

21 BILL STROM: The point of the EIS is not a  
22 conclusionary document. The EIS purpose is not to say  
23 aye or nay to this project. That on the state side,  
24 for the state's role is done at the PUC final decision  
25 hearing. So what you're envisioning is not part of the

## Responses

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1 process.

2 ALMER PEDERSON: So it'll be part of the --  
3 the part that goes into the mix and gets down to  
4 whether everything is approved or disapproved?

5 BILL STROM: I guess I'll have to say yes.  
6 Well, what happens is we have a contested case hearing  
7 that's sort of on a parallel track. We take all the  
8 comments received during the comment period for the  
9 draft EIS, we address them and issue a final EIS.

10 The contested case hearing takes testimony,  
11 evidence from the public, from other agencies, and out  
12 of that comes a report from the ALJ, administrative law  
13 judge. That comes back to me. I take the whole  
14 record, which includes everything from the beginning  
15 through this, through the ALJ, through the contested  
16 case hearing, through the ALJ report, I assemble it, I  
17 assemble briefing papers. I present that to the PUC,  
18 and they make the final decision on those three  
19 decision points. That's the state's process.

20 RICHARD HARGIS: I just want to clarify one  
21 thing. And Linda, you were concerned about comments  
22 that everybody is putting together on this draft EIS,  
23 that they're somehow not going to be addressed or  
24 they're not going to be considered carefully. I tried  
25 to make a point in my presentation -- I guess I didn't

**Responses**

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1 do a very good job -- but every comment that we get,  
2 whether it's tonight, whether it's a written comment,  
3 e-mail, fax, whatever, it will be reproduced in its  
4 entirety, and that's why we have a court reporter here  
5 for the oral comments so that we have them in writing.  
6 There will be a separate section in the final EIS that  
7 has every comment, word-for-word what you said we  
8 should do and why, and then we will give you a specific  
9 response. Yeah, we agree with you. We should have  
10 done that. And then we will point to the specific  
11 portion of the final EIS and say, here's what we  
12 changed. And it will be bold and in italics so it will  
13 stand out. You can go to that section, and you can see  
14 how we addressed your comments.

15 So I hope that that will convince people. If  
16 you'd like, I can send you a recent final EIS that we  
17 did to show you how we did that. I can send you a copy  
18 so you can see what to expect for this project as well.

19 As far as the state process and  
20 decision-making, all of the -- deciding how to respond  
21 to these comments, it gets reviewed at various levels  
22 within the DOE, and it goes to the highest levels  
23 within DOE, within fossil energy within DOE, to ensure  
24 that we've done our job in terms of answering your  
25 questions and addressing your comments.

## Responses

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1           ALMER PEDERSON: Thank you.

2           ANDREW DAVID: I appreciate that explanation.  
3 That's wonderful. We see in the final EIS how you will  
4 have addressed concerns that we bring up here. The  
5 concerns of the people who are here, at least the ones  
6 that are still left, is that we did a scoping EIS, and  
7 theoretically it was under a similar situation, and  
8 many of the things that were brought up then are not in  
9 this document now. It's a fear. Somehow you have to  
10 overcome that fear. There's got to be a little bit of  
11 trust. Thank you.

12           BILL STROM: Anyone else? Again, I appreciate  
13 you guys being here. I do this all the time. I have  
14 many projects. I think I'm from the Range, I come up  
15 here so often. I do appreciate your participation. I  
16 know it's a burden to come out here. But the one thing  
17 I love about my job is this process. I'm the neutral  
18 one. I have six, seven different projects. I'm  
19 neutral pretty much on the projects all the way through  
20 the process. What I'm strong about is getting you  
21 people to voice your opinion and bring it forward so the  
22 final decision-makers can have a complete record.  
23 (Applause)

24           (Hearing concluded at 9:45 p.m.)

25

## Responses

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1 COURT REPORTER'S CERTIFICATE

2 Be it known that I have reported and transcribed

3 the foregoing hearing;

4 That I am a notary public in and for the County of

5 St. Louis, State of Minnesota;

6 That I am not related to any of the parties hereto

7 or interested in the outcome of this matter;

8 That the foregoing is a true and accurate

9 transcription of my stenographic notes to the best of

10 my ability.

11 Witness my hand and seal this 7th day of December,

12 2007.

13

14

15 Kathleen M. Undeland  
Registered Professional Reporter

16

17 My commission expires  
January 31, 2010

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2

I N D E X

Presenters:

Bill Storm, PUC .....	3
Jason Lewis, DOE .....	13
Richard Hargis, DOE .....	14

Public Comments:

Norm Voorhees .....	19
Bob Tammen .....	21
Jean Dallas .....	22
Gordon Smith .....	24
Bill Whiteside .....	25
Warren Koskiniemi .....	27

1

P U B L I C   M E E T I N G

on the  
ENVIRONMENTAL IMPACT STATEMENT SCOPING MEETING  
for the  
MESABA ENERGY PROJECT

PUC Docket: E6472/GS-06-688

hosted by  
Minnesota Department of Commerce  
and  
Department of Energy

held at  
Hoyt Lakes Arena  
Hoyt Lakes, Minnesota  
November 28, 2007; 7:00 p.m.

REPORTED BY:  
KATE UNDELAND, RPR  
P.O. Box 131  
Virginia, MN 55792  
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3

1 PROCEEDINGS

2 BILL STORM: Good evening, folks. Thank you  
3 for coming. My name is Bill Storm, I'm the project  
4 manager for the Department of Commerce, Energy Facility  
5 Permitting staff. The Department of Commerce's role in  
6 this process is to assist the decision-maker, which is  
7 the Minnesota Public Utilities Commission in their  
8 determination of issuing a site permit for Mesaba  
9 Energy Project.

10 Before I start, I would like to point out a  
11 couple things. One is, there's a sign-in sheet on the  
12 table in the front. I'd appreciate if you would sign  
13 in. There's also a box to check if you want to be put  
14 on my mailing list. By checking that box, you will get  
15 notices of pertinent events, upcoming meetings, when  
16 the hearing is going to be held and that sort of thing.  
17 So if you would, please sign that if you haven't done  
18 so.

19 Additionally, on the front desk there are  
20 public comment sheets. The meeting tonight is to  
21 solicit comments from the public on the draft  
22 Environmental Impact Statement. We encourage you to  
23 speak tonight on the draft Environmental Impact  
24 Statement, and we also encourage you to submit written  
25 comments on the draft Environmental Impact Statement.

4

1 Your comments must be submitted to my office or the  
2 Department of Energy's office by January 11, 2008.

3 On the table is a comment sheet to aid in your  
4 efforts in that. If you don't feel comfortable  
5 speaking tonight, you can fill this out with your  
6 comments, fold it, staple it, put a stamp on it, mail  
7 it to my office. You can also send your comments to my  
8 attention on your own personal stationery or you can  
9 e-mail or fax your comments to me also, and that  
10 information is on the sheet.

11 Additionally, there are blue cards on the  
12 front desk. These blue cards are to facilitate  
13 speakers, for people who want to speak tonight. We ask  
14 if you know right now that you want to speak, that you  
15 fill out one of these blue cards and hand it to Cat,  
16 who is servicing our front desk there, and when I'm  
17 done giving with my presentation and the DOE is done  
18 giving their presentation, I will call people from  
19 these cards if they would like to speak. You don't  
20 have to speak. You can definitely submit your  
21 comments, as I said, written to me. Right now I have  
22 no cards filled out. So if you would like to speak, I  
23 encourage you to speak.

24 Additionally, there are the slides that I'm  
25 going to go through tonight out there, copies of the



5

1 slides if you want them. You're more than welcome to  
2 have a copy of them.

3 As I stated, tonight's meeting is a public  
4 meeting to solicit comments on the draft Environmental  
5 Impact Statement that was produced for the Mesaba  
6 Energy Project. The Mesaba Energy Project is being  
7 handled under PUC, Public Utility Commission Docket  
8 E6472/GS-06-688. I ask, if you do submit written  
9 comments to me either through your own stationery or  
10 e-mail me or fax me, please put the docket number on  
11 there.

12 Tonight's meeting is a joint meeting with the  
13 Department of Energy and the Department of Commerce.  
14 We held a meeting last not in Taconite. Tonight we are  
15 here in Hoyt Lakes.

16 The agenda for tonight's meeting is pretty  
17 simple. I'm going to run you through a short five  
18 slides of the state process showing you what we've done  
19 to date. The DOE will then talk about their role in  
20 this project, the funding role and what their role has  
21 been in this project to date. And then lastly your  
22 comments, and that's mainly what we're here to get, is  
23 your comments.

24 Whether you're for the project or against the  
25 project, tonight's meeting is more on if you had a

6

1 chance to look at the draft Environmental Impact  
2 Statement, are there issues in it, specific issues in  
3 the draft Environmental Impact Statement that you feel  
4 are not adequately addressed or that you feel you would  
5 like to see more information on. What we'll do, once  
6 we get your comments, is we will coompile all your  
7 comments and we will make responses to them, and that  
8 will go into the final Environmental Impact Statement  
9 document.

10 Just a little refresher from the PUC  
11 standpoint, again, you have two agencies here. You  
12 have the Minnesota Public Utilities Commission and you  
13 have the Department of Energy. I'm speaking for the  
14 state's role in this process. The Public Utilities  
15 Commission in Minnesota has the authority for siting  
16 large electric generating power plants, transmission  
17 lines and pipelines, and the statutes for those rules  
18 are up there.

19 The PUC in making their determination will be  
20 making three determinations at the end of this process.  
21 The first will be the adequacy of the draft  
22 Environmental Impact Statement. The second will be  
23 whether to issue a site permit and what conditions  
24 should be part of that site permit. And the third item  
25 would be which site should be selected, the Hoyt Lakes

7

1 site or the Taconite site.

2 And this slide -- if you remember, we were  
3 here in August of '06 for a scoping meeting, an initial  
4 public meeting to inform the public of the project and  
5 to solicit what the public thought were important  
6 issues that should be in the draft Environmental Impact  
7 Statement.

8 This slide just represents the Department of  
9 Commerce's relationship with the PUC. As I said, the  
10 PUC is the final decision-making body. They have  
11 authority over wind projects, pipelines, transmission  
12 lines and power plants. The Department of Commerce  
13 serves the PUC in an administrative capacity. We set  
14 up the public meetings. We make the public notices.  
15 We are responsible for production of the environmental  
16 documents that are associated with a given project.  
17 But the ultimate decision is the PUC's.

18 This is another slide that was also used  
19 during my presentation back in August. This is a slide  
20 that shows the process that we use to evaluate a given  
21 project. I just want to run you through the process a  
22 little bit to bring you up to speed of where we're at.  
23 The first block you can see is an applicant. An  
24 applicant who wants to build a pipeline, transmission  
25 line, or a large power plant submits an application to

8

1 the PUC. Excelsior Energy submitted such a permit  
2 application, and it was a joint application. It  
3 included the power plant, the transmission line and  
4 pipeline requirements for the project, on June 19th,  
5 2006.

6 The next step, the PUC evaluated that  
7 application, and this is a function that the Department  
8 of Commerce does for the PUC. We go through the  
9 application, make sure that all the information that  
10 needs to be there according to the rule is there, and  
11 then we make a recommendation to the PUC. In this case  
12 the PUC accepted the application as complete on July  
13 28, 2006.

14 In that accepting the application, the PUC  
15 also authorized the establishment of a Citizens  
16 Advisory Task Force and they authorized the Department  
17 of Commerce to assemble that task force and oversee it.  
18 On August 1st, 2006 the Department of Commerce did  
19 appoint a Citizen Advisory Task Force for this project.

20 The next step that you see on the flow chart  
21 is the public meeting, an EIS scoping. On August 22nd  
22 and 23rd of 2006 the Department of Commerce, myself,  
23 held public information and scoping meetings for this  
24 project. The point of those meetings was to inform the  
25 public of the project and to solicit input from the

9

1 public on what they believe should be in the  
2 Environmental Impact Statement.

3 The next step is the scope. The scope is a  
4 document that's released by the Department of Commerce  
5 that states given all the information we got from the  
6 public, this scoping decision states what will be in  
7 the Environmental Impact Statement; and that was  
8 released on September 13th, 2006.

9 And that brings us to the draft Environmental  
10 Impact Statement, which was released on November 5th,  
11 2007 and why we are here.

12 This is just a rundown of the list I just  
13 went through, hitting the milestones that bring us to  
14 the point that we're at today.

15 And as we look into the future, if you recall  
16 that flow chart, these are some of the milestones we  
17 have yet to hit in the future. Note that most of these  
18 dates are tentative. The one date that isn't tentative  
19 and the one date that's real important for tonight's  
20 meeting is the close of the comment period on the draft  
21 Environmental Impact Statement is January 11, 2008. So  
22 you need to have your comments to myself, Bill Storm,  
23 or the DOE representative, Rich Hargis, and he will  
24 provide that information when he speaks, by January 11,  
25 2008.

10

1 As we move beyond that, these dates become  
2 tentative, but these are the dates we're shooting for.  
3 A contested case hearing, which will be back up here;  
4 we'll have a contested case hearing in Taconite and an  
5 contested case hearing here in Hoyt Lakes with an  
6 Administrative Law Judge presiding over the case.  
7 We're hoping to get that in on January 29th through  
8 31st, 2008. The contested case hearing will be an  
9 opportunity for the public to speak to the project, to  
10 an objective third-party, being the ALJ. That process  
11 will also have a comment period associated with it, and  
12 the comment period in that process will end in February  
13 of 2008.

14 The next step that we're -- the next  
15 milestone that we have is the final EIS, and again, the  
16 final EIS will be the compiling of the comments  
17 received in this process and responses to the comments,  
18 answering the questions, trying to resolve some of the  
19 issues. We're hoping to have the final EIS out March  
20 7, 2008.

21 The ALJ will then assemble the record,  
22 findings of fact, recommendations and conclusions, and  
23 he'll produce that in a report, and that report will  
24 come back to the Department of Commerce, and we're  
25 hoping that the ALJ can have that done by March 21st,

11

1 2008. Once that is done, I will take the record, the  
2 information I have to date, all the public comments  
3 from starting way back from the beginning, August of  
4 '06, up to and including the ALJ's report, and I will  
5 produce a briefing paper about this project to the PUC  
6 for their final decision.

7 Again, the decision that they're going to be  
8 making is three-pronged; the adequacy of the  
9 Environmental Impact Statement, whether a pipeline  
10 route and transmission line route should be granted and  
11 what conditions those permits should have; and three,  
12 site selection. And in this case it's the Hoyt Lakes  
13 site or the Taconite site. And I'm hoping to bring  
14 that before the PUC on May 22nd, 2008.

15 If you're interested in tracking information  
16 on this project, if you'd like to see a copy, an  
17 electronic copy of the draft Environmental Impact  
18 Statement or you would like to see what other comments  
19 the public has made either about the draft  
20 Environmental Impact Statement or previous comments  
21 that were made by either agencies or the public in the  
22 past as we worked our way up to this point, you can go  
23 to the MPUC Energy Facility Permitting website, and  
24 that's the address up there, and you will see a file  
25 register. This is the file register I made the second

12

1 week the project was existing. Now it's like four or  
2 five pages. But each of the items in the file register  
3 are documents. The Environmental Impact Statement is  
4 up there, the scoping decision is up there, the ALJ  
5 report will be up there when we get to that point,  
6 public comments I received from agencies, public  
7 comments I received to date will all be listed up  
8 there, and they will be in p-d-f format so you can  
9 click on them and look and read the information that's  
10 available.

11 Now to talk about why we're here. Again,  
12 we're here to solicit comments about the draft  
13 Environmental Impact Statement. I encourage you to  
14 comment on the draft Environmental Impact Statement,  
15 and I encourage you to be as specific as possible. If  
16 you have an issue, if you think the draft Environmental  
17 Impact Statement is deficient in an area or you think  
18 an area needs to be more flushed out, you know, be as  
19 specific as you can.

20 I would normally limit the speakers to five  
21 minutes. As I said, so far I have nobody who has  
22 signed up to preregister. Oh, I do have one. When the  
23 DOE is done with their presentation, I will call first  
24 using the cards, and then if you haven't filled out a  
25 card but have since decided you want to speak, I will

13

1 ask for a show of hands and call on you one by one that  
2 way. So five minutes per speaker. Once I go through,  
3 give everybody a chance to speak, we can certainly  
4 allow people to speak again if they would like. As I  
5 said, preregistered speakers first.

6 We are preparing a transcript of the meeting  
7 tonight. Kate is our transcriptionist here tonight, so  
8 I ask that if you are going to speak, that you come to  
9 the mike, you state your name, you spell your name,  
10 speak slowly, probably not like I've been doing  
11 tonight, and clearly so she can get your information  
12 down as accurately as possible. If you have written  
13 testimony, written prepared papers that you're speaking  
14 from, it would really help if you would give her that  
15 when you're done speaking. We can certainly give them  
16 back to you if you need them.

17 Again, I want to remind you, if you want to  
18 comment but you don't want to speak orally, you want to  
19 submit your comments in writing, you can submit them to  
20 either me or Rich Hargis of the DOE, but they have to  
21 be in by January 11, 2008. Okay.

22 I'm going to turn it over to the DOE for their  
23 presentation. Jason Lewis.

24 JASON LEWIS: Thank you, Bill. Welcome. It's  
25 good to be here tonight. My name is Jason Lewis. I'm

14

1 the U.S. Department of Energy's federal project manager  
2 for the DOE's participation in the Mesaba Energy  
3 Project. My colleague here tonight, Rich Hargis, has a  
4 separate and independent responsibility as the NEPA,  
5 EIS document manager to ensure that the National  
6 Environmental Policy Act process is completed for the  
7 project. The results of that activity will be used by  
8 the DOE decision-makers, myself included, in our  
9 decision-making of whether or not to continue  
10 cost-share, co-funding for the project beyond the  
11 current developmental activities.

12 Why is the DOE interested in this project?  
13 The office of fossil energy's ultimate goal is to  
14 achieve the commercialization of a zero emissions  
15 coal-based electric power generation plant. This  
16 project is not that. But as the state of the art low  
17 emissions gasification style electric power generation  
18 project, it is the next logical vital step towards that  
19 zero emissions plant.

20 Again, I'd like to welcome you here. It's an  
21 honor to be here. We welcome your comments, we look  
22 forward to them. At this time I would like to  
23 introduce Rich Hargis, and he'll go through the NEPA  
24 process from the federal perspective.

25 RICHARD HARGIS: Thanks, Jason. My name is

15

1 Rich Hargis. My role is managing the preparation of  
2 the DOE, NEPA document, and it's a joint document now  
3 with the State of Minnesota. I work for the Department  
4 of Energy, National Energy Technology Laboratory. We  
5 have two other DOE members here. George Pokanic is  
6 project engineer on the project. He's also responsible  
7 for coordinating the consultation with the state's  
8 historic preservation office, as well as consultation  
9 with the Native American Tribes regarding their  
10 concerns. Bernadette Ward is also here -- she's  
11 standing in the back of the room. She's a public  
12 affairs representative. You might have seen her when  
13 you came in the door there.

14 Okay. Well, obviously we're here tonight, as  
15 Bill said, to get your oral comments on the draft  
16 Environmental Impact Statement that we prepared. You  
17 can also provide written comments if that's what you  
18 prefer. Oral comments, written comments are treated  
19 the same in preparing the final EIS. Your comments are  
20 very important to us at the DOE, and I'm sure Bill  
21 feels the same way, in ensuring that we analyze all the  
22 environmental impacts and that we have given the proper  
23 emphasis of the impacts to the EIS.

24 For written comments, it's important for you  
25 to know that your name and address will appear in the

16

1 final EIS unless you prefer that that information be  
2 withheld, you have to let us know that. And all  
3 comments received by January 11, 2008, that's the end  
4 of the comment period, will be considered in preparing  
5 the final EIS.

6 The driving force for the federal  
7 environmental review process is the National  
8 Environmental Policy Act from 1970, and it applies to  
9 all federal agencies. Any action that federal agencies  
10 take, they have to consider what the environmental  
11 impacts are. It's a national charter for protection of  
12 the environment, and the mandate is that environmental  
13 information must be made available to, not only the  
14 public, but the federal officials that are responsible  
15 for making decisions, so that the appropriate  
16 consideration can be given to the environmental impacts  
17 in any decision we make that could have significant  
18 impacts on the human environment.

19 This is kind of like what Bill Storm's slide  
20 was; where we are in the process. Our process actually  
21 started a little earlier than the state's process. We  
22 issued a notice of intent to prepare an Environmental  
23 Impact Statement on October 5th, 2005, and shortly  
24 after that we held public scoping meetings in Taconite  
25 and Hoyt Lakes, just like Bill did a year ago. So our

17

1 process actually started a little over two years ago.  
2 The DOE's public scoping period ended in November of  
3 2005. And we knew at that time that this was going to  
4 be a joint process with the state, but as Bill said,  
5 the state process couldn't start until Excelsior  
6 submitted the site permit application, and that didn't  
7 happen until later in 2006.

8 Also during the federal scoping period back  
9 in 2005 we wanted any federal agency that could have an  
10 interest to participate in our process. And as a  
11 result the Army Corps of Engineers and the U.S. Forest  
12 Service agreed to participate as cooperating agencies.  
13 So that draft Environmental Impact Statement that you  
14 have now also includes the participation of those two  
15 federal agencies.

16 On November 9th of this year the DOE issued  
17 their notice of availability of the draft EIS, and  
18 there was a mandatory 15-day waiting period before the  
19 public hearings that we're having this week. We had  
20 the Taconite public hearing yesterday, and today we're  
21 here.

22 The public comment period ends, typically for  
23 a federal process, it ends in 45 days from the day we  
24 issue the notice of availability. But because of the  
25 time of year, the holiday season and the size of the

18

1 document, we extended that comment period to 63 days in  
2 this case. So the public comment period on the draft  
3 EIS ends January 11, 2008 to get your comments to me at  
4 the Department of Energy or Bill Storm. We're going to  
5 combine the comments received by both agencies, treat  
6 them the same.

7 What we do then is we'll compile all the  
8 comments. We'll list all the comments in a separate  
9 section of the EIS, and then we'll list a specific  
10 response to each and every comment that we receive and  
11 show you where we made changes in the EIS if we did.

12 After we've done that, we'll distribute the  
13 final EIS. Anybody who requests a copy will get one.  
14 Just send me a note saying you'd like one.

15 After we've prepared and distributed the  
16 final EIS, we'll issue a notice of availability again  
17 in the Federal Register, and there will be a 30-day  
18 waiting period from the point of that publication in  
19 Federal Register until a decision can be made. And the  
20 DOE's decision will be whether to provide continued  
21 support, as Jason said, under the Clean Coal Power  
22 Initiative.

23 This is the same slide pretty much that Bill  
24 showed. As Bill said, please focus your comments, if  
25 you have written or if you'd like to make any oral

## Responses

### Comment 29-01

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

### Commenter 29 – Norm Voorhees

19

1 comments, please focus them on the draft EIS. Comment  
2 cards are available. And please state your name and  
3 spell it for the court reporter. Bill.  
4 BILL STORM: Thank you, Rich. I have two  
5 cards that have been filled out, so I will call on  
6 these people first. Once they are done speaking, I  
7 will ask for a show of hands, and I will select from  
8 the audience. The first preregistered speaker is Norm  
9 Voorhees. And if I butcher your name, my apologies.  
10 NORM VOORHEES: My name is Norm Voorhees,  
11 N-o-r-m V-o-o-r-h-e-e-s. I represent Ironworkers  
12 Local 512 here in the State of Minnesota, approximately  
13 200 members on the Iron Range, and approximately 1700  
14 in the State of Minnesota. We support the Mesaba  
15 Energy Project 100 percent, not only for the jobs it  
16 will create for our members in the construction  
17 process, but the long-term benefits that it will bring  
18 to the area and the environment, not only for the State  
19 of Minnesota, but for the nation and the rest of the  
20 world.  
21 We feel this project will move Minnesota to  
22 the forefront of technology in producing electricity,  
23 which is becoming more and more in demand and less  
24 available. The proposed technology that they want to  
25 use to do this plant is the cleanest and most

29-01



Responses

Commenter 29 – Norm Voorhees

20

29-01  
 (cont'd)

1 affordable that's available to us right now. And we're  
 2 seeing our electrical demands go up, and there's just a  
 3 crunch on the energy grid, not only for our livihoods  
 4 as lighting the schools and the hockey arenas, but also  
 5 the industry that depends on the electricity. Solar  
 6 and wind technology is in its early stages, but it just  
 7 cannot generate the power demands that we need.

8 I understand this hearing is for either this  
 9 site or the site over in Taconite, but, you know, I  
 10 think they need to build two plants on the Range  
 11 because the demand is there. And we owe it to our  
 12 children to move this technology forward, our children  
 13 and our grandchildren, so we can start cleaning up the  
 14 environment and set the stage for the rest of the  
 15 country and the world.

16 The last coal gasification plant to my  
 17 knowledge that was built was approximately 10 years ago  
 18 in Florida. And before that, I talked to a gentleman  
 19 that worked in Beulah, North Dakota, approximately 33  
 20 years ago, coal gasification; and that old technology,  
 21 it needs to be upgraded. They've tried to keep up with  
 22 EPA emissions, and they are with putting scrubbers in  
 23 and stuff. But I think this new technology is  
 24 something that we need to do for future generations.  
 25 Thank you. (Applause)

## Responses

### Comment 30-01

Section 4.11 of the Final EIS (Volume 1) discusses the potential impacts of the Mesaba Energy Project on the economy and employment. 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 BBER using the IMPLAN model reflects jobs specifically created within the 7-county Arrowhead region.

## Commenter 30 – Bob Tammen

21

1 BILL STORM: Thank you, Norm. Next up is Bob  
 2 Tammen.

3 BOB TAMMEN: Bob Tammen, T-a-m-m-e-n, Soudan,  
 4 Minnesota. I have a hard copy of my remarks, so if I  
 5 ramble a little bit, if you would consider the hard  
 6 copy as my official testimony.

7 I'd like to address the job creation aspect  
 8 of this project. Now, not everyone has a job where we  
 9 want it, but we don't appear to have a severe  
 10 unemployment problem in northern Minnesota. I'm a  
 11 retired electrician, and as a condition for drawing a  
 12 pension, I had to quit electrical work. This fall I  
 13 received a letter from my pension fund authorizing me  
 14 to return to electrical work while I drew my pension.  
 15 I've attached that letter as Exhibit 1. Apparently our  
 16 economy does not have an adequate supply of electrical  
 17 workers.

18 We've also been told about all the spin-off  
 19 jobs this project will create to keep our young people  
 20 in northern Minnesota. A few months ago I was reading  
 21 the want ads and saw a Hibbing company was advertising  
 22 for electrical and hydraulic technicians. I suppose  
 23 that's good news. The bad news is I was reading a  
 24 South Dakota newspaper. I've attached that want ad as  
 25 Exhibit 2. Our fine Iron Range employers are already

30-01

**Commenter 30 – Bob Tammen; Commenter 31 – Jean Dallas**  
 22

**Responses**

**Comment 31-01**

See response to Comment 24-01, which addresses the same concern.

**30-01  
 (cont'd)**

1 going to a low-wage, non-union state for employees.  
 2 How many more projects do we build before our employers  
 3 go to the next logical step of hiring illegal  
 4 immigrants?  
 5 I think if you look at the numbers, this  
 6 project is going to produce exorbitantly priced  
 7 electricity in our backyard. It's not competitive.  
 8 It's a liability for northern Minnesota. Thank you.  
 9 (Applause)  
 10 BILL STORM: Thank you, Bob. Those are the  
 11 two preregistered speakers that we have. Again, I  
 12 encourage you to speak. Does anyone else in the  
 13 audience want to speak to this issue tonight? Going  
 14 once, going twice. Yes. Would you please step to the  
 15 mike and state your name and spell it.  
 16 JEAN DALLAS: My name is Jean Dallas, J-e-a-n  
 17 D-a-l-l-a-s. I wasn't prepared to make a comment  
 18 tonight, but my concern is that when we've got an  
 19 800-page EIS document that is basically impenetrable  
 20 for the layman to get through, and it's very technical,  
 21 and it's very difficult for members of our community to  
 22 understand the technology that's involved in a project  
 23 like this. And we read news reports where  
 24 representatives of Mesaba Energy say one thing, and  
 25 then representatives of Minnesota Power say another

**31-01**

Responses

Commenter 31 – Jean Dallas

23

31-01  
 (cont'd)

1 thing. It's very complicated, and I don't know how we  
 2 can be expected to make informed decisions on something  
 3 of such major impact in our communities.  
 4 I don't know that there's a solution to this  
 5 problem, but it's a concern of mine. And I don't know  
 6 how you get through these huge EIS statements. I mean,  
 7 they're intimidating for a normal person. And one  
 8 person interprets it one way and another person  
 9 interprets it another way, so that really people end up  
 10 feeling powerless, and they make their choices based  
 11 on, you know, yes, we need jobs for your communities,  
 12 but is this really the best choice for our community.  
 13 It's a dilemma. That's just my opinion. And I don't  
 14 have a solution to that or a suggestion on how to solve  
 15 that, but it's an issue that I think needs to be  
 16 addressed in some way. I guess that's it. That's all  
 17 I have to say. It's a very difficult issue.  
 18 I think that we do have an imbalance in the  
 19 information that we're receiving through our media  
 20 sources, and it leaves people frustrated because  
 21 they're not sure whether they should support a project  
 22 like this, because they want to support it because they  
 23 want the economic benefits, but they're concerned about  
 24 the environmental issues. It's just so overly  
 25 complicated that it's difficult for them to make a

## Responses

### Comment 32-01

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

### Commenter 31 – Jean Dallas; Commenter 32 – Gordon Smith

24

#### 31-01 (cont'd)

1 truly informed choice or opinion about it. That's my  
2 statement. (Applause)  
3 BILL STORM: Thank you for your comment.  
4 Okay; I'm going to open it up to the floor again. This  
5 gentleman right here. Please step to the mike, state  
6 your name and spell it.

#### 32-01

7 GORDON SMITH: My name is Gordon Smith,  
8 G-o-r-d-o-n S-m-i-t-h. I live in Hibbing, and I  
9 represent the Painters Local up in this area. And we  
10 currently have very high unemployment in the trades in  
11 this area right now, and we're looking forward to this  
12 project moving forward because of the job opportunities  
13 that it would create, and also the fact that there is a  
14 great need for energy with many potential projects in  
15 this area.

16 We live in a very industrialized area with the  
17 mining in this area, and are very dependent on the  
18 heavy industry for jobs; and with the demand of future  
19 power needs going forward with all these future  
20 projects, we feel that there is a great need for this.

21 There's been a lot of power plants, coal-fired  
22 ones proposed around the country, and a lot of them are  
23 being shot down in a lot of areas, and a lot of them  
24 are your basic coal-fired plants. And if we're going  
25 to continue to use coal-fired plants for our future

## Responses

### Comment 33-01

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

### Commenter 32 – Gordon Smith; Commenter 33 – Bill Whiteside

25

32-01  
(cont'd)

1 power needs, I think we really need to move into the  
2 new technologies so we have the cleanest burning plants  
3 available. I mean, everybody wants the cleanest  
4 environment available, but we have to have power; let's  
5 do it the best way we possibly can. Thank you.  
6 (Applause)

7 BILL STORM: Thank you for your comment.  
8 Again, to the floor, if you would like to speak, raise  
9 your hand. This gentleman, please step to the mike,  
10 state and spell your name.

33-01

11 BILL WHITESIDE: Bill Whiteside, B-i-l-l  
12 W-h-i-t-e-s-i-d-e. I didn't come today with a prepared  
13 text or anything. My concern is that we have yet to  
14 see the demand for energy that we are going to see in  
15 the near future. With the demand for energy resources  
16 getting tighter, with us seeing in our own communities  
17 possibly and across the world, violence and trouble in  
18 energy areas, where we're reaching out to bring in  
19 energy to supply our own needs. I think we need to  
20 recognize that we have to take the initiative to take  
21 care of our own future with resources that are close to  
22 our own areas, and especially an inexpensive resource  
23 such as coal compared to a lot of other resources.

24 If we don't do that, I think we're setting  
25 ourselves up for a situation where we're going to see

## Responses

## Commenter 33 – Bill Whiteside

26

33-01  
(cont'd)

1 an even lower economic value of our monies, less  
2 resources for our people, poorer health conditions  
3 through lower living conditions; and these are what you  
4 might call some kind of social issues, and how this  
5 plays out in our communities and across our country.  
6 I'm just concerned that if we don't step up and take  
7 care of ourselves, that we're going to be sorry in the  
8 long run; and the long run may not be that far in the  
9 future.

10           Everybody wants to have clean air, everybody  
11 wants to have clean water, and that's why we're here,  
12 that's why we have the process where you guys are  
13 taking all the comments from people who have concerns  
14 and want to have clean air, have specific issues and  
15 specific knowledge brought forward here; I appreciate  
16 all that. And Excelsior brings forward the investment  
17 that they're willing to make, and the technology that  
18 they're proposing to put forward to try to ensure that  
19 we do have clean resources and the energy that we're  
20 going to need in the future. And I think it's real  
21 important for us all to work together and see that we  
22 can go there. Thanks. (Applause)

23           BILL STORM: Thank you for your comment.  
24 Again, to the floor, if you would like to speak, please  
25 raise your hand. Sir, in the back, please step to the

## Responses

### Comment 34-01

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

### Commenter 34 – Warren Koskiniemi

27

34-01

1 mike, state and spell your name clearly. Thank you.

2 WARREN KOSKINIEMI: Warren Koskiniemi,

3 W-a-r-r-e-n K-o-s-k-i-n-i-e-m i. I'm 100 percent for

4 this project. People that are worried about the

5 pollutants and what have you not as far as water and

6 air, what are you worried about? There's so many

7 government agencies out here that you can't fart

8 without getting a ticket. So I don't think that would

9 be a major concern.

10 As far as which end of the Range to put it on,

11 I agree with the one gentleman, two plants would be

12 awesome. But as far as on the east end of the Range, I

13 think the politicians, for lack of a better term, would

14 open their arms to an influx of high skilled employees

15 that this plant would require. We're not looking for

16 immigrants coming from whatever country. It's going to

17 take skilled labor to make this plant go. And I would

18 think on this end of the Range we would be open arms as

19 far as new kids for our schools and new people for our

20 communities. Thank you. (Applause)

21 BILL STORM: Thank you very much. Again, I'd

22 like to open it up to the floor. If you want to speak,

23 raise your hand. Going once, twice.

24 Thank you very much. Again, I want to remind

25 you that your comments, if you want to submit written



## Responses

28

1     comments, you can submit them to either me or Richard.  
2     The comments need to be in by the 11th of January,  
3     2008. I encourage you to participate in the process.  
4     We will be back up here for the contested case hearing  
5     down the road. And I do appreciate you coming out.  
6     This process wouldn't work if it wasn't for the people.  
7     Thank you very much. (Applause)

8             (Hearing concluded at 7:40 p.m.)

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## Responses

29

1 COURT REPORTER'S CERTIFICATE

2 Be it known that I have reported and transcribed  
3 the foregoing Public Meeting;

4 That I am a notary public in and for the County of  
5 St. Louis, State of Minnesota;

6 That I am not related to any of the parties hereto  
7 or interested in the outcome of this matter;

8 That the foregoing is a true and accurate  
9 transcription of the proceedings to the best of my  
10 ability.

11 Witness my hand and seal this 10th day of  
12 December, 2007.

13

14

15 Kathleen M. Undeland  
16 Registered Professional Reporter

17 My commission expires  
18 January 31, 2010

19

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## Commenter 35 – Neil Ahlstrom



## METALCASTERS OF MINNESOTA

1855 East 28<sup>th</sup> Street  
Minneapolis, MN 55407  
612-729-9395

November 25<sup>th</sup>, 2007

Mr. Bill Storm- State Planning Director  
Minnesota Department of Commerce  
85 7<sup>th</sup> Place East Suite 500  
Saint Paul, Minnesota 55101-2198

Dear Mr. Storm,

On behalf of the Metalcasters of Minnesota I'm writing to express our concerns about the status of future electric power generation in the state of Minnesota. As consumers of significant amounts of both electricity and natural gas our industry supports initiatives aimed at providing ample sources of clean, dependable, and economical power, such as the one being proposed by Excelsior Energy Inc. in Hibbing, Minnesota.

Our specific concern relates to the ongoing debate about the need for additional power generation in Minnesota. Based on our recent discussions with a number of current energy suppliers and those proposing to add new sources for electric generation, such as Excelsior Energy Inc., (Mesaba Energy Project) we are perplexed by the fact that we are being told by existing suppliers that there is an ample supply of power to handle our current and future demand. Yet, at the same time, our member companies who have interruptible service are being asked to curtail their power usage due to high peak demand at an ever increasing rate. We have even heard rumors that curtailment might begin to occur in cold weather months as well. These issues seem to counter the claim that we have an ample supply of electric energy in our state. Adding to our concern is the fact that future demand will continue to rise at an ever increasing pace and unless we find new ways to conserve considerably more energy, find alternative sources, or reduce consumption, we will find ourselves in an obvious shortfall going forward.

As this debate continues, we will be carefully monitoring the pros and cons of new power generation within our state and the impact it has, not only on our industry, but for all Minnesota electricity consumers. Our hope is for a balanced and open dialogue by all parties on the merits of whether Minnesota needs new electrical capacity. Decisions made in the near future will have a significant impact on everyone in the metalcasting industry. Our continued success and the success of our entire manufacturing base is dependent upon an ample and affordable supply of electric energy to maintain our competitive position, not only in Minnesota, but on a global basis as well. We therefore support efforts such as those proposed by Excelsior Energy to provide additional electrical capacity in Minnesota and ask that full and fair consideration be given to them as they move forward in their desire to make the Mesaba Energy Project a reality.

Thank you for considering our comments and position on the Mesaba Energy Project.

On behalf of the Metalcasters of Minnesota Board of Directors

*Neil C. Ahlstrom*  
Neil Ahlstrom  
President



## Responses

## Comment 35-01

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

35-01

Commenter 36 – David Hudek



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

Name: DAVID L. HUDEK  
23215 DIAMOND LANE  
ROBEY, MN.  
Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Representing: \_\_\_\_\_  
Email: \_\_\_\_\_  
Tel: \_\_\_\_\_

Comments: opposed to project, loss of hunting lands,  
environment impact. No plans for trapping  
C<sup>o</sup>2 emissions until up and running.  
\_\_\_\_\_  
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Please submit comments to meeting moderator or send to:  
William Cole Storm  
Department of Commerce  
85 7<sup>th</sup> Place East, Suite 500  
St. Paul, MN 55101-2198.  
Tel: 651-296-9535.

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

Responses

Comment 36-01

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

36-01

## Commenter 37 – Gail Matthews



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

Name: Gail Matthews  
Representing: my community / myself  
Email: wynvic@marble.mn.us  
Address: PO Box 63  
Mesaba MN 55764  
Tel: 218-247-3149

### Comments:

In today's world of the concern over global warming, I find it ludicrous that you would consider building an obsolete form of energy production. I cannot support a plan that will burn fossil fuels. Why aren't we moving toward renewable energy?

<sup>Clean coal is an oxymoron</sup>  
This plan is a step backward. I don't care how new the technology is, it still involves burning a non-renewable, polluting resource.

In conjunction with the proposed steel plant in Nashwanak, this plan lowers the desirability + environmental quality of this community. I own property here but I will not keep it if this goes through. The argument that this is good for the economy, is just a catch all phrase to justify any kind of development, whether it is beneficial or not.

Please submit comments to meeting moderator or send to:

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

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

## Responses

### Comment 37-01

See responses to Comments 1-01 and 12-02, which address the same concerns. Final EIS Section 1.4.1 (Volume 1) explains that DOE's purpose and need in this EIS are to demonstrate a specific, advanced coal-based technology selected competitively for co-shared funding under the CCPI Program. The Mesaba Energy Project was selected competitively from among 13 applications in response to Round 2 of CCPI Program funding opportunity announcements. Section 2.1.1.2 (Volume 1) of the Final EIS describes the reasonable alternatives considered by DOE. Because the U.S. Congress established the CCPI Program with the specific goal of accelerating commercial deployment of advanced coal-based technologies as explained in Section 1.2.1 (Volume 1) of the Final EIS, other technologies (such as nuclear, hydro, wind, solar, or conservation) that cannot carry out these goals are not reasonable alternatives in this EIS. However, DOE oversees programs and numerous projects that are investigating and supporting a wide variety of energy technologies and conservation.

### Comment 37-02

Section 5.2 (Volume 1) of the Final EIS describes the potential cumulative impacts of the Mesaba Energy Project in conjunction with the Minnesota Steel Industries project and other projects in the Iron Range. See also response to Comment 16-01, which addresses concerns regarding economic impacts.

**Responses****Comment 38-01**

As stated in response to Comment 6-01, the use of an enhanced ZLD system at the West Range Site (as well as at the East Range Site) would eliminate discharges of process water or blowdown water to surface waters. Hence no mercury would be discharged to surface waters. Mercury deposition from power plant emissions to the atmosphere would be highest near the exhaust stacks and exponentially lower with distance away from the point of emission. See further discussion in response to Comment 42-01. The EIS analyzed health risks under the required MPCA guidelines for an 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 Section 4.17, Safety and Health. The Final EIS has been revised to insert a missing sub-section heading (in printed copies of the Draft EIS), "4.17.2.3 Human Health Risks", for the text that addresses risks associated with air pollutants emitted by the project.

**Commenter 38 – Lee Ann Norgord**

**From:** Leeann Norgord [mailto:leeannn@localnet.com]  
**Sent:** Monday, December 03, 2007 12:39 PM  
**To:** Bill Storm  
**Subject:** Re-sending comments re: Taconite Comment meeting

Mr. Storm:  
Please find the letter sent to you in it's entirety!  
Lee Ann Norgord

Mr. Bill Storm  
Minnesota Dept. of Commerce  
85 7<sup>th</sup> Place E.  
Suite 500  
St. Paul, MN

RE: Mesaba Energy Project  
PUC Docket E6472/GS-06-668 (This was printed incorrectly on the hand-outs at  
Taconite. The hand-outs had GS-06-688)

In my presentation at the DEIS Public Comment Meeting in Taconite on November 27, 2007, I had some statistical errors. I wish to send a correction as I want my comment to be factual and accurate. Here is the correction:

**Excelsior stated that the Mesaba Plant will not contribute additional mercury discharge 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?**

38-01

## Responses

### Comment 38-02

See responses to Comments 1-01, 12-02, and 14-03, which address the same concerns.

### Comment 38-03

Potential noise impacts from transportation are discussed in Section 4.13 (Volume 1). Noise from trains may be detected by some residential receptors during a pass-by; however, the incremental  $L_{dn}$  increase and vibration would not be considered significant when compared to existing background noise levels and considering the infrequency of the event. Also, it was determined that maximum noise levels generated by freight train operations would be below the ATPA guideline of 70 dBA at each residential receptor location. Noise from rail yard operations would be inaudible in Taconite and at nearby residences (i.e., less than 30 dBA at locations with background noise levels near 50 dBA – see Table 4.18-3 in Volume 1). Noise from trains while unloading would be minimized by the use of an automatic electro-hydraulic positioner, enabling all but one engine to be shut off during unloading. Additionally, the proposed rail loop would minimize the need for rail car switching and, thus, associated noise. Emissions from coal unloading and loading from trains are not expected to appreciably change air quality because emissions would be reduced by minimizing unenclosed points of material transfer components, enclosing conveyors and loading areas, and installing control devices such as baghouses and wetting systems. Dust from unloading would be controlled via a fabric filter system, and would not reach residences in Taconite or other nearby residences. See response to Comment 12-01 for discussion of the amount of train and truck emissions expected from the Mesaba Energy Project. Truck traffic impacts would be mitigated by the addition of a turning lane to US 169 at its intersection with CR 7 and at the approach to the plant entrance on CR 7.

## Commenter 38 – Lee Ann Norgord

I also have 2 other comments and questions:

38-02

We know the Mesaba Energy Project does not initially intend to sequester CO2 and it will be just another dirty coal-fired plant. In the Draft EIS it states plans are to remove 74 acres of forest for Phase I and 81 acres of forest for Phase II. (forest having 50-100 yr. old stand of trees) We also know that trees are helpful in absorbing CO2 in the atmosphere during the summer months. So with that said, the pollution in the atmosphere, water and land as well as CO2 will increase with the Mesaba Energy Project.

*How do you justify this added pollution and CO2 and how are you going to explain to the people who hunt in those woods that the forest as well as wildlife will no longer be there or in the surrounding area?*

38-03

In the draft EIS it states there will be increased truck and train traffic, noise (ex: coupling of train cars during switching, as well as loading and unloading train cars), dust, and vibration. *Do you have a plan for people living in the localized area, especially the people living in Taconite, to cope with these negative increases?*

Lee Ann Norgord  
 26739 Birch Dr.  
 Bovey, MN 55709  
[leeannn@localnet.com](mailto:leeannn@localnet.com)

**Responses**

- Comment 39-01**  
Thank you for your comment. It has been noted and will be included in the administrative record for this EIS.
- Comment 39-02**  
Section 4.11 of the Final EIS (Volume 1) discusses the potential impacts of the Mesaba Energy Project on the economy and employment.
- Comment 39-03**  
Thank you for your comment. It has been noted and will be included in the administrative record for this EIS.

**Commenter 39 – Mark Roalson**

From: mroalson@hotmail.com  
To: bill.storm@state.mn.us; hargis@nett.doe.gov;  
mroalson@hotmail.com  
Subject: PUC Docket #E6472/GS-06-668  
Date: Fri, 30 Nov 2007 19:32:40 +0000

I was at the public meeting in Hoyt Lakes on Wednesday, November 28th, 2007 regarding Mesaba Energy Project. (PUC Docket # E6472/GS-06-668). I personally am in favor of the building of this facility in Hoyt Lakes for the following reasons:

**39-01**

(1.)Primarily, this will be a state-of-the-art plant with low emissions and energy re-capture to make maximum use of all heat release. Bi-product sulphur will be sequestered and sold on the market and not allowed to blow up the stacks. Mercury emissions , we are told, will be held to a minimum and also captured as much as possible. I can't speak for all the local residents, but I think we should give this modern high-efficiency plant a chance to prove itself. It would be nice not to have to burn anything for energy, but until that day arrives, using technology to minimize pollution and maximize energy capture is the best option to plants that do not have these controls.

**39-02**

(2.) Of course, creation of jobs is important, both construction and long-term in the facility. Major employers like this will benefit the entire local economy. Spin-off industries will result and a tax-base shared by industry takes the pressure off from the average homeowner/taxpayer.

**39-03**

(3.) Also, local residents here are not overly concerned about any "visual blight" the plant may cause, We already have an electrical-energy plant on our skyline, and knowing that this one burns much cleaner is a positive thought.

Sincerely,  
Mark S. Roalson



## Responses

### Comment 40-01

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

### Commenter 40 – Gail Matthews

**From:** Gail Matthews [mailto:wyncie@marblemn.com]

**Sent:** Wednesday, December 05, 2007 8:00 AM

**To:** Bill.Storm@state.mn.us

**Subject:** RE: the Mesaba Coal Project in Taconite - Let's build something to be proud of, not Dirty Coal, read on

40-01

I want to be part of the future, not the past. Coal is yesterday's technology and we all know that. Bio-diesel is the future, and we need it now.

Gail M

## Commenter 41 – Steve Clark

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

December 9, 2007


Dear Sir:

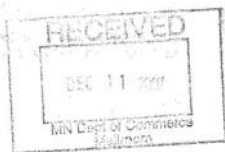
I am writing in regard to the Mesaba Energy Project, PUC Docket No. E6472/GS-06-668. I attended the DEIS meeting in Taconite on November 27th and want to thank you for the professional manner in which you facilitated the discussion. Having now had a chance to read the DEIS, I must concur with the majority of concerned citizens who spoke on the 27th and expressed surprise and disappointment with the Document's failure to adequately address key issues involved in the Mesaba Project. My concerns include the following:

- 41-01 | 1. No in-depth, comprehensive cost/benefit analysis has ever been done on the project. The DEIS only refers to an Excelsior Energy commissioned study of economic impact that the study's authors acknowledge is of limited scope.
- 41-02 | 2. The DEIS gives cursory attention to potential ground water ramifications to the Coleraine, Bovey, Trout Lake Township area. This failure provides a text-book basis for class action litigation in the event that local wells begin to show elevated contaminants.
- 41-03 | 3. The MPUC has already expressed an opinion that the cost of potential power generated by the Taconite plant would be prohibitive.
- 41-04 | 4. How can our Governor, national and state elected officials continue to publicly promote higher alternate energy standards while backing a project that would become Minnesota's second highest polluter.
- 41-05 | 5. This ill-conceived project is incapable of sequestering carbon dioxide, is dependant upon coal from distant sources and would require millions of dollars in infrastructure to transmit its power to providers who have been unanimous in saying they don't want or need it.
- 41-06 | These are but a few of the obvious flaws regarding the Mesaba Project and the woefully inadequate DEIS. I strongly suggest that the Department of Commerce and the Federal Energy Commission take a new look at producing an EIS that speaks to legitimate concerns and does not rely so heavily on the understandably biased input from Excelsior Energy.

Thank you for your time and attention.

Sincerely,

  
Steve Clark  
26606 Eagle View Drive  
Bovey, MN 55709-8642



## Responses

## Comment 41-01

See response to Comment 16-01, which addresses the same concern. In addressing the use of cost-benefit analysis, 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." In so stating, CEQ recognized 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 41-02

See response to Comment 7-02, which addresses the same concern.

## Comment 41-03

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

## Comment 41-04

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

## Comment 41-05

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

## Comment 41-06

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

## Commenter 42 – Alvar Hupila



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

Name: ALVAR E. HUPILA Representing: Self  
Email: \_\_\_\_\_  
Address: 41259 Scenic Hwy. Tel: 218-245-2261  
Bovey MN. 55709

Comments: The draft EIS as presented is  
totally inadequate.  
The CO<sub>2</sub> sequestration that is  
supposed to be the linch pin of this process  
is vague and possibly ten years from be-  
coming a reality.

The air borne mercury and the  
various oxides of sulphur, nitrogen and  
hydrogen were only quoted for Big Diamond  
Lake without consideration for the lakes that  
would be downwind from the plant for a good  
share of the year.

The environmental impacts of moving  
the highway, building the rail spur and gas  
pipeline as well as the 400 mile pipeline to  
North Dakota and beyond were not even  
addressed. Not to mention the HVTL

Please submit comments to meeting moderator or send to:

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

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

## Responses

### Comment 42-01

See responses to Comments 1-02 and 4-03 which address concerns about CCS. With respect to deposition of air emissions, Big Diamond Lake was selected for specific mercury health risk modeling in accordance with the MPCA's AERA guidance. As shown in Figure 6 of Appendix C (Volume 2) of the Draft EIS, higher mercury concentrations are modeled over Big Diamond Lake than over any other lake. This is consistent with the wind rose (Figure 3.3-1 in Volume 1 of the EIS), which shows that the predominant wind direction is from the north-northwest, which means that Big Diamond Lake is directly downwind of the West Range IGCC Power Station. Therefore, Big Diamond Lake represents the closest receiving waters for worst-case conditions, and it is the most logical choice for analyzing the health risk of mercury emissions from Phase I and Phase II. Analyzing other lakes for which modeled mercury concentrations are even lower would only show smaller impacts. See also response to Comment 38-01.

The results of Excelsior's risk assessment modeling showed that risks associated with fish consumed by adult subsistence and recreational fishers on Big Diamond Lake increased less than 1 percent above current levels for both the average-sized and the 95th percentile length-sized fish in Swan, Oxhide, Trout, Snowball, and Lower Panasa Lakes. Those lakes were selected to provide surrogate fish size data in consultation with MPCA. The analysis was conducted using MPCA's *Mercury Risk Estimation Method for the Fish Consumption Pathway: Impact Assessment of a Nearby Source*, which assumes that there is a linear relationship in a given lake between the atmospheric mercury deposition rate and fish tissue methylmercury concentrations. The relationship is used to estimate the non-cancer oral hazard quotients due to fish tissue ingestion based on increases in mercury deposition as a result of facility emissions. Updated results of the revised risk (AERA) analysis are presented in Section 4.17 (Volume 1) and Appendix C (Volume 2) of the EIS.

The re-alignment of County Road 7 (which is not considered available for the project since publication of the Draft EIS – see Section 2.3.1.2 [Volume 1] regarding the new proposed Access Road 3, which is now Excelsior's preferred alternative) and the CO<sub>2</sub> pipeline are not within the scope of this EIS (see responses to Comments 4-02 and 80-11). The options for the natural gas pipeline and new and upgraded HVTL lines are addressed in the EIS.

42-01

# Commenter 43 – Mark Mandich



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

Name: MARK MANDICH Representing: \_\_\_\_\_  
ITASCA City Commissioner Email: Mark.Mandich@afscme.com  
36820 BayPoint Rd. Tel: 218-245-1547  
Bovey, MN 55709

Comments:  
 Keep the MESABA ENERGY Project moving  
 forward. The EIS look great AS A whole.  
 Most citizens that I have had contact with  
 in regards to this project ARE VERY supportive  
 of it. There's Always going to be A few  
 that complain about one thing or the other  
 Keep up the good work.

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

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

## Responses

### Comment 43-01

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

43-01

**Commenter 44 – Bob Norgord**

Project Docket No. GS06--688/EG472  
 Mesaba Energy Project

**Responses**

**44-01**

It has been suggested that the Nashwauk PUC would supply the natural gas for the Mesaba Project if the West Range site were chosen. As per Minnesota Session Laws 1997-Chapter 21.SF504, (see Exhibit A) Nashwauk does not have the legal authority to supply the natural gas outside of the “Nashwauk newly acquired area”. Therefore, Excelsior Energy will have to become it’s own utility or will have to find another retail supplier of natural gas.

If the route taken for Excelsior’s pipeline is the one shown in the permit application as alternative 1 (preferred), it will mostly parallel Nashwauk’s preferred route. Nashwauk’s pipeline application asks for an initial 70 ft. ROW with an additional 30-ft. cleared for a workspace. If Excelsior does the same, that will cause a strip of land 200 ft. wide to be cleared. This would mean the loss of wildlife habitat and CO2 sequestration on 290.0 acres of land with 145.5 acres of this attributed to the Mesaba Project.

**44-02**

In some instances the natural gas pipeline would deprive landowners of the right to build or put their septic systems on their open spaces. The EIS does not take into consideration the fact that additional land would have to be cleared to allow for homes and septic systems to take the place of the open land utilized by the pipeline.

The EIS does not mention that the blast area for a 24-inch natural gas pipeline is 500 ft. They only mention homes within 300 ft. of the proposed line. With this knowledge, future homebuilders will have to clear areas for the construction of homes beyond 500 ft. from the pipeline for safety reasons.

**44-03**

No one can say that these natural gas lines won’t explode. The Panhandle Eastern pipeline explosion near Springfield, Illinois on April 29, 2007 is but one example of the danger. Another example was the explosion of a 36-inch line in the front yard of the Burbee home in rural Deer River a few years ago. In any case, this danger could cause additional land to be cleared, causing more loss of habitat for wildlife and loss of trees for CO2 sequestration.

There are other possible routes that could be taken that would have less of an impact on wildlife and humans One route is a route submitted by Michael Karna, 21205 Bluebird Drive, Grand Rapids, MN to the D.O.C. for consideration in the Nashwauk PUC application. This route follows mostly county tax forfeit land (nine sections) and an existing HVTL ROW (see Exhibit B attached). There are wetlands involved, but pipelines have always been able to overcome any difficulty wetlands present.

**44-04**

Another route would be to follow a HVTL ROW from a connecting point on the GLG 36-inch natural gas lines just north of US Highway 2 at Cohasset. It could then follow the HVTL that connects the MP Clay Boswell plant to the old Butler Tac site (now MSI). In addition to the following of an existing ROW, it would avoid crossing the ore body.

I have included as “Exhibit C” a copy of the “Citizen’s Advisory Committee” report for the proposed “Nashwauk-Blackberry Natural Gas Pipeline”, proposed by the Nashwauk PUC which was ~~supposed~~ to parallel the proposed Mesaba Project Pipeline. It discusses

**Comment 44-01**

See response to Comment 5-01, which addresses the same concern.

**Comment 44-02**

See response to Comment 5-02, which addresses the same concern.

**Comment 44-03**

See response to Comment 5-02, which addresses the same concern.

**Comment 44-04**

See response to Comment 5-03, which addresses the same concern.

## Responses

### Comment 44-05

See response to Comment 5-04, which addresses the same concern.

### Comment 44-06

See response to Comment 5-05, which addresses the same concern. Although the report cited identifies the presence of mineral resources in the areas noted, it states that no attempt has been made to identify the cost of extracting such resources.

## Commenter 44 – Bob Norgord

44-04  
 (cont'd)

five possible alternative routes, and a sixth route has since been identified and added to the list.

44-05

It should be noted that in an Excelsior Energy press release dated 8/29/05, it says, under “Advantages of the Preferred Site”, “The site...is located in close proximity to existing infrastructure, including adequately sized natural gas pipelines...”. This statement is just another example of spin that Excelsior Energy will put on facts to make them fit the Project.

44-06

At a recent meeting of the Itasca County Planning and Zoning, a subcommittee was formed, that included John Engesser of the Minnesota DNR Mines and Minerals Division and several mining engineers. Their mission was to identify the exact location of the <sup>ore</sup> body, and to devise a map to be implemented in a mine overlay district. The object of the mine overlay district is to prevent development over the ore body in order to preserve the land for future mining.

Through test borings and other data it was shown that the next and only logical place for mining in the near future would be in the area starting at the old Arturas mine (just east of Scenic Highway #7) and traversing west to the Canestee mine pit. (See Exhibit D, attached) This means that the Mesaba Project’s infrastructure, railroad spur, process water lines, potable water lines, waste water lines and HVTTL, all would interfere with the mining in the area.

I have included in “Exhibit D” a report that was done by members of the Natural Resources Research Institute and Richard Ojakangas of the Department of Geological Sciences, University of Minnesota, Duluth. It states that, “Even though access to the mineral resource itself is crucial, attention must also be paid for keeping land available for things like ancillary facilities, tailings basins, and stockpiles including land north of the iron-formation where the bedrock is Archean granite”. Since the Mesaba Project itself was planned in close proximity to and north of the iron ore body, it would jeopardize the ability to mine that area, depriving the state, county, and schools of badly needed funds. Putting this information along with the fact that they can’t sequester CO2 in this area, it reinforces a statement made by MPUC Chair Leroy Koppendrayner, “You’re in the wrong place”.

Bob Norgord  
 26739 Birch Dr.  
 Bovey, MN 55709

## Responses

### Comment 45-01

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

### Commenter 45 – Gail Matthews

>>> "Gail Matthews" <[Gail@glorvigen.com](mailto:Gail@glorvigen.com)> 12/13/2007 10:38 AM >>>

We need to find better ways to get energy. Building this plant would tell the world that we are not willing to even consider that our global warming problem is a possibility. Coal is not clean, but it is abundant and the industry that supports it is powerful as are the political interests that are pushing it on the residents of the Iron Range, of which I am one.

I do not want to live next to this thing, I am ashamed of it, and I will fight against it. It makes me very sad that the people in the decision making process are so backward in their thinking.

The time for change is upon us, and we need to assume that if we don't make changes, then we are jeopardizing future generations. Are you willing to risk the security of your grandchildren that your ideas are right, or are you willing to take precautionary measures now, in case you are wrong.

We have the ability to do better than this. We just need the political will. It is up to leaders like you to lead and not follow.

45-01

## Responses

### Comment 46-01

See response to Comment 37-01, which addresses the same concern. As stated in Section 1.2.2 (Volume 1), the PUC has responsibility to site power plants in accordance with Minnesota Rules Chapter 7849 based on permit applications received. The MDOC supports PUC in the permitting process by preparing an EIS and holding a contested case hearing. In accordance with state regulations, and after considering the potential impacts, the PUC has the responsibility either to approve the project and issue permits on the applicant's preferred or alternative site and corridors or to disapprove the permit application.

### Comment 46-02

The response to Comment 37-01 explains DOE's involvement in the EIS.

### Comment 46-03

See responses to Comments 1-02, 4-01, and 12-02, which address the same concerns.

## Commenter 46 – Randy Zupan

**From:** Zupan [mailto:zupan@uslink.net]

**Sent:** Tuesday, December 18, 2007 7:53 PM

**To:** Bill.Storm@state.mn.us

**Cc:** rep.tom.anzelc@house.mn; rep.bill.hilty@house.mn;  
rep.maria.ruud@house.mn; rep.jean.wagenius@house.mn;  
rep.alice.hausman@house.mn; sen.tom.saxhaug@senate.mn;  
sen.david.tomassoni@senate.mn; rep.loren.solberg@house.mn;  
rep.tom.rukavina@house.mn; rep.tony.sertich@house.mn;  
rep.david.dill@house.mn; Tim.Pawlenty@state.mn.us;  
rep.margaret.kelliher@house.mn; Attorney.General@state.mn.us

**Subject:** Mesaba draft EIS comments

Mr. Storm,

The draft EIS for the Mesaba Energy Project (PUC Docket E6472/GS-06-688) is inadequate in several areas.

46-01

1. The EIS is meant to study the environmental impact of a project not evaluate it for CCPI Program funding. By not including wind, solar and conservation as reasonable alternatives, an adequate environmental impact study has not been done.

46-02

2. The DOE should not be leading the EIS because of it's interest in the CCPI Program. This is quite evident in the "No Action Alternative" section of the Draft EIS.

46-03

3. CO2 emissions have to be reduced today, not increased or reduced in the future. Increasing CO2 emissions now, with the hope that sequestering technology will be available in the future let alone used, is irresponsible and inadequate.

Randy Zupan  
31120 East Bass Lake Road  
Grand Rapids, MN 55744  
[zupan@uslink.net](mailto:zupan@uslink.net)



## Responses

### Comment 47-01

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

### Commenter 47 – Frank Kirby

Transcription of voice mail received by Richard Hargis, DOE, on 11/30/07 at 1:17 pm.

47-01

"My name is Frank Kirby. I live in northeastern Minnesota and I'm calling in regard to Mesaba Energy Project, the two coal burning plants. I am very much against any new coal burning plants even if they are cleaner than the old ones. I think we must stop that and go to solar and wind power. And if you need to talk to me further my area code is 218-xxx-xxxx. My name is Frank Kirby. Thank you. Have a good day."

## Commenter 48 – Dennis A. Gimmestad



MINNESOTA HISTORICAL SOCIETY  
State Historic Preservation Office

December 18, 2007

Mr. Richard Hargis, Jr.  
National Energy Technology Laboratory  
PO Box 10940  
Pittsburgh, PA 15236-0940

Re: Mesaba Energy Project Draft EIS  
SHPO Number: 2005-3002

Dear Mr. Hargis:

Thank you for the opportunity to review and comment on the Draft EIS for the above referenced project.

We have the following comments relative to the cultural resource issues and the Section 106 review of the project. We have focused these comments on Section 4.9 of the DEIS.

- |              |   |
|--------------|---|
| <b>48-01</b> | 1. The method of analysis discussion does not address the full criteria of effect as defined in 36 CFR 800.   |
| <b>48-02</b> | 2. The impacts of operation section indicates that facility operations would be conducted in compliance with applicable cultural resource laws, regulations, policies, and procedures, but it does not define what these laws, regulations, policies, and procedures are. To the extent that these relate to Section 106 requirements, this document is the place where they need to be spelled out, not just referenced in a general way.  |
| <b>48-03</b> | 3. Our understanding of the current status of cultural resource identification at the West Range Site:<br><br>A. We reviewed the report of the archaeological survey of the West Range plant site and concurred with the finding of no archaeological properties.<br>B. The archaeological survey of the West Range corridors still needs to be completed. We recommend that all project areas be surveyed, not just those of high or medium potential.<br>C. The architectural survey of the West Range plant site and the West Range corridors still needs to be completed. The preliminary discussion of these properties at the top of page 4.9-5 is confusing. |
| <b>48-04</b> | 4. Our understanding of the current status of cultural resource identification of the East Range Site:<br><br>A. We reviewed the report of the archaeological survey of the East Range plant site in 2006, and concurred with the finding of no archaeological properties.  |

345 Kellogg Boulevard West/Saint Paul, Minnesota 55102-1906/Telephone 651-296-6126

## Responses

### Comment 48-01

Section 4.9.1.2 (Volume 1) has been updated to summarize the criteria of adverse effect as outlined in 36 CFR 800.5. Sections 4.9.3.1 and 4.9.4.1 (Volume 1) present the impact analysis of the properties eligible for inclusion to the National Register. A list of the historic properties within the area of potential effect can be found in Tables 3.9-2 and 3.9-3 (Volume 1).

### Comment 48-02

The laws, regulations, policies and procedures applicable to cultural resources around the Mesaba Energy Project are cited in Chapter 6 of the EIS, Regulatory and Permit Requirements. The following text has been added to Section 4.9.2.2 (Volume 1): "Facility operations would be conducted in compliance with applicable cultural resource laws, regulations, policies and procedures (see Chapter 6, Regulatory and Permit Requirements)." Correspondence, consultation letters, and responses are presented in Appendix E (Volume 2) of the EIS. DOE is preparing a Programmatic Agreement in consultation with the ACHP, SHPO, Native American tribes, MDOC, and the project proponent, which addresses the procedures for avoiding or mitigating potential impacts to cultural resources during construction and operation of the Mesaba Energy Project.

### Comment 48-03

A Phase I analysis of the West Range Site was completed in November 2007. Ten areas previously identified as having moderate archaeological potential were subjected to shovel testing along 49-foot transects. In total, 676 shovel tests were used to test 43.2 acres (106 Group, 2007b). No archaeological materials were within any of the surveyed areas. The text in Section 4.9.3.1 (Volume 1) has been updated to reflect the survey findings. If the West Range Site were to be selected for the Mesaba Generating Station, the Programmatic Agreement will address the additional actions to be taken to identify the potential for cultural resources at sites and along utility corridors that may be affected and procedures to be followed for avoiding or mitigating potential impacts.

**Commenter 48 – Dennis A. Gimmestad****Responses****48-04  
(cont'd)**

- B. The archaeological survey of the East Range corridors still needs to be completed. We recommend that all project areas be surveyed, not just those of high or medium potential. We note that this area includes previously identified sites; it will be particularly important to address all potential impacts on 21SL0009 and 21SL0390. Since these are identified as mound sites, it will also be important to address the requirements of the Minnesota Private Cemeteries Act.
- C. The architectural survey of the East Range plant site and the East Range corridors still needs to be completed. We have reviewed the September 2007 report assessing the project effect on two previously identified historic properties (the Longyear site and the DM&IR Railway line), and concur with the determination that neither will be adversely affected. Any other eligible properties identified in the survey will need to be assessed for effects as well.

**48-05**

5. The information in the Summary of Impacts table (4.9.6) is incomplete. It does not indicate that surveys are still to be completed. Further, the table does not appear to include all of the previously identified properties discussed in the preceding section.

**48-06**

6. We have reviewed the proposed Programmatic Agreement for the project. Such an agreement is an appropriate way to establish a method for identification, evaluation, and treatment of historic properties when such efforts are not complete at the time of a Record of Decision. The "Overview of Programmatic Agreement" statement you submitted explains this situation. Past experience has shown that such agreements are much more effective when they include a clear description of the process to be followed. In this regard, we think the current draft could be strengthened and simplified, to facilitate its use by the project sponsor and consultants.

We look forward to working with you and the other parties involved to complete this review. Contact us at 651-259-3456 with questions or concerns.

Sincerely,



Dennis A. Gimmestad  
Government Programs & Compliance

cc: Tom McCulloch, ACHP  
Anne Ketz, The 106 Group

**Comment 48-04**

In September 2007, an additional "Site Assessment of Effects" study was conducted on the two NRHP listed or eligible properties in the vicinity of the East Range Site. As a result, the study determined that the two properties would not be adversely affected by the construction or operation of the proposed action (106 Group, 2007). The text has been updated to reflect the finding of no effect. If the East Range Site were to be selected for the Mesaba Generating Station, the Programmatic Agreement will address the additional actions to be taken to identify the potential for cultural resources at sites and along utility corridors that may be affected and procedures to be followed for avoiding or mitigating potential impacts.

**Comment 48-05**

The Table in Section 4.9.6 (Volume 1) has been updated based on the completion of all Cultural Resources surveys at the West Range and East Range Sites. Based on these surveys, no additional analysis is needed until one of the alternatives is selected. The Programmatic Agreement will address the additional actions to be taken to identify the potential for cultural resources at sites and along utility corridors that may be affected and procedures to be followed for avoiding or mitigating potential impacts at either site selected for the Mesaba Energy Project.

**Comment 48-06**

DOE is revising the Programmatic Agreement in consultation with the ACHP, SHPO, Native American tribes, MDOC, and the project proponent to address the concerns expressed in this comment. The text in Section 4.9.2.1 (Volume 1) has been revised to provide a description of the consultation process.

## Commenter 49 – James W. Sanders and Jeff J. Smith



United States  
Department of  
Agriculture

Forest  
Service

Superior  
National  
Forest

8901 Grand Ave. Place  
Duluth, MN 55808-1122  
Phone: (218) 626-4300  
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File Code: 2580-3  
Date: December 17, 2007

Richard Hargis, Jr.  
NEPA Document Manager, Office of Major  
Demonstration Projects  
National Energy Technology Laboratory, US  
Department of Energy  
PO Box 10940  
Pittsburgh, PA 15236-0940

Dear Mr. Hargis:

Please find below our review of the combined federal/state Draft Environmental Impact Statement (DEIS) for Excelsior Energy, Inc.'s (Excelsior), Mesabi Energy Project. The project is an integrated coal gasification combined cycle (IGCC) electric power generating station. The facility is proposed to be built in two phases; each phase would nominally generate 600 megawatts of electricity. The preferred location for the facility would place it near the town of Taconite in northeastern Minnesota. At this location, the facility would be 98 kilometers from the Boundary Waters Canoe Area Wilderness (BWCAW) and 188 kilometers from Rainbow Lake Wilderness (RLW). An alternative location near Hoyt Lakes would place the facility considerably closer to the BWCAW, only about 40 kilometers away.

In regards to the Department of Energy, the Proposed Action is to provide \$36 million in co-funding to the project under the Clean Coal Power Initiative (CCPI) Program. The DEIS states that \$22 million has already been made available to Excelsior. The goal of the CCPI program, as established by Congress, is to accelerate the commercial development of advanced coal-based technologies that can generate clean, reliable, and affordable electricity.

On the state side of the DEIS, the Proposed Action for the State of Minnesota is to approve, through the Public Utilities Commission (PUC), as supported by the Department of Commerce, the pre-construction joint permit application for the project. The mission of the PUC is to create and maintain a regulatory environment that ensures safe, reliable, and efficient utility services at fair and reasonable rates through, among other things, emphasizing energy resources that minimize damage to the environment.

As a Federal Land Manager (FLM), the Forest Service has an affirmative responsibility to protect the air quality related values of the Class I wilderness areas it administers, as specified in the Federal Clean Air Act. We also have the specific role on this project as a cooperating agency in providing technical expertise in the review of air quality impacts.

We have reviewed the sections of the DEIS relating to the air quality impacts from this project on the Forest Service Class I areas. As you know, an air emissions permit is also necessary for this project. It is through this process that our concerns are normally addressed, in cooperation



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## Responses

### Comment 49-01

The IGCC technology is considered to have a substantial overall advantage in emissions reductions when compared to existing conventional coal-fired power plants. Since BACT would be determined in subsequent negotiations between Excelsior and MPCA, DOE based the impacts on the emission profile based on BACT as proposed by Excelsior to the MPCA. DOE believes that this basis provides a reasonable upper bound to the potential impacts of the proposed action. In correspondence since publication of the Draft EIS, MPCA stated that *"We have since learned that the U.S. Environmental Protection Agency may disagree with our BACT analysis"* and, therefore, has decided to address the BACT determination as part of the MPCA's permitting process. Further, the MPCA agrees that the air permit for Phase I and Phase II of the Mesaba Energy Project must ensure the protection of Class I areas as required by 40 CFR 52.21(p). See new text in Section 4.3.1.2 regarding BACT analysis and the permitting process.

Because the air modeling for the Draft EIS was conducted in December 2005 using data available at the time, DOE revised Section 4.3 (Volume 1) and Appendix B (Volume 2) of the Final EIS to include results from updated air modeling. The revised air modeling analysis was conducted in light of comments on the Draft EIS to evaluate Mesaba Energy Project impacts on air quality and AQRVs in Class I areas near the West Range and East Range Sites, including the BWCAW, VNP, RLW, and IRNP (analyzed for East Range Site only). Additionally, the revised air modeling serves to inform the MPCA and the FLMs of the combination of emission controls that would be implemented for Phase I and Phase II of the Mesaba Energy Project (see Section 4.3.1.2 on scenarios modeled).

**Commenter 49 – James W. Sanders and Jeff J. Smith**


49-01

with the permitting agencies - the Minnesota Pollution Control Agency (MPCA), the Environmental Protection Agency (EPA), and other FLMs such as the National Park Service. The air permit process for this project is ongoing. While we are sure we will continue to work with our state and federal partners through the air permit process, we felt it necessary to submit comments on the DEIS due to our role as a cooperating agency and the need to clarify some information.

Our biggest concerns with this project are twofold. The first is that Excelsior is not proposing to include emission controls that can significantly reduce its emissions and that have been specified on other IGCC projects in the United States. The second is the modeled impacts to visibility in the BWCAW. We view the visibility impacts predicted from this project at either site as significant. We do not agree that the modeled impacts can be ignored due to weather conditions or other reasons. This is not in agreement with current FLM guidance. In our past experience, proponents of projects showing impacts at similar levels have worked with the MPCA to develop mitigation plans in an attempt to offset their impact. It has also been our past practice to not entertain mitigation proposals until the facility in question has reduced its emissions to the level of Best Available Control Technology (BACT). The FLMs do not agree that the emission rates in the current DEIS and air permit application represent BACT. It is clear from their letter of October 19, 2007, to Excelsior that the MPCA is of the same opinion on this issue. In past communications with Excelsior, we have strongly suggested that they consider reducing their emissions as a way to eliminate the modeled impacts and with this letter continue to do so.

Our technical comments are enclosed. If you have specific questions on these comments, please contact Trent Wickman of my staff at (218) 626-4372. We look forward to working with you in addressing the impacts from this project on our Wilderness areas.

Sincerely,

  
JAMES W. SANDERS  
Forest Supervisor

Enclosures (2)

cc: William Storm  
Marshall Cole  
Chris Nelson  
Don Shepherd  
Kenneth Westlake  
Jennifer Darrow,  
Bob Evans

**Responses****Comment 49-01 (cont'd)**

The modeling database was revised to include the following revisions, enhancements, and updates:

- The most recently EPA-approved "guideline" version of the CALMET/CALPUFF/CALPOST modeling system (version 5.8);
- Actual Canadian and NLCD1992 land cover data instead of the model default values;
- Recent comprehensive and more appropriate meteorological data period consistent with the database developed for other modeling analyses in the same modeling domain;
- Enhancement of meteorological data base with buoy data to provide better resolution of meteorological conditions over large expanses of open water (i.e., Lake Superior);
- Updated information regarding the height at which meteorological observations are taken;
- An expanded modeling domain;
- Added meteorological monitoring stations;
- Increased vertical resolution of fine modeling domains;
- Integrated meteorological data and hourly ozone data from the Voyageur CASTNET monitor;
- Integrated hourly ozone data from MPCA monitors in the BWCA and west of Duluth; and, where appropriate,
- The latest proposed regulatory guidance to supplement the modeling analyses.

In correspondence with the FLMs, Excelsior received concurrence on an updated modeling protocol (2009see Section 4.3.1.1 on the air modeling protocol since publication of the Draft EIS). The updated modeling included analysis of AQRV impacts using existing guidance prescribed under *The Federal Land Managers' Air Quality Related Values Workgroup (FLAG) Phase I Report (December 2000)*, also known as *FLAG 2000*, Method 2, as well as guidance referenced in the July 8, 2008 *Federal Register* notice (73 FR 39039). The proposed *FLAG 2008* guidance (otherwise referred to as Method 8) has been incorporated in the CALPOST postprocessor (see Section 4.3.1.4 for a discussion on the use of Method 8). Based on the accepted modeling protocol, new analyses provided in Section 4.3 (Volume 1) include a range of operating conditions on which modeling was conducted, some of which have been specified by DOE's cooperating agencies in comments on the Draft EIS. Also, additional cumulative air quality modeling was performed and is discussed in Section 5.2 (Volume 1) and Appendix D1.

**Commenter 49 – James W. Sanders and Jeff J. Smith**

Mr. Robert Evans II  
Vice President, Environmental Affairs  
Excelsior Energy  
11100 Wayzata Boulevard – Suite 305  
Minnetonka, MN 55305

RE: Best Available Control Technology Analysis for Combustion Turbine Sulfur Dioxide and Nitrogen Oxide Emissions

Dear Mr. Evans:

This letter responds to your June 11, 2007 letter regarding Best Available Control Technology (BACT) for the combustion turbines at Mesaba I and II. This letter is divided into two parts; the first part addresses the Sulfur Dioxide (SO<sub>2</sub>) BACT determination and the second part addresses the Nitrogen Oxide (NO<sub>x</sub>) BACT determination.

**I. Sulfur Dioxide BACT Determination**

Minnesota Pollution Control Agency (MPCA) staff reviewed information submitted by Excelsior Energy and determined Selexol is a cost-effective technology for SO<sub>2</sub> control for the proposed Mesaba I and II Integrated Gasification Combined Cycle (IGCC) power plant. This determination is based on the following information.

- a. Your June 11, 2007 letter (Exhibit I pages 1 - 3) compares the cost per ton of SO<sub>2</sub> removed for the proposed Mesaba I and II IGCC power plant, with the cost per ton of SO<sub>2</sub> removed for Pulverized Coal-fired (PC) boilers. This comparison of costs between an IGCC and a PC boiler plant is inappropriate because IGCC and PC boilers are two different technologies for coal-fueled electric power production. Comparing the cost of controls for a pollutant between these two technologies does not follow the procedure for determining BACT according to U.S. Environmental Protection Agency's (EPA) October 1990 New Source Review (NSR) Workshop Manual. ("NSR workshop manual" or "NSR manual").

Page B.13 of the NSR workshop manual states that EPA has generally not considered the BACT requirement as a means of changing the design of the emissions unit when considering control alternatives. For example, the MPCA would not normally consider a natural gas combined cycle turbine as a control alternative to the IGCC proposed by Excelsior, although the NSR workshop manual indicates that we have the discretion to do so. Nevertheless, the MPCA would certainly not consider a PC boiler as a BACT control alternative to the IGCC and the SO<sub>2</sub> control costs for a PC boiler are irrelevant in the evaluation of the control costs for the proposed IGCC power plant.

**Responses****Comment 49-02**

The comments in this letter are not comments on the Draft EIS. Rather, these are comments from MPCA to Excelsior regarding BACT. Excelsior has since responded to MPCA's comments – see Section 4.3.1.2 (Volume 1) for information on Excelsior and MPCA correspondence regarding BACT.

49-02

## Commenter 49 – James W. Sanders and Jeff J. Smith

## Responses

## Comment 49-03

See response to Comment 49-02 above.

Mr. Robert Evans II  
Page 2

49-02  
(cont'd)

- b. Excelsior's cost effectiveness determination for Selexol cleaning of the syngas Hydrogen Sulfide (H<sub>2</sub>S) content to 20 ppmv results in an average cost of \$7,663 per ton of SO<sub>2</sub> removed. This cost is well under the EPA cost-prohibitive threshold. Therefore, the MPCA determines that Selexol is a cost-effective control technology.

The MPCA therefore concludes Selexol is BACT for SO<sub>2</sub> at Mesaba Energy, and the BACT limit is approximately 0.010 lb/mmBtu (on a heat input to gasifier basis). This limit may be on a 30-day rolling average basis; however, short term limits may be necessary to protect the 1-hour, 3-hour, and 24-hour SO<sub>2</sub> ambient air quality standards.

## II. Nitrogen Oxides BACT Determination

### a. Technical Feasibility

MPCA staff do not agree with Excelsior Energy's determination that Selective Catalytic Reduction (SCR) is a technically infeasible control option for coal-based IGCC. Staff reviewed information submitted by Excelsior Energy as well as guidance in the NSR workshop manual and determined SCR is technically feasible for combustion turbine NO<sub>x</sub> control for the proposed Mesaba I and II IGCC power plant. This determination is based on the following information.

- i. Excelsior's June 11, 2007 Exhibit I (page 5) discussion titled "*The NSR manual supports classification of SCR as technically infeasible for coal-based IGCC*" states in part "*According to the NSR manual, the first of three standards under which a control technology must be considered technically feasible is due to a previous demonstration of its successful use on the type of source under review*". This statement is incorrect.

The NSR workshop manual (page B.17) states "*If the control technology has been installed and operated successfully on the type of source under review, it is demonstrated and it is technically feasible. For control technologies that are not demonstrated in the sense indicated above, the analysis is somewhat more involved.*"

*Two key concepts are important in determining whether an undemonstrated technology is feasible: "availability" and "applicability"...a technology is considered "available" if it can be obtained by the applicant through commercial channels or is otherwise available within the common sense meaning of the term. An available technology is "applicable" if it can reasonably be installed and operated on the source type under consideration. A technology that is available and applicable is technically feasible."*

It is clear the manual does not require a successful installation and operation of a control technology for the technology to be technically feasible. Although a successful application of the control technology to the source type under review would readily demonstrate the technology is technically feasible, it is not required to determine that a technology is feasible.

49-03

**Commenter 49 – James W. Sanders and Jeff J. Smith**

Mr. Robert Evans II  
 Page 3

**Responses**

**49-04**

ii. Exhibit I (page 6) discussion titled “*Technical feasibility of undemonstrated controls due to their availability and applicability*” misinterprets the context of the term *availability* as used in the NSR workshop manual technical feasibility analysis discussion. The NSR workshop manual (pages B.17 - B.18) discussion of availability is in the context of the control equipment technology (i.e. SCR) only, and not of the control equipment availability to the specific source type. SCR has been widely available for several decades, and therefore is considered an available control technology for this project.

**49-05**

iii. The NSR workshop manual (page B.18) states “*Technical judgment on the part of the applicant and the review authority is to be exercised in determining whether a control alternative is applicable to the source type under consideration. In general, a commercially available control option will be presumed applicable if it has been or is soon to be deployed (e.g., is specified in a permit) on the same or a similar source type.*” SCR has been specified in coal-based IGCC permits (most recently in June 2007 for the Christian County Generation in Taylorville, Illinois, Illinois EPA Permit No. 05040027), and is used for NO<sub>x</sub> control on many PC boilers.

**49-06**

iv. Absent a permit, technical feasibility can also be determined through examination of the physical and chemical characteristics of the pollutant-bearing gas stream and comparison to the gas stream characteristics of the source types to which the technology had been applied previously. Although syngas has a higher H<sub>2</sub>S content than natural gas combusted in SCR-controlled natural gas combined cycle power plants, SCR has been employed for the past decade on pulverized coal boilers. Similar concerns about the SCR application to coal-fired boilers also existed, but have been successfully resolved. A Heat Recovery Steam Generator (HRSG) is similar enough to a boiler that lessons learned from the application of SCR to pulverized coal-fired boilers can be applied to SCR for coal-based IGCC. The MPCA sees no evidence of why the SCR issues for coal-based IGCC can not be resolved. The need for physical modifications to the HRSG to make it compatible with coal-based IGCC do not make SCR technically infeasible. However, any additional costs for such modifications should be included in the economic impacts portion of the BACT analysis. The MPCA considers SCR to be applicable and available and, therefore, a technically feasible control technology for coal-based IGCC.

**49-07**

**b. Economic Feasibility**

The NSR workshop manual top-down BACT analysis method directs the reader to perform an economic feasibility determination for all controls that are technically feasible. Excelsior Energy needs to conduct the cost analysis for SCR control of NO<sub>x</sub> emissions and submit it to the MPCA to complete the BACT process for NO<sub>x</sub> control for the

**Comment 49-04**

See response to Comment 49-02 above.

**Comment 49-05**

See response to Comment 49-02 above.

**Comment 49-06**

See response to Comment 49-02 above.

**Comment 49-07**

See response to Comment 49-02 above.



**Commenter 49 – James W. Sanders and Jeff J. Smith**

Mr. Robert Evans II  
Page 4

**49-07  
(cont'd)**

combustion turbines. Submittal of a cost effectiveness matrix using variables such as an improved ammonia injection grid for reduced ammonia slip, and maintaining HRSG temperature at various levels above the ammonium bisulfate dew point would be appropriate. Excelsior may also consider contacting other entities that have applied for or obtained permits for coal-based IGCC with SCR, to inquire about SCR costs.

**49-08**

Finally, the NSR workshop manual (page B.74) states *"While it is not the intention of BACT to prevent construction, it is possible that local or regional air quality management concerns regarding the need to minimize the air quality impacts of new sources would lead the permitting authority to require a source to either achieve stringent emission control levels or, at a minimum, that control cost expenditures meet certain cost levels without consideration of the resultant economic impact to the source."* SO<sub>2</sub> and NO<sub>x</sub> are visibility impairing pollutants and due to the proposed location of Mesaba II and II, it could be determined that higher BACT control costs for these pollutants are warranted.

**49-09**

In closing, MPCA staff have determined that Selexol is a cost effective method for SO<sub>2</sub> emissions control for coal-based IGCC, and SCR is a technically feasible control option for coal-based IGCC, and a BACT limit can be set. To complete the NO<sub>x</sub> emissions BACT analysis, please submit a cost analysis for SCR control of combustion turbine NO<sub>x</sub> emissions at your earliest convenience. If you have any questions, please contact Marshall Cole at 507-280-2992 or at marshall.cole@pca.state.mn.us.

Sincerely,

Jeff J. Smith, Manager  
Air Quality Permit Section  
Industrial Division

JJS/MC:lao

cc: Trent Wickman, NPS  
Don Shephard, NPS  
J. David Thornton, MPCA  
Bob Beresford, MPCA, Duluth  
Rich Sandberg, MPCA  
Don Smith, MPCA  
Steve Pak, MPCA  
Anne Jackson, MPCA  
Marshall Cole, MPCA, Rochester  
AQ File No. 4274

**Responses****Comment 49-08**

See response to Comment 49-02 above.

**Comment 49-09**

The visibility impacts were remodeled using emissions rates that are more stringent and incorporate control devices, as discussed in response to Comment 49-01. The results of these remodeling are presented in Section 4.3 (Volume 1) of the Final EIS.

**Commenter 49 – James W. Sanders and Jeff J. Smith****Technical Comments on the Class I Air Quality Material in the Mesaba Energy DEIS**

- 49-10** | Page 3.3-11: We do not view the purchase of acid rain allowances by affected units in amounts required by the Acid Rain program as mitigation. These purchases are already required by the Clean Air Act to satisfy the goals of the Acid Rain Program.
- 49-11** | Page 4.3-14: While a number of other approaches are presented, Method 2 is the currently applicable method for visibility analyses per the FLM interagency guidance document for conducting air quality related value analyses, *Federal Land Managers' Air Quality Related Values Workgroup (FLAG) Phase I Report (December 2000)*. Although characterized as "small" in the DEIS, we see 31 days in three years over a 10% change in visibility as an impact that, if included in the final permit and EIS for this facility without other mitigation, would likely be declared adverse.
- 49-12** | Page 5.2-3: We do not understand the basis for the emission rates used for the facilities in the table. While they may be appropriate for an increment analysis, having no emissions of sulfur dioxide and/or nitrogen oxides from utilities and taconite plants does not fit the intent of a visibility analysis. Since the emission inventory is the basis for the cumulative analysis, it is hard to draw any conclusions from it - especially with regard to visibility. The assessment of cumulative visibility impacts are probably best dealt with through the regional haze program and plan being developed by the State of Minnesota.
- 49-13** | In regards to increment, Minnesota Steel conducted a PM<sub>10</sub>-24-hour Class I cumulative increment analysis for their recent air permit application and determined the cumulative increase to be 7.0 ug/m<sup>3</sup>. The identical analysis for this project showed an increase of about 2.1 ug/m<sup>3</sup>. It is important that this sizeable difference be explained.
- 49-14** | Page 5.3-16: The MPCA, in consultation with the EPA, will determine BACT for the facility. Although Excelsior may maintain that the current design of its facility represents BACT, the agency with the authority to decide this issue currently does not (see the attached letter from the MPCA dated October 19, 2007). In this letter the MPCA concludes that Selexol is BACT for sulfur dioxide (see top of page 2). The agency also concludes that selective catalytic reduction (SCR) is technically feasible for nitrogen oxides and requests more information to make its determination of economic feasibility and thereby also its final BACT determination. As such we recommend that DOE modify the discussion in the DEIS to more accurately reflect what the deciding agency has determined for BACT.
- 49-15** | Lastly we are very interested in seeing a model run which shows the visibility impacts of the facility after the installation of Selexol and SCR.

**Responses****Comment 49-10**

DOE recognizes that the FLMs do not consider the purchase of acid rain allowances by affected units to be mitigation of impacts from the Mesaba Energy Project. Text has been revised in Section 4.3.2.6 (Volume 1) of the Final EIS to reflect the FLMs' position. However, the Acid Rain Program was established as a system of marketable allowances to control emissions that contribute to the formation of acid rain. The program is inherently a mitigation tool in that the marketable allowances help limit the amount of SO<sub>2</sub> and NO<sub>x</sub> that can be produced by any one facility; thereby mitigating regional effects. Trading allowances between facilities allow facilities to benefit from each other and stay in compliance while they continue to operate. Allowances not only can be traded, but they can also be banked and used in the future.

**Comment 49-11**

DOE understands that the FLMs have the authority to determine the appropriate methodology for determining visibility impacts and that, pending approval of revisions deemed appropriate by and presented on behalf of the FLMs at 73 FR 39039 (i.e., Method 8), Method 2 is the currently applicable method accepted by the FLMs. See also response to Comment 49-01 and new text in Section 4.3.1.4 regarding Method 8.

Section 4.3 (Volume 1) and Appendix B (Volume 2) of the EIS have been updated to provide the results (of both Method 2 and Method 8) of the revised air modeling as well as clarification on the two visibility methodologies. See Section 4.3.1.4 for a discussion on the Class I area modeling approach.

DOE included visibility impacts based on these other approaches in an effort to present a more thorough understanding of the potential impacts.

**Comment 49-12**

The cumulative air impacts analysis in Section 5.2.2 (Volume 1) has been updated and includes new text on cumulative impacts on visibility. Based on the comment, the cumulative impact analysis on visibility in Class I areas has been evaluated in conjunction with the draft state implementation plan (SIP), which is discussed in Section 5.2.2.2 (Volume 1). (The impacts of the Mesaba Generating Station on visibility in Class I areas are presented in the sub-section *Class I Visibility/Regional Haze Analysis* under Section 4.3.2.5 [Volume 1] and mitigation of such impacts are discussed in Section 5.3.2.2 [Volume 1].)

**Comment 49-13**

Explanations for the larger predicted 24-hr PM<sub>10</sub> Class I increment consumption indicated in MSI's analysis (i.e., 2.7 to 7.0 µg/m<sup>3</sup>) versus the Mesaba Energy Project's analysis (i.e., 1.1 to 2.2 µg/m<sup>3</sup>, or 1.2 to 2.4 µg/m<sup>3</sup> based on the updated modeling in the Final EIS) include the following:

- Mesaba's consideration of increment-expanding decreases in PM<sub>10</sub> emissions that are projected for Minnesota Power's Clay Boswell Unit 3 and Taconite Harbor Energy Center, and the permanent closure of some other increment-consuming sources.
- Differences in increment consuming emission rates that were included in the model analyses. In general, MSI's inventory did not differentiate between PSD baseline and increment consuming emission units at a stationary source, i.e., if a stationary source contained one increment consuming point source, all point sources at the stationary source were considered to be increment-consuming and were included in MSI's PSD increment modeling studies. The inventory used in the Mesaba Energy Project's increment modeling studies only included those point sources known to be increment-consuming; baseline sources were excluded. Therefore, the modeled impacts on the PM<sub>10</sub> increment would be overstated in MSI's studies relative to the impacts predicted in the Mesaba Energy Project's modeling studies.

However, it can be noted that the Mesaba analysis of cumulative total PM<sub>10</sub> impacts (Draft EIS Table 5.2.2-3) indicates impacts of 5.5 to 8.3 µg/m<sup>3</sup>, considerably larger than the increment impacts (Draft EIS Table 5.2.2-2).

**Comment 49-14**

The visibility impacts were remodeled using emissions rates that are more stringent and incorporate control devices such as selective catalytic reduction and Selexol for NO<sub>x</sub> and SO<sub>2</sub>, respectively. The results of this remodeling are presented in Section 4.3 (Volume 1) of the Final EIS. See response to Comment 49-01, which addresses the same concerns.

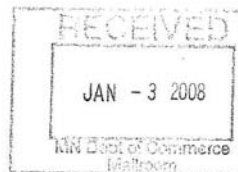
**Comment 49-15**

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

## Commenter 50 – Cody Ekholm

Cody Ekholm  
16413 County Road 8  
Nashwauk, MN 55769  
(218)-885-2734  
December 17, 2007

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



Dear Bill Storm:

I am a student at Itasca Community College studying environmental science. I live by Nashwauk, and I would be affected by this plant if it goes in. Hopefully I can give you some valuable insight to the people who are deciding if they should go ahead for this project.

I am for this project because it will help boost the local economy significantly. It will open up many jobs in an area that is slowly dying. It will also help with the steadily rising pit by Bovey. I also know of the environmental concerns with this plant. Excelsior Energy estimates that 90% of the Mercury will be removed prior to discharging the waste, but it will also most likely contain amounts of selenium, cyanide, and arsenic. They could pollute many lakes and rivers in this area.

Overall, I am still for this plant though. I just think there should be tougher penalties for breaking the permit violations on the discharged waste. This could help keep the levels of pollutants down significantly.

Sincerely,

Cody Ekholm

## Responses

### Comment 50-01

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

50-01

**Commenter 51 – Joseph Troumbly**

Joseph Troumbly  
500 Ne 8<sup>th</sup> ST  
Grand Rapids, MN 55744  
12-17-2007  
Re: Mesabi Project

CERTIFIED MAIL  
PERSONAL

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

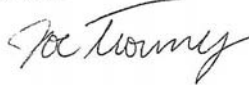
Attention Bill Storm

Dear Bill Storm

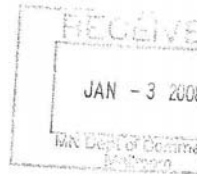
Citizen Concerns

I am a writing regarding concerns as a life time citizen of Itasca County. I have studied and read the DEIS on the Mesabi Project and I have information regarding my concerns. There are some strong positives for this project although the negatives out weight them. This is the right project for the wrong area. There is not adequate pollution control methods planned. The power is not need in the immediate area there for a large amount of reforestation will occur in order to transport the power. Last, the soil type in the area is not the type that can adequately be used for the pollution control processes that are necessary. Please look further into these concerns before reaching any decision. Thank you for your time.

Sincerely,



Joseph Troumbly



**Responses**

**Comment 51-01**

The Final EIS describes pollution control equipment for the Mesaba Energy Project in Section 2.2.1.3 and describes discharges and emissions in Section 2.2.3 (Volume 1). Section 4.3 (Volume 1) describes the impacts on air quality, and Section 4.8 (Volume 1) describes impacts on vegetation and wildlife habitat. Section 5.1.2 (Volume 1) describes the carbon capture and sequestration scenarios that may be implemented during future commercial operations based on future greenhouse gas regulations or incentives.

51-01

## Responses

### Comment 52-01

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

### Commenter 52 – Mary Anderson

>>> "Mary Anderson" <[kostoryz@gmail.com](mailto:kostoryz@gmail.com)> 1/7/2008 4:03 PM >>>  
I am in favor of the Mesabi Energy Project. Our economy is devastated up here and we desperately need good paying jobs and the boom that large scale industrial projects is likely to produce. Other industries and likely to consider our area if they believe they have a chance to move in. The Blandin Paper Mill may choose to shut down instead of building the approved new paper machine if this and other projects do not go through. I don't want us to go back to the days of indiscriminate pollution of our rivers, lakes and forests but neither do I think that a minority group of environmental "fanatics?" should decide what kind of life and standard of living they should have over the needs of all.

52-01

**Commenter 53 – Ron Gustafson and Linda Castagneri**

January 8, 2008

Richard A. Hargis  
 U.S. DOE/NETL  
 PO BOX 10940  
 Pittsburgh, PA 15236-0940

Subject: Comments and Questions – DOE Draft EIS for the Mesaba Energy Project (DOE/EIS-0382D)

I am requesting the following comments and questions be included in the record regarding the draft EIS for the proposed IGCC demonstration plant to be sited in Taconite Minnesota.

**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."*

**53-01**

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.

*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*

**53-02**

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**

**53-03**

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

**Responses**

**Comment 53-01**

The DOE Cooperative Agreement calls for a 1-year operational demonstration period under the CCPI Program. MEP-I, LLC, a project company of Excelsior Energy, would be responsible for developing a demonstration test plan, prior to the operational demonstration period, executing the test plan, and providing formal reporting of progress relative to executing the demonstration test plan to DOE. DOE would be responsible for review and approval of the demonstration test plan to ensure that the demonstration test program is adequate for evaluating performance against programmatic success criteria, and for monitoring the Recipient's progress relative to the demonstration test plan. There is no quantitative measure for the volume of natural gas that would constitute a threshold for determining project success. It is expected—and is not outside the realm of normal commercial practice—that natural gas would be considered and used for plant processes outside of continual operations; specifically, initial plant start-up, restart following downtime for routine maintenance, or as a result of process upsets. Otherwise, the gasification process is expected to produce syngas from coal as the principal fuel. DOE programmatic objectives include demonstrating the commercial readiness of clean coal technologies. This does not preclude the consideration of accepted commercial practices such as availability of an alternative/back-up fuel for the purposes identified above. Therefore, use of natural gas solely for the purposes identified above will not in of themselves result in an unsuccessful demonstration. The Cooperative Agreement does stipulate that DOE will not share in the acquisition costs of any fuel other than coal, unless prior written approval is obtained from the DOE Contracting Officer. The Recipient is required to provide information to DOE that supports all costs submitted for DOE cost-sharing. DOE also reserves the right to have the Recipient's costs audited by DCAA.

**Comment 53-02**

A quantitative assessment of the impact to rate payers in the event the demonstration is unsuccessful would depend on factors that are as yet undetermined. The Minnesota Public Utilities Commission has not approved any power purchase agreement or agreements, which would contain provisions that would determine the impact to rate payers. An unsuccessful demonstration could result in one of multiple possible outcomes, including long-term commercial operation using a fuel other than coal, application of lessons learned from an unsuccessful demonstration leading to the subsequent long-term commercial operation using coal as the primary fuel, or failure to operate the plant on a commercial basis.

## Responses

### Comment 53-02 (cont'd)

Similarly, the impact to a potential Federal loan guarantee, if awarded to the Mesaba Energy Project, cannot be quantitatively determined as the terms and conditions of any potential guarantee have not yet been negotiated. Should a decision be made to go forward with a guarantee and should the project be unsuccessful, possible outcomes could include but would not necessarily be limited to sale of the plant to another entity that would go on to operate it as a commercially viable electric power generating plant, or sale of the plant property, systems and equipment for scrap-value.

### Comment 53-03

Section 4.16.2.2 (Volume 1) addresses potential landfills in the project area. A specific sanitary landfill for unmarketable sulfur or slag has not been contracted to accept these non-hazardous wastes if there is not a market for their reuse. One or more permitted sanitary landfills would be used that would be engineered with regulatory safeguards (liner, leachate collection system, and groundwater monitoring) to accept this waste. The long-range impact to the life of the landfill(s) and associated costs are not predictable at this time because Excelsior expects to find markets for these byproducts as explained in Sections 2.2.3.3 and 2.3.3.4 (Volume 1). See further responses to Comments 102-05 and 102-10.

### Comment 53-04

See responses to Comments 4-01 and 4-03, which address the same concerns. As stated in Section 2.2.1.3 (Volume 1) of the Final EIS (under Potential Carbon Capture Retrofit), CCS options presented in the EIS are based on a potential future requirement to reduce CO<sub>2</sub> emissions from the Mesaba Energy Project, along with potential financial incentives such as carbon removal credits traded in a "carbon market" that would limit the cost of CCS passed on to utility customers. CO<sub>2</sub> emissions are not currently limited under the CAA, and a viable carbon market has not been established in the U.S. Therefore, as stated in Appendix A2 (Volume 2), the effect of CCS on the cost of electricity from the Mesaba Energy Project has not been quantified. Assuming that legislation restricting carbon emissions would eventually be passed by the U.S. Congress and signed into law, the real costs associated with CO<sub>2</sub> emissions and required reductions would be determinable at that time. Under the standards established by 40 CFR 1502.22 of the CEQ NEPA regulations, the EIS has addressed "reasonably foreseeable" impacts from CO<sub>2</sub> emissions and CCS to the extent practicable without resorting to unwarranted conjecture.

## Commenter 53 – Ron Gustafson and Linda Castagneri

### 53-03 (cont'd)

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

*"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.

	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"*

### 53-04

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

*"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."



## Responses

### Comment 53-05

BMPs referenced in Table 5.1-2 (Volume 1) generally include standard practices required by state and Federal regulations and local ordinances for construction projects. Such standard BMPs would include the use of silt fencing to reduce soil erosion and sedimentation affecting surface waters, wetlands, and biological habitats; collection and appropriate treatment and disposal of contaminated condensate water; retention of stormwater runoff to reduce sediment loadings to surface waters in compliance with National Pollutant Discharge Elimination System (NPDES) permits; and the use of appropriate well casings, well seals, and grouting to protect groundwater resources in the development and use of CO<sub>2</sub> injection wells. Such BMPs were developed in response to requirements of the Clean Water Act, the Safe Drinking Water Act, and other Federal laws and have been widely utilized effectively in construction projects throughout the U.S. It should also be noted that as stated in Section 5.1.2 (Volume 1) of the Final EIS: “It is expected that if CO<sub>2</sub> capture and storage were implemented at some time in the future, a more detailed analysis would be conducted, including detailed design and engineering, environmental and geotechnical studies, and permitting necessary to comply with appropriate laws and regulations.”

### Commenter 53 – Ron Gustafson and Linda Castagneri

The DOE analysis concluded:

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

*“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.***

***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:

***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/sequestration 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.***

53-04  
(cont'd)

53-05

## Responses

### Comment 53-06

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

### Comment 53-07

The use of an enhanced ZLD system at the West Range Site would eliminate discharges of process water and cooling tower blowdown and negate the concerns noted in the comment. See responses to Comments 6-01 and 7-02, which address the same concerns. See Section 4.5 (Volume 1), *Surface Water Resources*, which has been revised to reflect use of the enhanced ZLD system.

## Commenter 53 – Ron Gustafson and Linda Castagneri

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?

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?***

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?

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

53-05  
(cont'd)

53-06

53-07

## Responses

### Comment 53-08

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

See response to Comment 41-01, which addresses the concerns regarding economic impacts.

The construction and operation of the proposed project would cause the elimination of a small fraction of the total habitat in the vicinity of either the West Range Site or the East Range Site. Comparable habitat types are abundant within the region; therefore impacts to game species would be expected to be small considering their high mobility and ample habitat. Please refer to Sections 4.8, Biological Resources; and 5.2.6, Cumulative Impacts – Wildlife Habitat (Volume 1), of the Final EIS.

### Commenter 53 – Ron Gustafson and Linda Castagneri

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 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?

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

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.

53-07  
(cont'd)

53-08

## Responses

### Comment 53-09

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

### Commenter 53 – Ron Gustafson and Linda Castagneri

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 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.

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 100<sup>th</sup> 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.*

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.***

53-08  
(cont'd)

53-09

**Commenter 53 – Ron Gustafson and Linda Castagneri**

Why would the DOE even entertain these types of comments by a private developer in 2007? What person, by title and position deemed these comments acceptable at the DOE and the State of Minnesota?

**53-09  
(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?

**53-10**

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

**53-11**

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. I request that the health issues be reviewed.

**Responses**

**Comment 53-10**

See response to Comment 38-03, which addresses the same concerns on noise and dust impacts to residential receptors from the rail transport of coal.

With respect to traffic delays at rail crossings, the potential impacts to emergency responders are discussed in Sections 4.13.2.2 and 4.13.3.2 (under subsections *Emergency Response*) and Section 5.2.7.1 (Volume 1). Under Minnesota law, train crossing times are limited to a maximum of 10 minutes (Minnesota Statute 219.383, Subd.3). The EIS estimated that the time for a train to cross a road intersection would be 9 minutes, which is considered a conservative estimate as it assumes the train's speed would be 10 mph. Even under this worst-case scenario, the potential train crossing time falls under the state limit. Therefore, a comprehensive study is not considered necessary. However, DOE recognizes that although the delay times would be below the state limit there could be negative effects on road traffic, as described in Sections 4.13.3.2 and 5.2.7.1 (Volume 1).

**Comment 53-11**

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

## Responses

### Comment 53-12

See response to Comment 4-04, which addresses the same concern.

### Comment 53-13

See response to Comment 4-04, which addresses the same concern. The Emergency Response Plan required for the Mesaba Energy Project would identify the requirements for personnel, training, and equipment for first response at the plant. The first responder capabilities at the plant would be maintained through revenues generated by the project. Potential additional requirements for emergency response by local jurisdictions would be identified in the Emergency Response Plan. The costs associated with additional personnel, training, and equipment for local and regional emergency response agencies would be the responsibilities of the respective jurisdictions.

## Commenter 53 – Ron Gustafson and Linda Castagneri

53-11  
 (cont'd)

What person or persons by name, title, and experience determined that these risks would not be addressed? What was the specific basis for non review of the health risks? What were the individuals' background and expertise to determine these reviews are not necessary? It is a matter of public record that the Department of Health for the State of Minnesota withheld pertinent information about the impact on the miners and their respiratory health. How do we know that is not occurring here as well?

### Emergency Response

53-12

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. What person, by title, name and expertise determined that since there hasn't been a problem in the past, there won't be one in the future?

53-13

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.

Ron Gustafson  
 Linda Castagneri  
 808 Berry Street Apt 406  
 St. Paul MN 55114-1384

Responses

**Comment 54-01**  
See response to Comment 1-01, which addresses the same concern.

**Commenter 54 – Jim and Tracy Weseloh**

>>> "Jim & Tracy Weseloh" <[westj@mchsi.com](mailto:westj@mchsi.com)> 1/8/2008 9:50 AM >>>

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

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

54-01 | There's no such thing as "clean" or "efficient" coal! Please add my support to CAMP. Thank you. Trace

## Commenter 55 – Christopher W. Harm



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEANIC SERVICE  
National Geodetic Survey  
Silver Spring, Maryland 20910-3282

January 4, 2008

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

Dear Mr. Hargis,

We have provided comments on the DEIS regarding the Mesaba Energy Project, Proposal to Design, Construct, and Operate a Coal-Based Integrated Gasification Cycle Electric Power Generating Facility, Located in the Taconite Tax Relief Area, Itasca & St Louis Counties, MN (20070471).

The DEIS has been reviewed within the areas of the National Oceanic and Atmospheric Administration, National Geodetic Survey's (NGS) geodetic responsibility, expertise, and in terms of the impact of the proposed actions on NGS activities and projects.

If there are any planned activities which will disturb or destroy geodetic control monuments, NGS requires notification not less than 90 days in advance of such activities in order to plan for their relocation. NGS recommends that funding for this project includes the cost of any required relocation(s).

All available geodetic control information about horizontal and vertical geodetic control monuments in the subject area is contained on the homepage of NGS at the following Internet address: <http://www.ngs.noaa.gov>. After entering this website, please access the topic "Products and Services" then "Data Sheet." This menu item will allow you to directly access geodetic control monument information from the NGS database for the subject area project. This information should be reviewed for identifying the location and designation of any geodetic control monuments that may be affected by the proposed project.

We hope our comments will assist you. Thank you for giving NGS the opportunity to review your DEIS.

Sincerely,

Christopher W. Harm  
Program Analyst  
NOAA's National Geodetic Survey  
Office of the Director  
1315 East-West Highway  
SSMC3 8729, NOAA, N/NGS  
Silver Spring, Maryland 20910



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## Responses

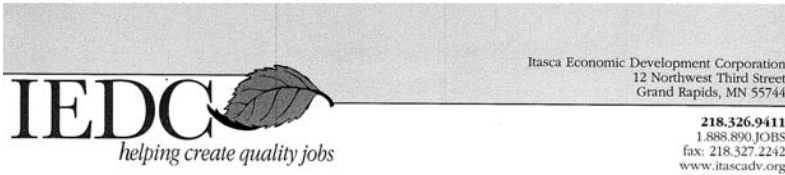
### Comment 55-01

New text was added to Section 4.4.2.1 (Volume 1) stating that DOE would require the project proponent, prior to construction, to review the locations of geodetic markers on the NGS website and notify the NGS 90 days in advance of any markers being disturbed by construction procedures.

55-01



**Commenter 56 – Mike Ives and Peter McDermott**



January 8, 2008

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

Re: U.S. Department of Energy's Draft Environment Impact Statement  
Mesaba Energy Project proposed by Excelsior Energy  
DOE/EIS-0382D

Dear Mr. Hargis

Thank you for this opportunity to comment on the above referenced document. The process to complete an Environment Impact Statement is a huge undertaking and our empathy goes out to you and all those involved.

Based on a review of the document, the public process, public input, state and federal agency involvement we believe the Draft EIS adequately and completely discloses information about the project's significant impacts and adequately and completely describes mitigation as prescribed in the Environmental Impact Statement Scoping Decision. Without qualifying that statement we do offer the following comments for your consideration in finalizing the EIS.

Itasca Economic Development Corporation (IEDC) has participated from the beginning of this process since the first public meetings. Please note our organization's legal name has changed from Itasca Development Corporation in 2006 which is referenced on page 3.11-8. IEDC is the economic development organization in the Itasca County area and works with many other organizations to improve quality of life for all residents. IEDC's main emphasis is on the economic well being of area residents. As such our comments are primarily on the Socio-Economic impact of the Mesaba Energy Project.

Section 3.11.3.2 West Range Site and Corridors – This section should note that Itasca County is a federally designated HUB Zone because of the high unemployment rate and low wages. The Federal Government contracting office gives preferential treatment in awarding contracts to projects located in a HUB Zone which would favor locating the Mesaba Project in Itasca County.

Section 3.11.4.2 West Range Site and Corridors – This section references key businesses in Itasca County including UPM Blandin Paper Mill in Grand Rapids and Ainsworth Grand Rapids OSB Plant. This section should also note that in early 2003 UPM Blandin permanently shut down two paper machine lines and reduced its workforce from 800 to 500 with 300 jobs eliminated. Further, the Ainsworth Grand Rapids OSB Plant was shut down in September of 2006 with the layoff of 135 employees. This plant remains shut down today.

**Responses**

**Comment 56-01**

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

**Comment 56-02**

The reference to Itasca Development Corporation in the Final EIS has been changed to Itasca Economic Development Corporation.

**Comment 56-03**

Section 3.11.3.2 (Volume 1) of the Final EIS has been revised to indicate that Itasca County is a Federally designated HUB Zone and thereby receives preferential treatment.

**Comment 56-04**

Section 3.11.4.2 (Volume 1) of the Final EIS has been revised to indicate these employment losses in Itasca County since 2000.

56-01

56-02

56-03

56-04

## Commenter 56 – Mike Ives and Peter McDermott


56-05

There are a number of potential large capital projects proposed in northern Minnesota that will require power in the future and this local project will add significant base load electricity. The Mesaba Energy Project will produce electricity from state-of-the-art technology on Minnesota's Iron Range. Basic industries requiring significant amounts of electricity have been the foundation of our local economy for a hundred years. In September 2007 Minnesota Steel completed its permitting process and that facility will have a demand for approximately 450 megawatts of electricity. The economic and environmental benefits of locating a long term producer of electricity on Minnesota's Iron Range, where several large capital projects are proposed or under construction, should be highlighted in the EIS.

56-06

We at IEDC are advocates for jobs and quality employment opportunities, but not by disregarding other factors of the quality of life. We rely on environmental advocates, the general public and finally governmental bodies to provide the necessary feedback, investigation and permitting to determine whether the Mesaba Energy Project is good for our area.

Thank you for your consideration.

Sincerely,  
  
Mike Ives  
Chairman of the Board

  
Peter McDermott  
President

## Responses

### Comment 56-05

The Minnesota Steel Industries project was included in the cumulative impacts analysis for the Mesaba Energy Project. That project is also a factor in Excelsior's preference for the West Range Site.

### Comment 56-06

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

**Commenter 57 – Michael T. Chezik**

**Responses**



**United States Department of the Interior**

OFFICE OF THE SECRETARY  
Office of Environmental Policy and Compliance  
Custom House, Room 244  
200 Chestnut Street  
Philadelphia, Pennsylvania 19106-2904



January 8, 2008

ER 07/958

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

Dear Mr. Hargis, Jr.:

The Department of the Interior (Department) has reviewed the November 2007 Draft Environmental Impact Statement (DEIS) for the Mesaba Energy Project, Itasca and St. Louis Counties, Minnesota.

The EIS describes the potential environmental consequences of the U.S. Department of Energy's (DOE's) proposed action to provide a total of \$36 million in co-funding, through a financial assistance cooperative agreement, for the design and one-year operational demonstration of a coal-based, Integrated Gasification Combined Cycle (IGCC) electric generating facility on the Iron Range of northern Minnesota. The facility would be demonstrated through a cooperative agreement between DOE and Excelsior Energy Inc. (Excelsior) under the Clean Coal Power Initiative (CCPI) program. The goal of the CCPI program, as established by Congress, is to accelerate the commercial development of advanced coal-based technologies that can generate clean, reliable, and affordable electricity. The DEIS states that \$22 million has already been made available to Excelsior. The facility is proposed to be built in two phases; each phase would nominally generate 606 megawatts of electricity. Although DOE's proposed action would be applicable to only the first phase, the EIS considers the combined impacts of both phases as connected actions.

Because the proposed facility is considered a Large Electric Power Generating Plant, the Project is subject to the Minnesota Power Plant Siting Act (MPPSA), which requires the preparation of a state-equivalent EIS. The EIS requirements under NEPA and MPPSA are substantially similar, DOE prepared this draft EIS in cooperation with the Minnesota Department of Commerce to fulfill the requirements of both laws. The Proposed Action for the State of Minnesota is to approve, through the Public Utilities Commission (PUC), as supported by the Department of Commerce, the preconstruction joint permit application for the project. The mission of the PUC is to create and maintain a regulatory environment that ensures safe, reliable, and efficient utility

**Responses****Comment 57-01**

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

**Commenter 57 – Michael T. Chezik**

services at fair and reasonable rates through, among other things, emphasizing energy resources that minimize damage to the environment.

State rules established for the MPPSA require the applicant for a site permit to identify at least two sites for the power plant—a preferred site and an alternative site. Excelsior identified the West Range site (Taconite, Itasca County, Minnesota) as its preferred site and the East Range site (Hoyt Lakes, St. Louis County, Minnesota) as its alternative site. The Department offers the following comments and recommendations for your consideration.

**AIR QUALITY – GENERAL COMMENTS**

The location preferred by Excelsior for the facility would place it near the town of Taconite in northeastern Minnesota. At this location, the facility would be 139 kilometers from Voyageurs National Park (NP) and 346 kilometers from Isle Royale NP, both of which are Class I wilderness areas administered by the National Park Service (NPS).

As the Federal Land Manager (FLM), representing the Department, the NPS has an affirmative responsibility to protect the air quality-related values of the Class I wilderness areas it administers, as specified in the Federal Clean Air Act. The NPS also has a specific role on this project in providing technical expertise in the review of air quality impacts.

As the DOE is aware, an air emissions permit is necessary for this project. It is through this process that the NPS's concerns are normally addressed, in cooperation with the permitting Agencies - the Minnesota Pollution Control Agency (MPCA) and the Environmental Protection Agency (EPA) - and other FLMs, such as the U.S. Forest Service. The air permit process for this project is ongoing. While the NPS will continue to work with its State and Federal partners through the air permit process, the NPS also reviewed the sections of the DEIS relating to the air quality impacts from this project on the NPS Class I areas and determined that it is important to comment on the DEIS.

The Department has two major concerns about potential project impacts on air quality. The first is that Excelsior is not proposing to include emission controls that may significantly reduce emissions and which have been specified on other IGCC projects in the United States. The second concerns the modeled impacts to visibility in Voyageurs NP. We view the visibility impacts predicted from this project at either site as significant. We do not agree that the modeled impacts can be ignored due to weather conditions or other reasons. Such an approach is not in agreement with current FLM guidance. In the NPS experience, proponents of projects showing impacts at levels similar to those modeled for the Mesaba project have worked with the MPCA to develop mitigation plans in an attempt to offset impacts. In addition, the NPS typically does not entertain mitigation proposals until the facility in question has reduced its emissions to the level of Best Available Control Technology (BACT). The FLMs do not agree that the emission rates shown in the current DEIS and air permit application represent BACT. It is clear from their October 19 letter to Excelsior that the MPCA is of the same opinion on this issue. In past communications with Excelsior, the NPS has strongly suggested that Excelsior consider reducing their emissions as a way to eliminate the modeled impacts. With this letter, the Department and the NPS continue to advocate that position.

## Commenter 57 – Michael T. Chezick

### AIR QUALITY - SPECIFIC COMMENTS

57-02

DEIS Page 3.3-11: The purchase of acid rain allowances by affected units in amounts required by the Acid Rain Program is not mitigation. These purchases are already required by the Clean Air Act to satisfy the goals of the Acid Rain Program.

57-03

DEIS Page 4.3-14: While a number of other approaches are presented, Method 2 is the currently applicable method for visibility analyses per the FLM interagency guidance document for conducting air quality related value analyses, *Federal Land Managers' Air Quality Related Values Workgroup (FLAG) Phase I Report (December 2000)*. Although characterized as “small” in the DEIS, we see 9 to 18 days<sup>1</sup> in 3 years over a 10 percent change in visibility as an impact that, if included in the final permit and EIS for this facility without other mitigation, would likely be declared adverse. As such, we do not place much value on the alternate analyses presented (i.e., Method 6)<sup>2</sup> which also predicted significant impacts to visibility at Voyageurs NP.

57-04

DEIS Page 4.3-22: Mesaba’s contribution to sulfur deposition at Voyageurs NP is predicted to exceed the NPS Deposition Analysis Threshold (DAT) for 2 of the 3 years modeled.<sup>3</sup> We view a contribution to sulfur deposition that is 11 percent above the DAT as something more serious than “slight.” The DOE appears to have taken it upon itself to determine what is and is not an adverse impact.<sup>4</sup> It is our understanding this is a prerogative reserved to the FLM by the Clean Air Act.

57-05

DEIS Page 5.2-3: Regarding the cumulative analysis, we do not understand the basis of the emission rates used for the facilities. While they may be appropriate for an increment analysis, it is inappropriate to not include emissions of sulfur dioxide and/or nitrogen oxides from existing utilities and taconite plants in the visibility analysis. Since the emission inventory is the basis for the cumulative analysis, it is hard to draw any conclusions from it, especially with regard to visibility. The assessment of cumulative visibility impacts is probably best dealt with through the regional haze program and plan being developed by the State of Minnesota. Please note that for their recent air permit application, Minnesota Steel conducted a PM<sub>10</sub>, 24-hour Class I cumulative increment analysis (an analysis of airborne particulate matter with particles less than 10 micrometers in diameter) and determined the cumulative increase to be 7.0 microgram per cubic meter (µg/m<sup>3</sup>). A similar analysis for the proposed Mesaba project shows an increase of about 2.1 µg/m<sup>3</sup>. The final EIS should provide an explanation and thorough discussion of the large discrepancy between these two analyses.

57-06

DEIS Page 5.3-16: It is inappropriate for the DOE to describe certain control technologies as “characterizing” or “taking a step in the continuum toward” BACT or lowest achievable emission rate or “one extreme of the continuum.” Although Excelsior may maintain that the

<sup>1</sup> Higher impacts result from the eastern location; lower impacts from the western location.

<sup>2</sup> Even those Method 6 analyses predict 35 days in 3 years with change in extinction > 5% for the western site. Those impacts indicate that Mesaba would significantly contribute to visibility impairment at Voyageurs NP if this source were an old source subject to the Regional Haze Program.

<sup>3</sup> DOE attempts to dismiss this as a statistical anomaly. We believe that, if emission from Mesaba were to be modeled for its full lifetime, it is likely that higher impacts would be predicted.

<sup>4</sup> DOE states, “Based upon these considerations, it has been concluded that S and N deposition from the Mesaba Energy Project would not cause adverse effects in VNP [Voyageurs NP]”

## Responses

### Comment 57-02

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

### Comment 57-03

See response to Comment 49-11, which addresses the same concerns.

### Comment 57-04

DOE understands that the FLMs have rights to determine impacts to Class I Areas. The qualitative description of the impacts as “slight” has been deleted in the Final EIS. Also see responses to Comments 49-01 and 49-11, which address the same concerns.

### Comment 57-05

The emissions inventory shown in Table 5.2.2-1 (Volume 1) of the Draft EIS contains all source data that the MPCA could provide at the time of Mesaba’s cumulative analysis and represents their judgment at that time of the sources likely to have significant air quality and visibility impacts in Class I areas. The Final EIS has been revised to include updated emissions sources inventory that was used in the revised analyses (included in the revised Appendices B and D1 [Volume 2]). Also see response to Comment 49-13, which addresses the same concern.

### Comment 57-06

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

**Commenter 57 – Michael T. Chezik**

**Responses**

**57-06  
(cont'd)**

current facility design represents BACT, the MPCA, in consultation with the EPA, will determine BACT. We note that in its October 19 letter, the MPCA concludes that the Selexol® process is BACT for sulfur dioxide. The MPCA also concludes that selective catalytic reduction (SCR) is technically feasible for nitrogen oxides and requests more information to make its determination of economic feasibility and, thereby, the final BACT determination. As such, it is inappropriate for the DOE to promote Excelsior's BACT position in the DEIS. We request that the text be modified in the final EIS to more accurately reflect what the MPCA has determined for BACT.

**57-07**

Lastly, we recommend that a model be run which shows the visibility impacts of the facility with installation of the Selexol® process and SCR. The results of the modeling should be provided in the final EIS.

**WETLANDS (DEIS SECTION 3.7)**

**57-08**

Due to the number of sub-alternatives for utility corridors nested within the components of the East and West site location alternatives, there are a very confusing number of potential wetland impacts (Table S-6, Summary Comparison of Impacts, page S-33). This is further complicated with discussion of impacts occurring within temporary versus permanent right-of-ways and/or construction zones. It is also unclear as to the exact definition of temporary versus permanent impact, and consequently, the discussion of necessary mitigation remains largely unaddressed. However, it appears that even a project focused solely on minimization and avoidance of wetland impacts will result in a need for restoration of several hundred acres of wetland, and in all likelihood, much more. Given that the majority of these impacts are likely to occur in wetlands which are difficult to restore and require multiple growing seasons to achieve full function (i.e., forested wetlands and peatlands), it is imperative that a realistic review of potential mitigation strategies be provided in the final EIS.

**57-09**

The assertion in Section 4.7.7.1 that "the Proposed Action would be designed to minimize impacts to wetlands wherever feasible, including the placement of the facility footprint ... and routing infrastructure to avoid wetland areas" is too vague and unsupported. The EIS "shall provide full and fair discussion of significant environmental impacts and shall inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts ..." (40 CFR 1502.1). The EIS shall also discuss the "...means to mitigate adverse environmental effects." (40 CFR 1502.16(h)) Mitigation for direct and indirect project-induced unavoidable adverse impacts may, by itself, be considered a significant environmental impact, and should be described within the final EIS.

**OTHER BIOLOGICAL RESOURCES (DEIS SECTION 3.8)**

**57-10**

The subsections dealing with mammals and birds are overly vague and appear fairly random in their discussion of species occurrence. For example, there are several types of wetlands listed as present in the West Range Site, but Table 3.8-3 lists only those birds using peatland habitat. The complex of habitats at both the West and East locations are populated with a diversity of avian species only partially represented in the DEIS.

**Comment 57-07**

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

**Comment 57-08**

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

DOE has added the definitions for the following terms in the beginning of Section 4.7 of the Final EIS (Volume 1) to eliminate confusion: Permanent Impact, Temporary Impact, Indirect Impact, and Wetland Type Conversion. DOE has updated Tables 4.7-33, 4.7-34 and Appendix F2 to further clarify impacts.

**Comment 57-09**

DOE has expanded the avoidance and minimization analysis and discussions in the Final EIS including new rail and road alternatives developed in order to reduce direct and indirect wetland impacts at the West Range Site and the East Range Site. Additional explanations of the placement of the facility footprint and potential for indirect impacts to wetlands have also been added as appropriate to the Final EIS.

**Comment 57-10**

Section 3.8 (Volume 1) has been re-written to incorporate the Ecological Classification System (ECS) which identifies, characterizes and maps ecosystems using physical and biological properties. While it is not possible to identify every species occurring within the project areas, this system allows for the characterization of ecosystems (habitat). Understanding the impacts to habitat quantity and quality, Section 4.8 (Volume 1) of the EIS has been revised to evaluate which ecosystems (using the ECS) would experience the greatest impacts and which species habitat would be greatest impacted (see Section 4.8 [Volume 1]).

**Commenter 57 – Michael T. Chezik**

**Responses**

57-11

Per the Migratory Bird Treaty Act, the U.S. Fish and Wildlife Service (FWS) is responsible for management of migratory birds within the United States and should be consulted regarding species in the project area which may be affected by project construction and long-term operation. In addition to species with populations low enough to be formally recognized as threatened or endangered under the Endangered Species Act, the FWS maintains a regional list of Species of Concern. The FWS also administers a number of programs and management strategies coordinated through the Migratory Birds Division which focus on conserving species with declining populations. It appears that the only contact DOE has had with the FWS thus far has been in relation to federally listed species. Therefore, we are concerned that the section on project impacts and potential mitigation needs in the DEIS is correspondingly incomplete and should be expanded in the final EIS.

**FEDERALLY PROTECTED SPECIES – (DEIS SECTION 3.8.3.1)**

The DEIS summarizes the coordination which has occurred thus far between DOE and the FWS regarding species listed under the Endangered Species Act of 1973, as amended. Discussions subsequent to the last official contact between the two agencies (FWS letter dated March 6, 2007) has centered on the appropriate consultation path given the changes in listed species' status (i.e., delisting of the American peregrine falcon) and the completion of additional biological resource surveys in the West and East alternative locations. These discussions have resulted in DOE's decision to withdraw its earlier determination of effects and to reinstitute consultation based on a review of the most current information. The FWS fully supports this position and expects to begin the process as early as January 2008.

57-12

The FWS will be working closely with DOE as they prepare a biological assessment for the proposed project. This document may include:

- (1) The results of an on-site inspection of the area affected by the action to determine if listed or proposed species are present or occur seasonally;
- (2) The views of recognized experts on the species at issue;
- (3) A review of the literature and other information;
- (4) An analysis of the effects of the action on the species and habitat, including consideration of cumulative effects, and the results of any related studies.

In the absence of a preferred alternative, it will be necessary for DOE to complete a detailed analysis of effects for both the East and West Site Alternatives and each of the number of utility corridor sub-alternatives nested within each of the site alternatives.

**SUMMARY COMMENTS**

The Department has a continuing interest in working with Excelsior and DOE to ensure that project impacts to resources of concern to the Department are adequately addressed. For questions and further coordination with NPS concerning the comments on air quality, please contact Environmental Engineer Don Shepherd, NPS, Air Resources Division, Policy, Planning, and Permit Review Branch, P.O. Box 25287, Denver, Colorado 80225, telephone: (303) 969-2075. For matters related to fish and wildlife resources and federally listed threatened and

**Comment 57-11**

Primary impacts to migratory birds would be caused by the loss of forest habitat during construction of the power plant and utility corridors. See response to Comment 14-02 for impacts to interior ground nesting birds. Overall impacts to migratory bird species could be reduced or avoided through tree clearing activities occurring outside the migratory bird season (after August 1st and before May 1st). Overall impacts to habitat would be reduced through minimizing clearing activities to the greatest extent possible. As abundant habitat to migratory birds exists within the region (see Section 5.2.6 [Volume 1]) and initiatives, such as the North Central Landscape Region: A Report to the Minnesota Forest Resources Council, are being implemented to protect forest resources, overall impacts to migratory bird populations and habitat would be minimal.

DOE has consulted with the FWS regarding migratory bird protection, consistent with the MOU between FWS and DOE and has considered migratory bird protection and conservation in the Final EIS as required by the Migratory Bird Treaty Act and Executive Order 13186.

**Comment 57-12**

The Biological Assessment was completed and originally submitted by DOE to USFWS in July 2008. DOE made a determination that the proposed action may affect but is unlikely to adversely affect the Canada lynx or critical habitat in a letter to USFWS on August 15, 2008. The Biological Assessment was revised in February 2009 (see Volume 2, Appendix E) to hedge uncertainties regarding the status of the gray wolf under the Endangered Species Act (ESA), the latest action of which occurred on July 1, 2009 when a U.S. District Judge approved an agreement between the USFWS and plaintiffs (in a lawsuit challenging USFWS's 2009 rule removing ESA protections for gray wolves in the Western Great Lakes) in which gray wolves in the Western Great Lakes area will again be protected until the public has been allowed sufficient opportunity to provide comment on the removal of such protections. In a letter sent on May 1, 2009, the USFWS concurred with DOE's conclusion that the proposed action may affect, but is unlikely to adversely affect, Canada lynx, gray wolf or their critical habitat at the West Range Site. Text in Section 4.8 has been revised to discuss the findings of the Biological Assessment.

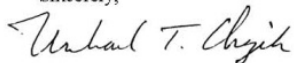
## Responses

### Commenter 57 – Michael T. Chezik

endangered species, please continue to coordinate with Tony Sullins, Field Supervisor, Twin Cities Field Office, U.S. Fish and Wildlife Service, 4101 East 80th Street, Bloomington, Minnesota 55425-1665, telephone: (612) 725-3548.

We appreciate the opportunity to review and comment on the document.

Sincerely,



Michael T. Chezik  
Regional Environmental Officer

cc:

D. Shepherd, NPS, Denver, CO  
T. Sullins, FWS, Bloomington, MN  
L. MacLean, Fort Snelling, MN



## Responses

### Comment 58-01

See response to Comment 6-01, which discusses the use of an enhanced ZLD system that would eliminate discharges of process water and cooling tower blowdown into any water bodies and negates concerns about potential impacts from effluents. See Sections 4.3 and 4.17 (Volume 1) for discussions on potential impacts from increased CO<sub>2</sub> and mercury emissions, respectively.

### Comment 58-02

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

### Commenter 58 – Timothy and Patricia Zoerb

>>> "trtlke" <[trtlke@comcast.net](mailto:trtlke@comcast.net)> 1/8/2008 4:32 PM >>>

58-01

Letting Mesaba go ahead will invalidate all environmental legislation passed in this state in the last two years. It runs counter to the spirit if not the letter of these new global warming laws. It will pollute groundwater, poison the surface water of Canisteo Pit, throw massive amounts of CO<sub>2</sub> and enough mercury into the air to affect life in the northland for centuries. It will make hypocrites out of the decisionmakers and let everyone know that government finally, ultimately, can and will be bought for enough money.

On a personal level, it will make me look elsewhere to live and pay taxes. It will make my present property a lot less valuable. It will teach my children to be deeply cynical of all politicians, the political and governmental process, and to think of our country and state as every bit as bad as Hugo Chavez's Venezuela.

58-02

There is no justification that can be given to permit this "project" to go ahead. It will be known as the smelly dirty rat of corrupt government and regulatory processes run amok. Just as the robber barons more than a century ago raped the northland for its resources and exploited new immigrants for their labor, the purveyors of this project want to subvert good environmental sense for financial gain. Their gain will be paid for at taxpayer expense and resident's health impacts. Pat Micheletti and Julie Jorgensen have no intention of living near their new plant, but we were planning on living next to Trout Lake.

Sincerely,

Timothy and Patricia Zoerb  
[trtlke@comcast.net](mailto:trtlke@comcast.net)

**Commenter 59 – Harry Hutchins**  
DEIS Measba project

**Responses**

Page #  
4 8 2 1

**59-01**

Changing forestland to grassland will only benefit edge species. We have an abundance of these already. What is declining are forest interior species, species which need larger patches of intact mature forest, and ground nesting birds. These corridors will provide easy hunting well into the fragments of forests Studies show these edge effects go well into the forests – at least 200 meters. Changing forestland to grassland will also be a loss of a Carbon Sequestration sink and loss of biodiversity Righelato and Spracklen, Science 317:902) There should be a GIS study buffering the amount of forest habitat that would be lost from ecologically functioning as a forest. Just the amount of land is one thing, weather the land base functions as a mature forest patch is another – especially with the creation of permanent hard edge.

Last graph

**59-02**

How are these areas going to be restored? Need to be specific here. Using native genotypes is expensive and the plant material is not readily available. How much native seed will be used? Are they using non-native grasses and hay? Using hay as a ground cover spreads weed seeds. Native grass seeds will have to be maintained with some burning. Is this feasible on these locations?.

The weed seeds will spread into the forest as has been documented in rural road construction. Invasive species control than becomes a multimillion dollar control issue and tax burden and forest health issue. As noted in the DEIS, these invasive plants establish easy and are little used by wildlife. A further degradation of our forest environment.

So what about the maintenance of this changed ecosystem? This has not been answered adequately – both ecologically and economically.

Fauna  
Graph 2

**59-03**

What Habitat type is so abundant? It is never stated. “Comparably habitats are abundant” has no business being in an ecological document. I think the wording ABUNDANT needs to be defined. This is arbitrary and for those species which require these NPC, they need to be large, spatial patches, common, and of various age classes across the landscape. Not fragmented small parcels, less abundant and dominate by one or two age classes. What about the organisms which have large spatial area requirements in mature forests? Document goes back and forth from using the wording of habitat type (Kotar) to listing natural plant communities (DNR) for Ecological Classification Systems. The actual NPC is not listed until several pages later. Very confusing and poorly written.

**Comment 59-01**

Section 4.8 (Volume 1) of the EIS addresses loss of ecological function and forest fragmentation, including the creation of increased forest edge and decline of wildlife species. Also, see responses to Comments 14-02 and 14-03, which address the same concerns. The amount of forest land lost to the Mesaba Energy Project will be negligible compared to worldwide forest land serving as carbon stores. Additionally, the amount of carbon released from forest clearing is small compared to the amount of carbon lost each year to forest fires and other natural disturbances (Natural Resources Canada, 2007).

**Comment 59-02**

The following text has been added to Section 4.8.2.1 (Volume 1) concerning invasive plants species: “Invasive species are species that have been introduced, or moved, by human activities to a location where they do not naturally occur and are termed “exotic,” “non-native,” “alien,” and “nonindigenous.” Oftentimes, these species become dominant in disturbed areas and outcompete native species, lower biological diversity, and alter ecosystem function... The potential for invasive species, primarily invasive plant species, would increase within the project area through construction and clearing activities. Natural areas along the power plant as well as utility corridors would be susceptible to invasive species introduction. Both the presence of vehicles and human traffic which can inadvertently carry invasive plant seeds from other locations would be increased. Construction equipment could inadvertently carry invasive plant seeds into the area and continued maintenance (i.e., vegetation clearing) along the utility ROWs would potentially allow for the spread and dominance of these species. Impacts to the overall ecosystems would be reduced as these species would be located within lower quality habitat areas that would experience periodic human disturbance. Invasive species control measures such as spraying and manual removal could be implemented in areas dominated by invasive species to minimize impacts and prevent spreading.”

**Comment 59-03**

Where appropriate, the term “abundant” has been stated with a reference to Section 5.2.6 (Volume 1), which describes proportional habitat impacts in the region.

## Responses

## Commenter 59 – Harry Hutchins

59-04	Graph 3, s 1	Good statement about dispersal and migration.
		<ul style="list-style-type: none"><li>• These corridors will create barriers to movement</li><li>• Many of these forest birds are important in maintaining forest health by feeding primarily feeding on butterfly and moth larvae which would strip our trees of their leaves.</li></ul>
59-05	4 8 3 1 s 1	<b>We do not have Turkey in Itasca County</b> or at the Eastern location of the plant. Why was this written in? Has there been any local research on these ecosystems?
59-06	4 8 3 2	This statement is incorrect in Northern Minnesota. See research by Natural Resource Research Institute in Duluth and other Lake States wildlife authors. This needs citation. Seeding Transportation lines and utility corridors WILL NOT “BENEFIT” native north central wildlife, as most species in decline in Minnesota are not edge species.
		Cow bird should be one word.
59-07		
59-08	4 8 3 3	A basic animal ecological principal is that populations cannot pick-up and move to the next woodlot. It may not have the same elements as the destroyed forest patch. There are already individuals that are occupying those niches and know the territory and food sites and territories are established. Even if you could get to a new patch, other individuals of that species are there occupying the site. There is only a decline in numbers of that species in that region of that animal community.
		This is way to broad a statement as these species vary dramatically in habitats in which they occur for all 60 species of land vertebrates that can be hunted or trapped in Northern Minnesota. Needs much more research here.
		An impact <b>of habitat loss</b> is pretty darn serious to wildlife. In fact it means the end. Why does this seem to be taken so lightly and buried in the middle for the p-graph?
59-09	<u>Protected species</u> 4 8 4	
		They Canadian Lynx range is retreating to the north as climate change will decrease lynx numbers, and as forest decreases. Forests are important in CO2 sequestration, so as we decrease forest area with this power plant and associated ROW's, we will only contribute to the decline of the Lynx habitat, its climate conditions, and the requirements of its chief prey – the snowshoe hare. Another reason to not build this power plant in relation to ETS species.

## Comment 59-04

The width of the utility corridors would likely not impede the movement of most wildlife. See responses to Comments 14-02, 57-11, and 59-02 regarding other impacts fragmentation may have on habitat.

## Comment 59-05

The reference to turkey in Section 4.8 (Volume 1) has been removed.

## Comment 59-06

“Seeding the transmission or utility corridors with an appropriate seed mixture could benefit an assortment of wildlife species that thrive within a forest edge.”

This statement does not assert that seeding the transmission and utility corridors will benefit all native north-central wildlife in decline; it states that *edge* species may benefit. The statement is accurate.

## Comment 59-07

The text in Section 4.8.2.1 (Volume 1) has been revised as suggested.

## Comment 59-08

See responses to Comments 14-02, 57-10, 57-11, and 59-02, which address the same concerns.

## Comment 59-09

It is unlikely that habitat loss and fragmentation resulting from the Mesaba Energy Project would represent a significant obstacle to lynx from a regional perspective. A recent survey found no evidence of lynx residing in or traveling through the West Range Site area. A survey near the East Range Site found evidence of lynx in locations 10 miles and 18 miles away from the site. While lynx may be present in the vicinity of the proposed project sites, habitat quality is marginal and lynx density at the sites is expected to be low. The West Range Site does not lie within or near any designated critical habitat for the Canada lynx. However, the USFWS expanded the critical habitat on February 25, 2009 (74 *Federal Register* 8616) to areas that immediately surround the East Range site (see map at <http://www.fws.gov/midwest/endangered/mammals/lynx/lynxMNmapCh.html>). Findings of the Biological Assessment indicate that the Mesaba Energy Project is unlikely to adversely affect Canada lynx or their critical habitat in the region. The Biological Assessment has been included in Appendix E (Volume 2) to the EIS, and conclusions have been incorporated into the main text.

**Commenter 59 – Harry Hutchins****Responses**

	<u>Impacts of operation</u>	
59-10	4 8 5	What about noise and human activity in the area -- in relation to wildlife behavior and stress?
59-11		Particulate pollution from the gasification plant will add to leaf deterioration and hasten plant decline, growth, and death.
	4 8 2 2 graph 4	
59-12		What about mercury and heavy metals in fish? "... would not be expected to..." This is vague and needs scientific citation.
	<u>Power plant foot print</u>	
	4 8 3 1 gr 2	Needs to be stated the MHn 35b is at the NW edge of its range in the US. It is important to keep this type because of this climate change. It also has an important oak component for wildlife. Red Oak is also at the edge of its range here in Itasca Co.
59-13		MHn 44 This is one of the most productive NPC's for aspen, white spruce, and balsam fir forest. Forest industry cannot afford to lose this NPC. This P graph is inaccurate and exaggerated.
	<u>Fauna</u>	
59-14		<ul style="list-style-type: none"><li>• <b>It is important to realize that we made a similar statement about the passenger pigeon.</b> They were very abundant and within 60 years this species was extinct through habitat destruction and market hunting. It can happen again.</li></ul>
59-15		<ul style="list-style-type: none"><li>• Non native populations of flora will increase with human disturbance and landscaping of site</li><li>• The statements 'we can do it cause it is abundant' is a sign of an ignorant ecologist. We can't keep chipping away at ecosystems and think they can keep their integrity.</li></ul>
59-16		If we remove 1230 acres here, 89 acres there, 42 acres there and finally the ecosystems function falls apart. There are no large patches left of intact MHn 44 or MHn 35 anywhere
		<ul style="list-style-type: none"><li>• And what about \$\$\$ from tourism industry: especially biking and birding in the region. These are not considered.</li></ul>
59-17		
	<u>Protected species</u>	
59-18	4 8 3 pg 7	See previous comments on Lynx and climate change and forest removal

**Comment 59-10**

The following text has been added to Section 4.8.2.1 (Volume 1):

"Noise from construction may disturb animals or displace them to less favorable habitat; however, wildlife responses to noise may be species-specific, and could result in either avoidance or habituation. Avoidance could cause species to under-use high quality habitat near disturbance areas, resulting in decreased fecundity and survival. Noise impacts due to construction would be temporary and localized in nature."

**Comment 59-11**

The text in Section 4.8.2.2 (Volume 1) has been revised as follows:

"An indirect impact from both the introduction of access roads and railways and increased traffic would include the potential for increased stress to vegetation from particulate matter and dust, which could injure leaves, stems, and roots and increase vulnerability to diseases or insects (Delphi, 2004)."

**Comment 59-12**

The paragraph in question refers the reader to Sections 4.3 (Air Quality) and 4.17 (Health and Safety) of the EIS, which address the risks of bioaccumulation of mercury in fish (specifically in Sections 4.3.5.8 and 4.17.2.3). See also Section 4.5.2.1 (Volume 1) for information pertaining to mercury levels. As discussed in Section 4.8 (Volume 1), the operation of the proposed Mesaba Generating Station at either location would have minimal impact on aquatic species and their prey caused by the bioaccumulation of heavy metals. As stated in response to Comment 6-01, the use of an enhanced ZLD system at the West Range Site (as well as at the East Range Site), would eliminate discharges of process water and blowdown water to surface waters.

**Comment 59-13**

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

**Comment 59-14**

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

**Comment 59-15**

See response to Comment 59-02, which addresses the same concern.

**Comment 59-16**

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

**Commenter 59 – Harry Hutchins****Summary**

The Biological component of the DEIS is flawed in many areas. First, it does not coincide with the goals of the Minnesota Forest Resource Council North Central Landscape plan. In fact, this wasn't even mentioned in the DEIS. The 3 main objectives of the plan which was developed by regional citizens and scientist are as follows

**DESIRED FUTURE FOREST CONDITION of North Central****Landscape** [www.frc.state.mn.us](http://www.frc.state.mn.us)

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

1. There will be an increased component of red, white and jack pine, cedar, tamarack, spruce and fir.
2. The forest will have a range of species, patch sizes, and age classes that more closely resemble natural patterns and functions within this landscape.
3. 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

Obviously, The 1300 acre proposed power plant does not fit the FRC Landscape Plan in many ways by eliminating forest cover, reducing conifer component, reducing the commercial forest area on productive Natural Plant Community Types (NPC), severely fragmenting the forest with the transmission and transportation and plant site foot print, and reducing the integrity and functions of the forest landscape.

Wildlife populations of many species will be negatively effected by fragmentation and the very real threat of introduction of invasive, non-native species.

Soil compaction on the equipment staging sites will render the sites impractical for growing plants again.

Wildlife cannot just '*get up and move*' to the next site. Those niches and territories are already filled. The populations of already stressed populations of Neotropical and ground nesting birds will continue to decline. The fragmentation and introduction of non- native grasslands into a forested ecosystem will only hasten their decline. Research has shown edge specialist predators have increased and have high predation success hunting along these edge corridors and the viability of forest interior species is short-lived. Over time, these fragmented areas are population sinks and they blink-out and vanish. Edge effects are known to effect forest interior species at least 200 meters from the forest edge.

**Responses****Comment 59-17**

Recreation and tourism are discussed in Sections 3.13.3 and 4.13 (Volume 1). See also response to Comment 65-01, which addresses the impacts of the Mesaba Energy Project on recreation and tourism.

**Comment 59-18**

See response to Comment 59-09, which addresses the same concern.

**Comment 59-19**

See response to Comment 14-03, which addresses the same concern. The analysis of impacts to biological resources (Section 4.8) has been revised with additional information, particularly with respect to habitat fragmentation.

**59-19**

Responses

Commenter 59 – Harry Hutchins

The invasive non-native plants issue will almost certainly negatively affect the integrity of the forests along the ROW corridors for transportation and energy transmission lines.

Finally, I find the Biological section of this document (section 4.8) needs a great deal of re-vamping and literature review. New information over the last 15 – 20 years is not included in this document. We are trading the wildlife and forest integrity off for a short term power plant. Forests and wildlife populations are renewable if we maintain the integrity of the forest ecosystem. This power plant will have a negative impact on this ecosystem and much more homework needs to be done by the authors of this study before this process goes on.

Harry E. Hutchins  
Forest Ecologist  
Itasca Community College  
Member of Wildlife habitat Technical Team for Mn Forest Resource Council  
Member of North Central Landscape Team for Mn Forest Resource Council

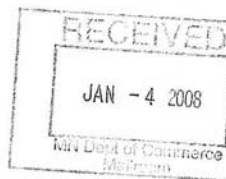
59-19  
(cont'd)

## Commenter 60 –Ryan Neururer

36608 Deer Lake Way  
Grand Rapids, MN 55744  
(218) 326-3758

December 13, 2007

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



Dear Mr. Storm:

60-01

After reading some of the Environmental Impact Statement I still stand on the opposing side of this project. Although it would be nice to have a few more job openings on the iron range, I feel that the environmental effects are too harsh and outweigh the benefits of building and operation the coal facility of the proposed mesaba project.

60-02

I like to consider myself an avid walleye angler, enjoying many of the areas local waters. With the proposed location of the mesaba project, the facility will be releasing mercury emissions into the air which will end up in the local lakes and rivers. Where I live and fish will be in the red zone on the map of the mercury emissions impact zone, which means that, 800+ fg/m3 of mercury will be emitted from the new plant. Allowed walleye consumption is already low for men and women not planning on getting pregnant, according to the Minnesota Department of Natural Resources, being allowed to eat up to one meal of walleye a week. That number goes down from one meal a week to one meal a month for pregnant women, women who may become pregnant, and children under age fifteen. With more emissions of mercury into the air and water, these numbers of meals could turn for meals per week to meals per month, meals per month to meals per year. I think this project is unsafe for the environment and the local residents, people and animals, and should be reconsidered if it is a right fit for the location.

I thank you for your time in allowing me to write this letter and voice my opinion. I hope you take what I have said into consideration.

Sincerely,

Ryan Neururer

## Responses

### Comment 60-01

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

### Comment 60-02

Sections 4.3.5.8 and 4.17.2.3 (Volume 1) address the impacts of the Mesaba Energy Project's mercury emissions on fishable waters and fish consumption. The results of AERA modeling and analysis in accordance with MPCA requirements indicate that the incremental risk associated with consumption of fish from Big Diamond Lake by adult subsistence fishers would be below the MPCA accepted risk value for the fish ingestion exposure pathway. As explained in the response to Comment 42-01, Big Diamond Lake was chosen as representative of fishable lakes within the release plume of future Mesaba Energy Project emissions.

## Commenter 61 – Christian Charity Warrington

December 14, 2007

Christian Charity Warrington  
928 N.E. 13<sup>th</sup> Ave. #59  
Grand Rapid, MN 55744

Bill Storm  
Minnesota Department of Commerce  
857<sup>th</sup> Place East  
Suite 500  
St. Paul, MN 55101

Attention: Bill Storm

Dear Mr. Storm,

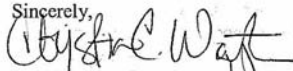
The proposed Mesaba energy Project is an unethical way of creating viable solutions to creating efficient energy. As a global community we need to look at the elimination of dependence on fossil fuels. There are other long term options that may overlooked such as wind or solar energy.

These renewable energy sources will catapult our generations into the future. Fossil fuels are already stressed, and costs of the clean coal-gastrification only puts a band-aid on our degradation of the planets resources. I believe politics have already defiled Mother Nature enough. I am firmly against this project only because I am focusing on our future generations. Is it not enough for these energy monopolies in Minnesota and nationwide to make millions off of consumers, but to exploit an area that is already in financial turmoil or economic despair?

The Minneapolis Excelsior didn't look at the long term picture in the proposal as to the storage, where will it all go? It is unethical and grandiose to minimize the problematic potential of cleaning up another spill or human related error of containment. Something always goes wrong, nothing is ever perfect.

Please make a morally and ethical decision in this project. Isn't it worth your children or grandchildren to say that money didn't ruin their air? Quick Fixes never work and depleting out natural resources is catastrophic. New energy business could come from producing wind and solar power manufactured in the U.S not in Europe.

Sincerely,



Christian Charity Warrington Itasca Community College and Concerned Air Breather



## Responses

### Comment 61-01

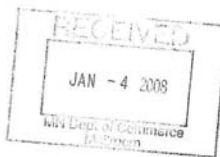
The response to Comment 37-01 explains DOE's purpose and need. DOE oversees numerous projects that are investigating and supporting a wide variety of renewable energy generation technologies, such as wind, solar, and hydro power.

61-01



## Commenter 62 – Jennifer Biscardi

Mrs. Jennifer Biscardi  
103 SW 10<sup>th</sup> Avenue  
Grand Rapids, MN 55744  
218.999.5461  
email: [jbiscardi@hotmail.com](mailto:jbiscardi@hotmail.com)  
December 15, 2007  
RE: DEIS for Taconite Coal Gasification Plant



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

Dear Mr. Storm,

I am a resident of Itasca county, I am also the mother of five children, a full-time student of Itasca Community College, and am also employed full-time in a local office, and lastly, but not least, I am a wife.

As a resident, and a tax-payer, I would like to add my opinion to the many thousands of voices in the Northland that are saying no to the coal gasification plant in Taconite. My family does not need the added thermal, air, water, light and visual pollution this proposed project will bring to our environment. We do not need the power in our region, and we don't see any reason to suffer so that people in other areas can use power generated here.

They tell us that there may be one hundred jobs generated once the plant is up and running, but it will easily cost us a hundred jobs that hinge on tourism.

People of the Northland are tired of shouldering the responsibility of power for the Twin Cities and suburbs. Make your own power and learn to conserve like the "out-state" citizens have learned. Walk, shop locally, shut off your lights, take shorter showers, wash clothes in cold water, etc.

According to the DEIS, after wading through much technical-ese, what the coal plant will give us is added traffic, added lights, added visual obstructions, more trees cut down, more trains, more particulates in the air, etc. All of which adds up to pollution where I'm from. And where I'm from, we're taught that carbon monoxide is poison.

The Northland doesn't want to be poisoned for the benefit of others, thank you very much.

Sincerely,  
Jennifer Biscardi  
Michael Biscardi  
Christopher Richardson  
Amanda Richardson  
Kyla Elliott  
Dominic Biscardi  
Michael Biscardi, Jr.  
Rickey Hickey, Jr.

dominic Biscardi

## Responses

### Comment 62-01

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

### Comment 62-02

Section 4.11 of the Final EIS (Volume 1) discusses the potential impacts of the Mesaba Energy Project on the economy and employment. Impacts on recreational resources are described in Section 4.13 (Volume 1). See also the response to Comment 65-01, which addresses the impacts of the Mesaba Energy Project on recreation and tourism.

### Comment 62-03

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

62-01

62-02

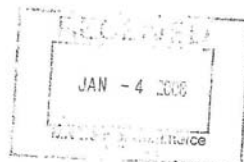
62-03

**Commenter 63 – Sarah Copeland**

Sarah Copeland  
902 Northwest Third Avenue  
Grand Rapids, Minnesota 55744

December 15, 2007

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



Dear Mr. Storm:

- Minnesota is known as an innovative and progressive state.
- Northern Minnesota is known as a beautiful, natural playground.
- The Iron Range is known as a severely depressed community with the state's highest unemployment and poverty rates.

When I first heard about the possibility that substantial numbers of jobs might come to the Taconite community, I was thrilled. This would make a huge impact on the entire Iron Range area. If a business could create 100 middle-class level jobs, the presence of those jobs creates more jobs. Then I found out that the business was coal-based. What are we thinking?

This 'new' coal gasification plant has placed a terrible rift throughout our communities based on only 2 factors: jobs and the environment. You either want jobs, or you want to save the environment. If you are interested in providing jobs for this extremely poverty-stricken and working-poor area, then you probably dump used motor oil in your local lake. If you are concerned about the amount of toxic and hazardous waste that this plant will dump into our air and water supply, then you are obviously a rich, tree-hugging snob who thinks that the environment is more important than human beings. This is an absurd mentality; and yet it is proliferating. (It is even more absurd to hear the grumbling as a massive windmill blade is being trucked through town.)

- Minnesota is known as an innovative and progressive state.

We are better than this. We are smarter than this. In the world today, with what we know and where our nation wants to be in the future, I find it unbelievable that anyone would consider building a "new" energy plant that uses fossil fuels. Regardless of what companies say they can do or reduce, it is backward thinking to build new with fossil fuels in mind. We need to get off the crack.

We need real, innovative and progressive solutions on the Iron Range. The best use of taxpayer money would be to select businesses that provide solar, wind or other sustainable or renewable energy sources. Northern Minnesota is placing workforce development as a huge priority for our region. We need help investing in people and companies that want to work for the future.

Here's a thought: In the DEIS (Volume 1) dated November 2007, section 1.3.2, under DOE Proposed Action, it states that \$36 million of taxpayer money will be used to co-fund just the design and one-year operational demonstration of the Mesaba Energy project. A portion, over \$22 million has already

**Responses****Comment 63-01**

As stated in response to 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 (solar, wind, biomass), and energy conservation. However, 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.

As stated in response to Comment 37-01, DOE's purpose and need in this EIS are to demonstrate a specific, advanced coal-based technology selected competitively for co-shared funding under the CCPI Program. The Mesaba Energy Project was selected competitively from among 13 applications in response to Round 2 of CCPI Program funding opportunity announcements. Section 2.1.1.2 (Volume 1) of the Final EIS describes the reasonable alternatives considered by DOE. Because the U.S. Congress established the CCPI Program with the specific goal of accelerating commercial deployment of advanced coal-based technologies as explained in Section 1.2.1 (Volume 1), other technologies (such as nuclear, hydro, wind, solar, or conservation) that cannot carry out these goals are not reasonable alternatives in this EIS.

As stated in response to Comment 1-01, "Clean coal technologies" refer to advanced coal utilization technologies that are environmentally cleaner, and in many cases, more efficient and less costly than conventional coal-utilization processes. The IGCC technology is considered a clean coal technology because it would have a substantial overall emissions reduction advantage when compared to existing conventional coal-fired power plants.

63-01

## Responses

### Commenter 63 – Sarah Copeland

63-01  
(cont'd)

been made available for cost sharing. That is a substantial amount of money. Look at how much state and federal money has already been spent just attending meetings and developing this DEIS.

There are many areas in these reports that talk about alternative actions. If we decided to only spend \$20,000,000 on an energy project for the Iron range area, what could we accomplish? (A large corporation would require the state to provide more incentive than \$20 million.) However, we could provide a between 1,070 and 2,516 full-sized homes with solar panels that would adequately supply their winter electric needs, and provide excess energy in the summer to sell back to the electric company. On the average, this would mean clean, free energy for approximately 6,038 Iron Range residents. Conservation Technologies, located in Duluth, MN, makes solar panels that could be used, keeping state tax money in our state. Can you imagine what this would mean if the state spent the same amount of money as they are planning for this coal-based project? (Is the coal-based project going to provide free energy? It certainly isn't clean energy.)

Have one of our state's economists map the equations out using the money multiplier. The impact on this entire region would be phenomenal. As a huge bonus, there is no need for additional environmental impact statements. Only positive results would come from this action. We need to think. Think smart.

This is actually a fantastic opportunity for the entire state of Minnesota. Do we want to continue to be on the forefront of technology and innovation? Whether it is wind farms, or solar panels or ethanol from prairie grasses or other biomass (much more productive than corn) the Iron Range has the potential of being the shining star of our entire nation.

"Wow, look what they did up in Northern Minnesota! They turned a severely depressed Iron Range into a vibrant community. They have low unemployment, an abundance of free and clean energy, and they are working on an unbelievable public transportation system. The air is clean and the skies are blue. I heard you can even drink the water right out of the lakes!"

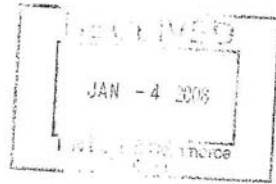
Is this only some dream? I don't think so. I invite you to come and spend some time up here on the Iron Range. Visit the local diners. Talk to the miners. Take the time to do some cross-country skiing or snowshoeing. Stand out in the middle of a frozen lake at about 9:00 at night. Check out the Northern Lights dancing across the sky. Listen. (I personally prefer doing this in a boat during the summer when the loons are present.) Don't wait very long to make the trip though, – people are waiting in line to dump hazardous waste in our air, lakes and groundwater supply – and the government is paying for them to do it.

Thank you for your time and consideration in this matter,

  
Sarah E. Copeland

## Commenter 64 – Miranda Hemsworth

Miranda Hemsworth  
6807 West Warren Lane  
Remer, MN 56672  
12/15/07  
Re: The Mesaba Energy Project



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

Dear Bill Storm,

I have to admit I'm not too familiar with the Mesaba Energy Project, but then again, not too many are. I was able to read some information regarding the project and discovered that I don't know exactly where I stand. I find that this project has many pros and cons. This "innovative energy project" could have a huge impact on our community. It would create new jobs for the Iron Range, and also produce many opportunities for those thinking of moving to our community.

64-01

This would be the most advanced coal plant in the world. One thing that I questioned was who would be able to work in such a plant? For example, out of the 105 positions in the Wabash Facility in Terre Haute, Indiana, 14% require a minimum of a 4-year college degree. The other 86% of those jobs require specialized training in a specific area, plus extensive previous experience in a power plant, refinery, or similar industrial/military background. These are highly specialized jobs that will pay well, but very few local residents will be qualified for these positions. Would this mean that you would create a training program for our local residents to qualify for these jobs or transfer people in from other areas?

64-02

What will be the environmental impact of the Mesaba Energy Project? Is IGCC technology really a "clean" way of using coal to produce energy? When I first thought about this, I thought that using coal would have a better impact on our atmosphere, but after a little research I found that mercury, carbon dioxide, carbon monoxide, sulfur dioxide, nitrogen oxides, lead, arsenic, volatile organic compounds and particulate matter are all emitted into the atmosphere. I understand that this project would contribute to satisfying the Clear Skies Initiative, which is focused on cutting nitrogen oxide, sulfur dioxide, and mercury emissions by 70% over the next 15 years. I actually think that's great.

## Responses

### Comment 64-01

Section 4.11 of the Final EIS (Volume 1) discusses the potential impacts of the Mesaba Energy Project on the economy and employment. As stated in Section 4.11.2.2, it is expected that permanent labor for plant operations would be drawn from throughout the Arrowhead Region and beyond, because of the specialized skills required for some jobs. Based on the BBER study, plant operation would be expected to induce the creation of additional permanent jobs in the Arrowhead Region.

### Comment 64-02

See response to Comment 1-01, which addresses the same concern. Section 4.3 (Volume 1) describes the impacts of the Mesaba Energy Project on air quality. However, it should be noted that the Clear Skies Initiative was never passed into law.

## Responses

### Comment 64-03

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

### Commenter 64 – Miranda Hemsworth

64-03

These are just a few things that stuck out to me. There is so much to think about when deciding whether to go ahead or not with a project this big. I'm sure you've heard arguments for and against this project, but please, really think about what's best for our community and environment. We live in an area of beauty and wonder; I would hate to ruin something we all love so much. With that said, I want to thank you for bringing this opportunity to our community.

Sincerely,

*Miranda Hemsworth*  
Miranda Hemsworth

## Commenter 65 – Dana L. Saville

December 16, 2007

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

Dear Mr. Strom:

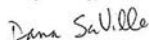
As a Bovey native and student of environmental science, I have serious concerns about the Mesaba Project and its impact on the environment. The EIS does not take into account the value of nature's ecosystems. For example, consider the value of recreation and water regulation and supply provided by Canisteo Mine. On a global scale, the value of recreation to the world is estimated to be worth at least \$3.0 trillion per year and water regulation is worth at least \$2.3 trillion per year. Here in MN, we have diverse ecosystems. How much ecological value does Minnesota provide to the global average and even more specifically, how do the natural resources located in Itasca County contribute to the larger picture? The EIS doesn't take this important measurement into account.

The EIS and supporters of this project view ecological services as free and limitless; expendable if it means more jobs and a boost to the economy. Environmentally literate citizens know this is false. Imagine if Excelsior Energy had to pay the residents of Itasca County for the full value of the recreation, water regulation, and plethora of other ecological services provided to the community by nature. The EIS does not address ecological value in a tangible way and therefore, is not comprehensive.

I am proud to be a Minnesotan and I have lived in places where the water is unsafe to swim in or drink. Minnesota must set an example by clearly defining and assigning a monetary value to the services that nature provides. This is the only way to assess the true cost and impact of a project like this. It's clear to me that the cost is too high and that this project will not provide a healthy and secure life for area residents.

Thank you for your consideration.

Respectfully,



Dana L. Saville  
Bovey Resident



## Responses

## Comment 65-01

The EIS evaluates existing conditions and impacts of the project on natural resources from a biological perspective (e.g., vegetation, wildlife, fisheries, etc.) in Sections 3.8 and 4.8 (Volume 1). Existing conditions and impacts on recreation are described in Sections 3.13 and 4.13 (Volume 1). Tourism is a key sector of Minnesota's economy, and northern Minnesota is the second-most popular destination for travelers (after the Twin Cities). It is difficult to predict the economic impact of the Mesaba Energy Project on tourism revenues, because tourism in the region has coexisted historically with extensive ore mining, timber harvesting, and associated industrial activities. Surface water resources were lost or degraded by these activities in the past, while other valued surface water resources are the direct result of these past activities, as in the case of the flooded Canisteo Mine Pit, Hill Annex Mine Pit, and other flooded mine pits. And, it should be recognized that the CMP could be lost to potential dewatering and mineral extraction in the future. The response to Comment 6-01 explains that the use of enhanced ZLD at the West Range Site, as already proposed for the East Range Site, would eliminate all plant discharges to surface waters, while water levels in the CMP would remain stabilized during withdrawals for Mesaba plant operations. Although Excelsior has proposed the limitation of public access to the CMP as a security measure to protect the plant intake facilities, the company has expressed its willingness to compromise and to comply with MNDNR's decision on the matter (see response to Comment 76-04). The EIS has also evaluated the potential risks of mercury deposition and other hazardous air emissions in Sections 4.3.2.4 and 4.17.2.3 (Volume 1), which have not indicated the potential for risks above levels established by MPCA. Although construction and operation of the plant would eliminate or alter the land cover at the respective permitted site, and wetland mitigation would be required, results of the EIS do not support the expectation of a substantial loss of tourism revenues attributable to the Mesaba Energy Project.

65-01

## Commenter 66 – Kari Engen

Kari Engen  
6666 County Rd #126 NE  
Longville, MN 56655-3071

December 16, 2007

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

Dear Bill,

My name is Kari Engen and I have lived in Minnesota for 8 years. I am now studying Environment Science and have been asked to read the study about the Mesaba Energy Project that is being proposed. I selected **Chapter four, Environmental Consequences; section 4.7 Wetlands** "*direct loss of wetlands due to the placement of dredge or fill material and secondary impacts relating to the altering or conversion of wetland function due to the removal of vegetation or change in hydrological regime.*" to write to you about.

There are 302 pages in this section and I focused on pages 111-112. After reading this several times, it seems to me that although there will be some negative impact on the wetlands, if a power plant must be built, this is inevitable. My question here would be if another power plant is really needed in Minnesota, wouldn't a nuclear power plant be more environmentally friendly? Perhaps a "wait and see" approach would make more sense. Rather than push ahead with this project, why not wait another five years and then do another study?

These are just some suggestions I wanted to share with you. Thank you for reading this letter.

Sincerely,

*Kari Engen*  
Kari Engen



## Responses

### Comment 66-01

Thank you for your comment. It has been noted and will be included in the administrative record for this EIS. Chapter 1 (Volume 1) of the Final EIS explains the importance of this project to DOE and the Minnesota Legislature.

66-01

## Commenter 67 – Darryl Sobey

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

12/16/2007

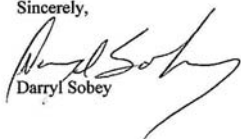
Dear Bill Storm,

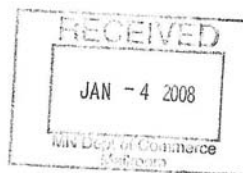
My name is Darryl Sobey, and I am writing this letter to express my feelings on the Mesaba Project. I have spent the last five months studying environmental science, and I am one of the top students in my class. I have read the DEIS, and have an educated opinion on this subject. There are a few problems that I see with the Mesaba Project: Excelsior does not have a plausible design for carbon capture, the geology of the proposed area is not composed of the right material to store the CO<sub>2</sub>, and the amount of CO<sub>2</sub> emissions that this site will produce in its life time is in the millions of tons.

I am sure you have read it, but I would like to present to you a few quotes that I have pulled from the DEIS. The first is regarding the storage of the CO<sub>2</sub> emissions. "Excelsior has not established a specific, detailed design for carbon capture, transport or sequestration." The second is regarding the amount of CO<sub>2</sub> that will be emitted without a sequestration method. "Emissions of CO<sub>2</sub> over the 20-year commercial life of the generating station would be approximately 214 million tons without mitigation." The third simply states, "The combined visibility impacts could potentially be significant".

The IPCC concluded that climate change is directly linked to the amount of CO<sub>2</sub> in the atmosphere. They used data collected from over a thousand scientists from all over the world. The Mesaba Project doesn't yet have any means of CO<sub>2</sub> storage, and therefore will be emitting massive amounts of CO<sub>2</sub>. This in turn will be speeding the trend of global climate change. In conclusion, I could not live with myself knowing that I did not try to do my part in stopping climate change. I hope you feel the same way.

Sincerely,

  
Darryl Sobey



## Responses

## Comment 67-01

See responses to Comments 1-02, 4-01, 4-03, 26-01, 49-01, and 53-04, which address the same concerns. The Final EIS (Volume 1) addresses greenhouse gases specifically in Sections 2.2.1.3 (under subsection *Potential Carbon Capture Retrofit*), 2.2.3.1 (under subsection *Emissions of Greenhouse Gases*), and 5.2.8 (under subsection *Greenhouse Gases and Climate Change*). As stated in the EIS, the Mesaba Generating Station Phases I and II without CCS would emit approximately 9.4 to 10.6 million tons per year of CO<sub>2</sub>.

67-01



Commenter 68 – Diana L. Storrs

Diana L. Storrs  
P. O. Box 552  
Grand Rapids, MN 55744-0552

December 16, 2007

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

Dear Mr. Storm,

I am a student at Itasca Community College in Grand Rapids, Minnesota, currently finishing a semester of study that includes a course in Environmental Science. The text for this course is *Principles of Environmental Science*, Cunningham, William P. and Mary Ann Cunningham. The chapter under discussion is entitled, "Environmental Policy and Sustainability", subtitled, "You must be the change you wish to see in the world." --Mahatma Gandhi.

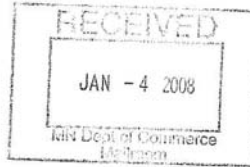
In conjunction with our studies, we were encouraged to read the Draft Environmental Impact Statement, Mesaba Energy Project. As I am sure you are aware, this is a challenge to read in its entirety. I therefore selected **Appendix F1, Documentation for USACE, "Overall Project Purposes From a Public Interest Perspective", Item d. Develop solid fuel baseload technologies with significantly reduced emissions of particulate matter, mercury, SO<sub>2</sub> and NO<sub>x</sub>**, upon which to focus my comments. It has become common knowledge that mercury is a neurotoxin that can cause harm in people and wildlife, sulfur dioxide is a corrosive gas that in part is a component of acid rain and nitrogen oxides produce smog. It is also fairly well known that coal burning electrical power plants emit these and other particulate matter and an "Integrated Gasification Combined Cycle" power plant is still a coal burning plant. West Range site or East Range site and LEDPA notwithstanding, it is my opinion that all needs as outlined, would be far better served now and in the future by a nuclear power plant.

Section h which reads, **"Support the development of energy systems which enhance national security"**, is a noble and lofty goal and one with which I heartily concur. Stamp the words "national security" on nearly any program and I will support it first and ask questions second. So while I support a project that will bring jobs and electrical power to Minnesota, I am now asking the questions, is it not better to avoid adding any more emissions to our air in the first place, rather than trying to minimize them? Is this not a case of none is better than some?

I appreciate your time in reading this letter, Mr. Storm.

Thank you,

*Diana Storrs*  
Diana Storrs



Responses

Comment 68-01

See response to Comment 37-01, which addresses similar concerns.

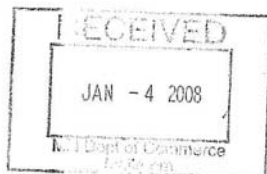
68-01

**Commenter 69 – Meagan Wichterman**

December 19, 2007

Re: Coal Gasification Plant

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



Dear Mr. Storm:

I am writing this letter to you to inform you about my concerns regarding a coal gasification plant that is being proposed for construction in Itasca County, Minnesota, and the Departmental Environmental Impact Statement (DEIS) that was written about this project. This letter also serves as an educational project assigned to me through an Environmental Science class that I am taking at Itasca Community College.

First of all, I found it difficult to read and comprehend the DEIS as it contains very technical and regulatory terminology that is confusing. In Chapter 4 of this DEIS, you stated that mercury levels in the lakes would stay below the total allowable limits. However, you did not mention the current status of mercury levels in lakes that are located near the plant's proposed construction site, nor did you give a projection of the potential increase in mercury levels that will be emitted once the plant becomes operational.

Mercury contamination is accumulated and stored in the muscle tissue of fish and wildlife that are exposed to it either through direct consumption or that which is absorbed through the skin. This poses a significant health risks to pregnant women, small children, elderly populations, people with immune deficiency disorders, and indigenous populations who consume large quantities on these dietary staples.

With 1,000's of lakes under mercury advisories and warnings, Minnesota's economy is also at risk due to a decline in tourism—one of the state's primary industries. In addition to being a prime vacation destination, Minnesota (especially the northern quadrant) attracts hunters and fish enthusiasts across the United States. Resort owners in Minnesota have already been negatively impact by the growing number of fish advisories, and some have had to close their businesses since many of their out-of-state customers have chose to go elsewhere.

The DEIS did not include any information about the possible long-term environmental affects of storing waste by-products that will be generated from this plant. Even with state-of-the-art leachate collection equipment and liners, I believe that Minnesota's harsh winters pose a risk for breakage and leakage to underground storage containers, thereby degrading soil and groundwater supplies.

Lastly, in constructing the plant and its pipelines, home owners are being displaced in what amounts to property "takings" by the company proposing this plant. While this project is seductive to economically-challenged communities that are looking for employment opportunities; I believe the environmental impacts and human health risks far outweigh the handful of jobs this plant promises to supply.

Sincerely,

Meagan Wichterman  
45038 County Road 172  
Deer River, MN 56636  
(218) 246-2126

**Responses****Comment 69-01**

See response to Comment 59-12, which addresses the same concern.

**Comment 69-02**

Refer to Section 4.16.2.2 (Volume 1), which discusses proposed management for hazardous and non-hazardous waste and pollution prevention of such material. The Mesaba Generating Station would be required to adhere to regulations under the Resource Conservation and Recovery Act (RCRA) for the handling, storage, and disposal of generated hazardous waste (described in Section 4.16.2.1). Guidelines for the installation of underground storage tanks typically state that such structures must be protected from freezing by installing below the frost level. Thus, underground tanks would adhere to design requirements that minimize the potential for leakage and include monitoring systems to detect accidental releases (Minnesota Rules, Chapters 7045 and 7150).

**Comment 69-03**

As stated in Sections 4.11.3 and 4.11.4 (Volume 1), respectively, the Mesaba Energy Project would not require the destruction of housing or the displacement of population at either the West Range or East Range Site. The magnitude of human health risks attributable to the project based on air emission modeling as described in Section 4.17 of the Final EIS (Volume 1) would be below EPA and MPCA thresholds.

69-01

69-02

69-03

**Responses****Comment 70-01**

See responses to Comments 4-01 and 4-02, which address concerns about carbon capture and sequestration. Sections 4.8 and 5.2.6 of the Final EIS (Volume 1), respectively, address project impacts and cumulative impacts on forest lands and wildlife habitat.

**Commenter 70 – Bridgitte Ross**

Dear Bill Storm,

After reviewing the EIS report, I found there to be several areas of concern. One of the main concerns many residences have is in the area of CO2 sequestration. The fact there is no procedure of how this will be done is only almost as scary as the fact that such equipment may not even be put in at all. Besides this, the amount of deforestation, pollution, and destruction that will take place if this project goes through is appalling. Not only will acres and acres of forest land and natural wildlife be destroyed in the process, but the EIS fails to even address this as a major issue. Besides just the damage done on the immediate construction site, the need for new gas lines and other utilities will create much more damage than suggested. This project is clearly being proposed for the wrong are. Northern Minnesota is in no power shortage, Mesaba does not even have a buyer for its energy yet, and the negative environmental impacts to our local residence and environment far outweigh the benefits.

Sincerely,

Bridgitte Ross

*Bridgitte Ross*

**70-01**

## Commenter 71 – Betty Dodson

Public Comment Sheet  
 From Lake Country Power Newsletter  
 December 2007  
 RECEIVED JAN - 7 2008

### Power factor: a closer look at energy costs

Great River Energy is dedicated to providing reliable, competitively priced energy to its 28 member cooperatives, including Lake Country Power. With that dedication comes the need for necessary investments to improve operations, reliability and increase efficiency. Investing in the future today will ensure adequate power supply for years to come.

As a result, Great River Energy anticipates passing on an average rate increase of 8.5 percent to its member co-op systems in 2008. (Editor's Note: GRE's rate increase to Lake Country Power will actually be closer to 11 percent based on seasonal demand and time of use. It's expected this will account for an additional \$3 million impact to Lake Country Power's 2008 budget.) There are three primary reasons for the increase in Great River Energy's wholesale rate.


1) Regular system maintenance, such as outages for routine plant maintenance, helps ensure the system's reliability. However, when a generation facility is offline for maintenance, Great River Energy must purchase higher priced replacement power from the open market, which is costly. In 2008, Great River Energy will experience an extended outage for approximately 70 days at its primary generation facility in North Dakota.

2) Increasing costs to mine coal will also affect Great River Energy's finances in 2008. The coal that is being mined for Great River Energy's North Dakota operations is getting farther away from the plant and deeper in the ground, so the cost of mining that coal is rising. About 25 percent of the overall wholesale power cost increase is related to mining coal next year. The mining industry is also experiencing increases in the cost of the equipment used to mine the coal.

3) In 2008, Great River Energy will realize a full cost of ownership for Cambridge Station, a new natural gas peaking plant near Cambridge, Minn. As transmission and generation projects are completed, the impact of rising interest payments is also reflected in the member rate.

*Note*

This came from our power company!  
 Our home was built in 1993 (2 bedroom) and our electric bill is over \$100<sup>00</sup> per month.  
 Our property taxes cost over \$100<sup>00</sup> per month!  
 On our fixed income we will not be able to afford anymore taxes for all that Mesaba Excelsior Project will entail  
 Betty Dodson



71-01

## Responses

### Comment 71-01

The PUC has responsibility to approve a power purchase agreement for the Mesaba Energy Project after determining that it would be in the best interests of the utility companies and rate payers.

## Commenter 72 – Alvin Donnell



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

Name: Alvin Donnell Representing: Iron Range Council  
of Native Americans  
Email: \_\_\_\_\_  
Address: P.O. Box 373 Tel: 218 327-2092  
Bovey, Mn. 55709

### Comments:

I am an enrolled member of the White Earth Reservation but have lived near the Iron Range most of my life. There have been many changes in the area throughout my 50 years. I was too young to notice the permanent scars in our landscape made by the iron mines. As my life has changed with the birth of our children and most recently my first grandchild I feel that I must accept the great responsibility of stewardship over our Mother Earth to insure a healthy environment for these and future generations.

I was proud to attend the Nov. 27<sup>th</sup> meeting in Taconite with so many educated and well informed neighbors. Many of these requested more clarification or revisiting the EIS. According to the facts & figures presented at this meeting I would request that we stop wasting our time and money funding the

Please submit comments to meeting moderator or send to:

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

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## Responses

### Comment 72-01

See response to Comment 63-01, which addresses the same concerns.

72-01

## Responses

## Commenter 72 – Alvin Donnell

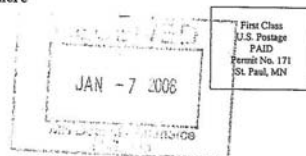
72-01  
(cont'd)

Comments Continued:

*propose to executive's salaries and continue to investigate  
more earth friendly sources of energy (wind & solar)  
We cannot continue to sacrifice our grandchildren  
to provide a more comfortable way of living for  
ourselves as the future generation will suffer or  
maybe not even be able to exist.*

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Staple/Tape here



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



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## Responses

### Comment 73-01

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

### Commenter 73 – Dorothy Stish

**MINNESOTA DEPARTMENT OF COMMERCE**

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

Name: Dorothy Stish Representing: \_\_\_\_\_

Address: 16177 Westwood  
Nashwanak, MN 55706

**Jobs from proposed Mesabi Range projects**

**Construction Jobs**  
**Permanent Jobs**

**Excelstar Energy** ■ 1,000  
proposed plant ■ 150 to 300

**Minnesota Steel Industries** ■ 2,000  
■ 700

**Mesabi** ■ 400  
Nugget ■ 200 to 300

**Polyfest plant** ■ 1,000  
■ 400

**Babbitt** ●

**ST. LOUIS COUNTY**

**NEWTERRINE GRAPHICS**

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

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*Some people call this the Mesabi Range! Many of us born in the Range and the death of the Range to the people and the Virgin men + God help you allow this to happen!*

RECEIVED  
JAN - 7 2008  
Minnesota Department of Commerce

73-01

## Responses

### Comment 74-01

DOE oversees numerous programs and projects that are investigating and supporting a wide variety of energy technologies. While a combination of technologies, including wind, solar, nuclear, and hydro power, will be important for the nation's future energy generation, coal is expected to remain one of the nation's lowest-cost sources of baseload (continuous) electric power for the foreseeable future because domestic supplies of coal are abundant. A goal of the CCPI is to develop technologies that reduce air emissions and other pollutants from coal-based power plants and to promote acceptance of viable technologies by demonstrating them at commercial scale. IGCC plants offer significant reductions in criteria pollutants and the ability to capture carbon emissions more efficiently than at pulverized coal-fired plants. While IGCC technology is not yet economically competitive with conventional coal-fired power plants that have higher emissions of criteria pollutants, DOE expects that more operating experience will help to advance the technology and reduce costs to improve the commercial viability of IGCC plants.

### Comment 74-02

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

### Commenter 74 – Nancy LaPlaca

>>> "Nancy LaPlaca" <[nancylaplaca@yahoo.com](mailto:nancylaplaca@yahoo.com)> 1/9/2008 11:35 AM >>>  
 Mr. Hargis and Mr. Storm:

Following are comments on the proposed Mesaba 600 MW IGCC plant proposed for Taconite MN.

74-01

About a dozen IGCC plants have been cancelled or put on hold during the 4 months. See the attached 3-page article about 9 IGCC plants that have been cancelled or put on hold (Emerging Energy Research, Oct. 5, 2007, "TECO, Nuon Underscore IGCC's Woes.") Since the report was issued, 2 more IGCC's have been cancelled: Colorado and Orlando. I worked long and hard to successfully stop the Colorado IGCC, but it was cancelled bc it is simply NOT economic; and although CO2 can be "captured", the entire process, from capture to compression to transportation to re-pressurization to storage -- is enormously expensive and risky. Why go there, when it's cheaper to go with wind and solar? The Orlando plant is notable because it received \$235 million in federal funds, which it must now return.

It's such a shame that our country is run by short-sighted, self-interested people who only know dollars -- and show very little respect for human life.

Facts: coal-fired power produces 40% of all CO2, 33% of all mercury and 66% of acid rain. In some states, EVERY body of water is contaminated with mercury. One in ten (some studies say one in six) women of child-bearing age in the U.S. have so much mercury in their bodies that she is at risk for having a child with serious neurological disorders.

74-02

Acid rain is a problem that is only getting bigger.

According to Peabody, coal use soared 30% in the past 5 years (2001-2006), and will increase dramatically over the next couple of decades.

Coal mining wastes are the largest waste stream in the U.S., and coal combustion wastes are second. U.S. coal peaked a few years ago in terms of BTU (heat value) per pound -- meaning that we need to burn more coal for the same amount of heat/electricity.

2/3 of a coal plant's energy is lost as waste heat.



## Responses

### Comment 74-03

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

### Commenter 74 – Nancy LaPlaca

74-03

**Renewable energy is cost-competitive.** Xcel Energy's recently submitted Colorado Resource Plan estimated these capital costs: wind-\$1645/kW (with Production Tax Credit); wind-\$2,000/kW (no PTC); concentrating solar with 6 hrs thermal storage-\$2572; IGCC with 50% capture-\$3912/kW; pulverized coal, dry cooled with 50% capture-\$3688/kW. Energy efficiency is 1-3 cents/kWh!  
[http://www.xcelenergy.com/XLWEB/CDA/0,3080,1-1-1\\_41994\\_45385-42116-2\\_68\\_135-0,00.html](http://www.xcelenergy.com/XLWEB/CDA/0,3080,1-1-1_41994_45385-42116-2_68_135-0,00.html) -(go to Vol. 1, p.1-55).

Thank you.

Nancy LaPlaca  
 Bardwell Consulting Ltd  
[www.bardwellconsulting.com](http://www.bardwellconsulting.com)  
 303-588-3937

*Mahatma Ghandi wrote about seven sins: wealth without work, pleasure without conscience, knowledge without character, commerce without morality, science without humanity, worship without sacrifice, and politics without principle. [www.energyjustice.net/coal/igcc](http://www.energyjustice.net/coal/igcc)*

Commenter 75 – Amanda Nesheim

January 9, 2008

PUC Docket E6472/GS-06-668  
DOE Draft EIS for the Mesaba Energy Project (DOE/EIS-0382D)  
Comments on Draft EIS

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Dear Sirs:

Below are nine comments that were combined in one document for your convenience.  
The comments are separated by lines.

75-01

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.

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?

75-02

I wish to draw attention 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

Responses

Comment 75-01

See responses to Comments 4-01 and 4-02, which address concerns about carbon capture and sequestration. See responses to Comments 9-02 and 22-01, which explain DOE and PUC authority to shut down power plants.

Comment 75-02

The requirements referenced in the comment apply to the Joint Permit Application and not the EIS. See response to Comment 16-01 regarding the BBER study using the IMPLAN model and response to Comment 41-01 regarding the use of cost-benefit analysis in NEPA documents. As stated in Section 1.3.1 (Volume 1) and the cooperative agreement, the estimated total cost for Phase I of the Mesaba Energy Project would be \$2.16 billion, of which DOE would provide \$36 million in co-funding through the cooperative agreement with Excelsior as part of the proposed action to demonstrate commercial-readiness of the ConocoPhillips E-Gas™ IGCC technology. Pursuant to the Energy Policy Act of 2005, DOE may also provide a loan guarantee for a portion of the private sector financing of the project. Excelsior has received other public funding and support for the Mesaba Energy Project; however, private financing would be required for the balance of project costs yet to be determined. The successful acquisition of private financing for the project by Excelsior will be dependent upon DOE's Record of Decision for the EIS, PUC's decision to issue a Joint Permit based on the EIS and the settlement of a power purchase agreement, USACE's issuance of a CWA Section 404 permit for the filling of wetlands, and the issuance of other permits by agencies consistent with Federal and state laws and regulations as outlined in Chapter 6 (Volume 1). The impacts of the Mesaba Energy Project on public health and safety, displacement, noise, aesthetics, socioeconomics, cultural resources, recreation, public services, and land uses are described throughout the resource subjects in Chapter 4 (Volume 1) of the Final EIS.

## Responses

## Commenter 75 – Amanda Nesheim

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.

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 developed for the Itasca Development Corporation. This is the study that is readily accepted as a complete cost review for the EIS.

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 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."*

Despite the cautions cited, many governmental agencies were misled 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.

It is not unreasonable to request that a cost analysis be required for the MEP to be included in the EIS. The public, both in verbal and written comments brought up the issue of conducting a cost analysis study in the EIS scoping process. It is clear that those comments were ignored, but it is also clear that a cost analysis must be conducted according to MR 7849.5220.

75-02  
(cont'd)

Commenter 75 – Amanda Nesheim

Responses

75-03

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."*

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, 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.

75-04

The Canisteo Mine Pit (CMP) is considered a national recreational attraction that includes, but is not limited to, a major trout fishery. Nowhere in the EIS is it discussed how closing the CMP to recreational use, (Excelsior Energy's intentions\*), will affect the tourism revenues brought into the area.

Nowhere does the EIS bring up the inherent danger of ground water contamination by the planned concentrated water discharges of the Mesaba Energy Project (MEP)\*\*. Yet Minnesota Rule 7849.5220 Subpart 3. F. *"a description of the effects of the facility on rare and unique natural resources."* is part of the EIS process and is ignored.

These two very important considerations need to be re-examined to determine the true effects of the MEP on not just the CMP, but the entire surrounding communities.

\*Excelsior Energy's Joint Permit Application; Supplement Part 1, page I-344.

\*\*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

and

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

75-05

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 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? I put forward the argument 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."***

Comment 75-03

Although the Mesaba Energy Project EIS relied substantially on data provided by Excelsior and its consultants consistent with DOE and MDOC policies for EIS preparation, the information was independently confirmed with primary sources as available. As stated in response to Comment 7-01, 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 (Commenter 55); 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 relying upon data consistent with, available from, and agreeable to, the respective agencies.

Comment 75-04

MNDNR would have jurisdiction over the decision to close the CMP for recreational use based on the need for security of the Mesaba intake structure. Based on demands for recreation on the CMP, MNDNR may minimize the area to be closed. See further discussion in response to Comment 76-04. Regarding potential groundwater impacts, see response to Comment 7-02.

Comment 75-05

The Mesaba Energy Project is exempt from requirements for a Certificate of Need as stated in Section 1.2.2 (Volume 1) of the Final EIS. The reference to baseload power generation needs within Minnesota was included in Chapter 1 of the Draft EIS under a section pertaining to the "Project Proponent Need" for the project. The anticipated needs for additional baseload power in Minnesota relating to plans filed in PUC dockets were outlined in Appendix F1 (Volume 2) prepared by Excelsior at the request of USACE, which is a cooperating agency for this EIS (see response to Comment 116-33). The reference to projected baseload power generation needs has been deleted from Chapter 1 (Volume 1) of the Final EIS. As stated in Section 1.4.1, DOE's need for the project "...is to accelerate the commercialization of clean coal technologies that achieve greater efficiencies, environmental performance, and cost-competitiveness."

## Commenter 75 – Amanda Nesheim

## Responses

75-05  
(cont'd)

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.

75-06

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..."***

It can be argued that the EIS was not written in plain and objective language. How can the general public decipher the ambiguous and voluminous technical data with no back-up information to which to compare or judge?

75-07

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

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."

In the interest of the providing a complete report for the Mesaba Energy Project's EIS, the MDOC should request a certificate of need.

75-08

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."*

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 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.

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

**Comment 75-06**

See response to Comment 24-01, which addresses the same concern.

**Comment 75-07**

MDOC has determined that the Mesaba Energy Project is exempt from the requirements for a Certificate of Need and the agency cannot request one.

**Comment 75-08**

In its capacity as the Federal agency responsible for the nation's energy resources, DOE estimated the number of years of available coal reserves in the U.S. As stated in Section 1.2.1 (Volume 1): "Coal accounts for over 94 percent of the proven fossil energy reserves in the U.S. and supplies over 50 percent of the electricity..." 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. Potential health risks from the Mesaba Energy Project are described in Section 4.17 (Volume 1). As explained in response to Comment 41-01, potential costs associated with qualitative considerations have not been estimated in this EIS because of the difficulty of reaching consensus on their valuation. See response to Comment 53-04 regarding the costs of potential CCS.

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## Responses

### Comment 75-09

Chapter 1 (Volume 1) of the Final EIS explains DOE's purpose and need and the agency's responsibilities under NEPA.

75-08  
(cont'd)

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.

\* The full report of Energy Watch Group can be found at:  
<http://www.energywatchgroup.org/files/Coalreport.pdf>

75-09

I respectfully suggest that the Department of Energy's (DOE) involvement in the EIS is biased and therefore the EIS cannot be relied upon to be forthcoming or accurate.

The DOE has openly and publicly supported the Mesaba Energy Project (MEP) on several occasions through different media sources. In the draft EIS the DOE openly promotes its favorable position on the MEP. It is stated in the draft 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, in which the MEP has qualified for the first two rounds in the application process.

In the interest of moral responsibility to the citizens of this community and beyond, this EIS should be disregarded in its entirety and a new one established without the biased influence of the DOE.

Respectfully submitted,  
Amanda Nesheim

## Responses

### Comment 75-10

The scope of the EIS addresses the Mesaba Energy Project Phases I and II at either the West Range or the East Range Site, including associated transmission lines and other infrastructure. If permitted, both phases would be eligible for construction and operation on the site authorized by MDOC, including HVTLs and pipeline corridors approved by MDOC. The EIS would not be applicable to other sites for potential future innovative energy projects, which would require separate permit applications. Also, MDOC has indicated that future upgrades to transmission facilities beyond the HVTL corridors described in Section 2.3 (Volume 1) would be subject to environmental review.

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January 9, 2008

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

#### The Mesaba Energy Project

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 on 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, (...on **up to three sites**), the intent to build six facilities, and the ambiguous legislation above mentioned, the EIS should include environmental, health and socio-economic impacts of all six proposed IGCC facilities.

75-10

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**Responses**

**75-11**

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 cannot be considered an Innovative Energy Project nor can it qualify for the Clean Coal Power Initiative (CCPI).

**75-12**

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.”

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 CO<sub>2</sub> 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. The DOE readily acknowledges that CCS is not environmentally or economically feasible. Therefore, this project cannot be considered environmentally successful.

**Comment 75-11**

The responses to Comments 1-02, 4-01, and 37-01 explain that the implementation of CCS is not a requirement for the Mesaba Energy Project to be considered “innovative technology” or to be eligible for the CCPI Program. MDOC and PUC have determined that the Mesaba Energy Project meets the requirements of the “innovative energy project” statute (Minnesota Statutes 216B.1694). DOE has determined that the project is qualified under the CCPI Program. These determinations are explained in Section 1.2 (Volume 1) of the Final EIS.

**Comment 75-12**

DOE’s purpose and need, as stated in Section 1.4.1 (Volume 1) are to demonstrate the commercial-readiness of a specific gasification technology in a utility-scale IGCC application. DOE will determine at the conclusion of the 1-year demonstration period whether the project has successfully met the demonstration objectives for the advancement of a gasification technology for the CCPI Program. As stated in response to Comment 4-01, the implementation of CCS is not a requirement for the successful demonstration of the Mesaba Energy Project under the CCPI Program; however, Excelsior submitted a plan for CCS that could be implemented based on regulations or incentives enacted during the commercial life of the plant. The PUC has not approved any power purchase agreement or agreements affecting the specific final revenues and costs for the project, which will determine its economic feasibility. See also response to Comment 53-01, which addresses a similar concern.



## Responses

### Comment 75-13

See responses to Comments 19-03 and 53-05, which address the same concerns. DOE's Carbon Sequestration Program also performs research, development, and demonstration of technologies and procedures for monitoring, mitigation, and verification to determine the success of sequestration and detect gas migration and leakage from a formation.

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### 75-12 (cont'd)

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).

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.

### 75-13

#### 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 CO<sub>2</sub> injected, employing advanced technologies could result in Enhanced Oil Recovery (EOR) with 60 percent of the CO<sub>2</sub> stored." This would amount to only 1,049,400 million tons (33%) of the 3,180,000 million tons of CO<sub>2</sub> 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%.

How is this cost effective or beneficial to the environment when the vast majority of the CO<sub>2</sub> 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) CO<sub>2</sub> emissions of 4,350,000 million tons, (approximately 1000 lbs of CO<sub>2</sub> per 42 gallon barrel). This clearly indicated that CCS is not the answer to reducing global warming CO<sub>2</sub>. Any economic benefits would solely go to the oil industry.

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**Responses**

**75-13  
(cont'd)**

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.

**75-14**

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.

**75-15**

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.

**75-16**

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.

**Comment 75-14**

The Cumulative Impacts discussion (Section 5.2 [Volume 1]) has been updated to reflect the latest information available about MSI, and also reviewed to verify the accuracy of data, correct discrepancies, and incorporate any more recently available data as appropriate.

**Comment 75-15**

Sections 4.17 and 5.2 (Volume 1) of the Final EIS present the results of an updated cumulative health impacts analysis that includes sources with available data.

**Comment 75-16**

See response to Comment 75-15, which addresses the same concerns.

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**Responses**

**75-16  
(cont'd)**

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 including the West Range.

**75-17**

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-evaluated because of this omission.

**75-18**

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?

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 Emissions Impact Zone below).

**Comment 75-17**

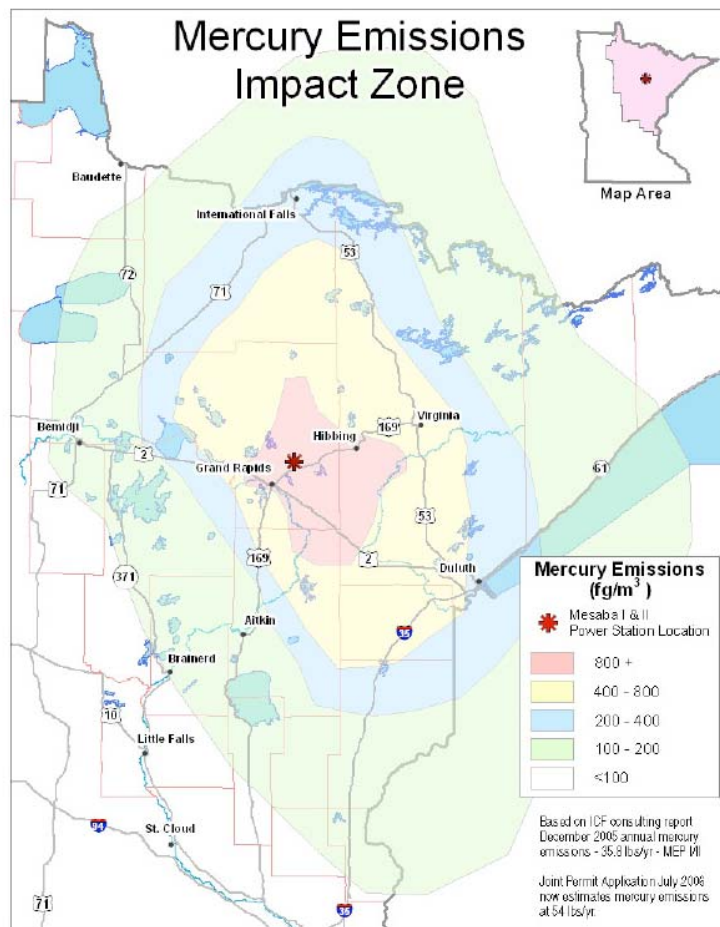
See response to Comment 75-14. The Nashwauk Public Utilities Commission has not applied for any facility that would produce air emissions.

**Comment 75-18**

See response to Comment 6-01 regarding the use of an enhanced ZLD system and the elimination of discharges of process water and cooling tower blowdown at the West Range Site.

See responses to Comments 38-01 and 42-01 regarding potential health risks from mercury emissions. Note that 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 text that addresses human health risks associated with air pollutants.

75-18  
(cont'd)



These emissions will greatly impact all of our water resources with those nearest becoming contaminated faster and more concentrated than they are currently. The 720 lakes identified in the Mercury Deposit Zone all need to be

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**Responses**

<b>75-18 (cont'd)</b>	<p>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.</p>
<b>75-19</b>	<p><u>5.2.6 Wildlife Habitat</u>          The information in this section is grossly inaccurate. It does not contain the total amount of habitat lost due to the MSI project.</p> <p>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.)</p> <p>This section needs to be corrected to reflect accurate information to determine habitat loss.</p>
<b>75-20</b>	<p><u>5.3.2 Additional Mitigation Options</u>          5.3.2.1 Cooling Water Discharge Options at West Range Site          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 its proposed location.</p>
<b>75-21</b>	<p>5.3.2.2 Mitigation Options for Visibility Impacts to Class 1 Areas – Enhancement of Existing Design Basis.          The 1<sup>st</sup> paragraph mentions MEP's current design status. It also states; "Excelsior could be required to enhance its current design basis to produce further SO<sub>2</sub> and NO<sub>x</sub> 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</p>

**Comment 75-19**

Tables 5.2.6-2 and 5.2.6-5 have been revised to provide more accurate estimations of the MSI Project's impacts to vegetation. DOE utilized the anticipated footprint of the MSI Plant for analysis to maintain consistency with analyses performed for other reasonably foreseeable future actions. It is important to note that State of Minnesota rules require the reclamation of mined lands following mining activities; therefore, permanent impacts to vegetation from the MSI Project are not currently well-defined.

**Comment 75-20**

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 75-21**

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

## Responses

### Comment 75-22

DOE is the Federal agency responsible for oversight and decisions relating to energy technologies in the U.S.; PUC is the state agency responsible for oversight and decisions relating to energy technologies in Minnesota. DOE selected the Mesaba Energy Project under the CCPI Program, because it would demonstrate an IGCC technology that DOE considers to be an advancement over conventional coal-fueled power plants (see response to Comment 1-01). MDOC and PUC have determined that the Mesaba Energy Project meets the requirements of the “innovative energy project” statute (Minnesota Statutes 216B.1694) as outlined in Section 1.2.2 (Volume 1). See also response to Comment 75-05 regarding estimated generation needs.

## Commenter 75 – Amanda Nesheim

75-21  
 (cont'd)

SO<sub>2</sub> and NO<sub>x</sub> emissions.

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

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

75-22

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 CO<sub>2</sub> annually and would add SO<sub>2</sub>, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, 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 CO<sub>2</sub> and its related costs.

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

**Commenter 75 – Amanda Nesheim**

**Responses**

**75-22  
(cont'd)**

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 any mention of needed baseload power should be stricken from the EIS.

**75-23**

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 not be referred to and any cost relationship data should be omitted.

**75-24**

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 - 4 million, considerably less than the estimated \$2.2 billion (and rising) for the MEP.

**75-25**

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.

Respectfully submitted,  
 Amanda Nesheim

**Comment 75-23**

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 75-24**

The Mesaba Energy Project has not been proposed specifically as an alternative for CMP water level stabilization. The Final EIS has been revised to acknowledge the proposed MNDNR project intended to address this issue.

**Comment 75-25**

As stated in response to Comment 41-01, the CEQ NEPA regulations recognize the difficulties in reaching consensus among differing opinions of experts and the public about the weighing of merits and drawbacks in terms of costs associated with a project. Therefore, to the extent practicable, the impacts on environmental and human health conditions have been presented in Chapters 4 and 5 (Volume 1) based on quantifiable changes and differences, the use of models and analyses required or recommended by respective regulatory agencies having jurisdiction over resources, and the comparison of results to thresholds as established by respective regulatory agencies where appropriate. The magnitude of human health risks attributable to the project based on air emission modeling as described in Section 4.17 of the Final EIS (Volume 1) would be below EPA and MPCA thresholds.

## Commenter 76 – Matt Langan

Minnesota Department of Natural Resources  
500 Lafayette Road • St. Paul, MN • 55155-4037

January 9, 2008

Bill Storm  
Department of Commerce  
85 7<sup>th</sup> Place East, Suite 500  
St. Paul, MN 55101-2198RE: Mesaba Energy Project Draft Environmental Impact Statement  
Docket #E6472/GS-06-668

Dear Mr. Storm:

The Department of Natural Resources (DNR) has reviewed the Draft Environmental Impact Statement (Draft EIS) for the proposed Mesaba Energy Project in northeastern Minnesota. We offer the following comments for your consideration. The comments are categorized as general comments, comments on the proposed West Range Site, and comments on the proposed East Range Site.

**General Comments**

It is clear from this Draft EIS that water quality standards for the Canisteo Mine Pit (CMP) and Holman Lake would be exceeded and Mesaba Energy (Mesaba) intends to request a variance during permitting. In other words, the proposal is to use waters of the state (CMP, Holman Lake, and Swan River) as part of the power plant's water treatment facility in order to meet standards at some distant, downstream location.

Mesaba is proposing to discharge an average of 600 gpm to 825 gpm blowdown to Holman Lake, and the remainder (900 gpm to 3,500 gpm) to the CMP. The Final EIS should describe the reason for this difference in distribution of discharge. It seems apparent that the justification for release of blowdown water to the environment, and its distribution to CMP and Holman Lake, is to use waters of the state as treatment facilities to accomplish dilution. If Mesaba can propose enhanced zero liquid discharge (ZLD) treatment at the East Range Site, the Final EIS should describe the potential for ZLD to be used at the West Range Site. The DNR is concerned with the use of state waters for dilution, and the dependence on getting a variance from meeting water quality standards at the West Range Site.

The Draft EIS references the reduced flooding potential and increased bank stability that will result from reducing the water level in the CMP (p. 4.5-11). Public concern has been expressed that the CMP could suddenly breach (through soil piping and subsequent mass failure, or over-topping and rapid head-cutting), causing serious flooding in part of Bovey. The real potential for mass failure has not been evaluated or demonstrated. Further, the rate of water level rise in the CMP in recent years has been significantly less than modeled in 2005, even considering the recent dry conditions, suggesting that the pit water may never rise high enough to form a surface water outflow. Re-modeling of expected future water levels is presently being conducted by DNR. This re-modeling shows that substantially higher ground water outflow is occurring from the CMP than was modeled in 2005. Mesaba has not demonstrated that lower CMP water levels will result in greater CMP wall stability. Although wave action on the glacial pit walls has an accelerating effect on pit wall erosion, the lack of wave action does not eliminate pit wall erosion since direct precipitation, wetting and drying, and freeze-thaw cycles will eventually lay the pit walls back to their angle of repose, regardless of the water level in the pit. Mesaba has not demonstrated the basis for these claimed benefits.

## Responses

**Comment 76-01**

The project proponent announced its commitment on January 21, 2008 to undertake a major regional water quality improvement program in connection with the Mesaba Energy Project Phases I and II. As stated in response to Comment 6-01, the program would include the installation of additional equipment to enhance the planned ZLD system at the power plant, which would result in all water used in the plant being recycled, thus eliminating all process water and blowdown discharges into the Upper Mississippi River watershed. In addition, as discussed in response to Comment 26-02, Excelsior has agreed to make significant capital improvements to the CBT WWTF when construction commences on the power plant. Excelsior has also proposed to fund for as long as the project is operative the addition of flocculants to the CBT WWTF and the disposal of the biosolids collected, which would significantly reduce phosphorus loading to the Swan River from the CBT WWTF. Finally, Excelsior has also proposed to fund studies to determine whether sand filters would be effective for treating mercury at the CBT WWTF. New text has been added to Section 4.14.3.3 (Volume 1) regarding Excelsior's commitment to improvements and potential impacts to the CBT WWTF.

Regarding the comment on reduced flooding potential and increased bank stability of the CMP, the Mesaba Energy Project's use of water on the West Range Site would maintain water levels in the CMP at approximately 1,290 ft MSL, which is below most or all of the town of Bovey, MN. This is the primary basis for the statement that flooding potential is reduced and was intended to address localized flooding from pit overflow. DOE recognizes that higher water levels do not constitute the likelihood of flooding or pit wall destabilization and agrees with MNDNR that, without additional stabilization measures, some bank erosion would still occur at the proposed operation levels due to natural processes that MNDNR references. Ultimately, the Canadian National Railway (CN) – the owner of the rail track adjacent to the CMP – would determine how to stabilize its rail track to allow for future commercial operations of the CN rail line.

Regarding the comment about water availability, DOE understands that Excelsior consulted MNDNR Waters Division staff and used MNDNR data to derive sustainable flow rates for use by the Mesaba Energy Project. The derived rates for the West Range Site are conservatively low (average inflow into mining pits was estimated based on data taken in recent years when water in the pits was being increasingly "lost" through fractured rock and/or unconsolidated soils in mining pit walls). Concerns about water availability at the East Range Site are addressed

76-01



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The analysis of available water is inaccurate and draws incorrect conclusions, especially for the East Range Site. Mesaba is relying on many alternative water sources being available for their use, but has not addressed existing, competing water uses, has not demonstrated control of riparian land needed to allow permits to be issued for them to appropriate water, and in many cases, has not addressed significant impacts or left them for the permitting process.

**76-01  
(cont'd)**

The Draft EIS does not address remediation of residual impacts if plant operations shut down either permanently or for extended time periods. Procedures for an unanticipated closure, and the associated impacts, should be described in the Final EIS.

Surface and mineral ownership of the CMP is controlled by a variety of parties. There is always the potential that the CMP will be proposed for mining again and need to be totally dewatered. The Draft EIS does not address any contingency plans should mining be proposed again.

Many issues seem to have been oversimplified, or briefly stated with little discussion. Effects of expected increases in pollutant discharges should be addressed. The Final EIS should also address potential impacts from pit dewatering on nearby surface waters and wetlands.

**West Range Site****Table 2.2-3. Process Water Requirements (p.2-29)**

This table states that the East Site will use, on average, 1,100 gpm to 2,900 gpm LESS water than the West Site, yet pg. 2-70 and p. 4.5-31 state that "water appropriations (for the East Site) can be reduced by up to 700 gpm per phase" (1,400 gpm total) by using enhanced ZLD technology. The numbers (and associated impacts) are conflicting (2,900 gpm is more than twice 1,400 gpm.)

**76-02**

**Figure 2.3-1. West Range Plant Site (p. 2-51)**

This figure shows water being pumped from the west end of the Gross Marble Pit (GMMP). This pumping location will not capture enough water to meet the stated Phase I and II combined demand (3,500 gpm). Further, there are conflicting numbers relating to the proposed amount of water anticipated to be pumped from the Hill Annex Mine Pit (HAMP). Figure 4.5-3 and Table 4.5-5 state 3,500 gpm, yet Table 4.5-2 states 2,000 gpm. Also, p. 4.5-14 states that there are no competing uses for the HAMP water. The Minnesota Steel (MSI) EIS concluded that MSI will need approximately 1,200 gpm from the HAMP by year 5 of their operation. The MSI EIS did not thoroughly evaluate potential impacts on Panasa Lake because there would still be at least 1,600 gpm available water after their use to be discharged to the lake. Even using the lower of the two stated water demands from the HAMP, it seems plausible that there will not be enough water for MSI and this project, let alone any surplus for Panasa Lake. The Draft EIS states (p. 3.5-7) that the HAMP can produce 3,230 gpm to 4,030 gpm, but does not show how these rates were determined. Again, the proposed pumping location in the Gross-Marble Mine Pit (GMMP) will not allow them to pump this much water on a continuous basis. Present DNR pumping from the HAMP does not support the high end of this range. Mesaba will need to work out a water use plan with MSI and should address impacts to Panasa Lake in the Final EIS. The DNR is concerned that the proposed plan relies on water that is not readily available to the project, and does not address all of the issues or impacts. For example, if less water is available from the HAMP, then it is probably that more water would have to be pumped from the Prairie River, further affecting water quality in the CMP.

**76-03**

**Responses****Comment 76-01 (cont'd)**

further in responses to Comments 76-30 through 76-36. Also, new text has been added to Section 4.5.4.1 (Volume 1) that discusses water withdrawals and potential impacts for the East Range Site.

Regarding the remediation of residual impacts during permanent/temporary plant shut-downs, presumably relating to CMP water levels, MNDNR plans to construct a gravity outflow device from the CMP to the Prairie River that would allow stabilization of the CMP water level at 1,313 ft msl. The proposed outflow would eliminate the need for the Mesaba Energy Project to provide an outfall from the CMP pumping station to Holman Lake as discussed in Section 4.5.3 (Volume 1).

Regarding surface and mineral ownership of the CMP, it is unlikely that the CMP would be mined within the economic lifetime of the Mesaba Generating Station. The ore under the CMP is largely oxidized (non-magnetic) taconite, and there are large reserves of oxidized taconite on the Iron Range that could be more economically recovered than that found under the CMP. Section 4.5.3.1 (Volume 1) discusses water source alternatives other than the CMP and identifies additional mine pits and the Prairie and Mississippi Rivers as viable alternatives.

Regarding dewatering impacts, see responses to Comments 76-02 and 76-12, which discuss the water balance and impacts from water level fluctuations to nearby surface waters, respectively. New water balance diagrams and text have been added to Section 4.5 (Volume 1) that reflect use of the enhanced ZLD system at the West Range Site.

**Comment 76-02**

The average annual water appropriation rate for the East Range IGCC Power Station shown in Table 2.2-3 of the Draft EIS (Volume 1) was stated incorrectly, and "7,400 gallons per minute" has been changed to "7,000 gallons per minute." The table has also been updated to reflect the implementation of the enhanced ZLD system at the West Range Site (e.g., average annual demand for Phase I is now 3,500 gallons per minute). Also in Sections 2.3.2.3 and 4.5.2.2 (Volume 1), text has been corrected to state that by using the enhanced ZLD system, the average annual water appropriation rate can be reduced by 900 gallons per minute per phase (1,800 gallons per minute total) in comparison to operating at five cycles of concentration with discharge of cooling tower blowdown.

Before the decision by Excelsior to use the enhanced ZLD system at the West Range Site, the cycles of concentrations (COCs) were reduced from five for the Mesaba Energy Project (i.e., Phase I only) to three for

**Commenter 76 – Matt Langan****Responses****Comment 76-02 (cont'd)**

the Mesaba Generating Station (i.e., both Phases I and II) to meet state water quality standards for the cooling tower operation. This reduction of COCs would have resulted in a greater than doubling of water requirements as stated in footnote “a” of Table 2.2-3 (Volume I) in the Draft EIS and is the reason for the “discrepancy” noted in the comment.

The Final EIS has been updated to reflect the project proponent’s announced decision, to be reflected 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. The Final EIS has been updated to describe the use of the enhanced ZLD system at the West Range Site in Sections 2.2.1.4 and 2.3.1.3 (Volume 1). Also, new text and water balance diagrams have been added to Section 4.5.3 (Volume 1) to reflect the use of the enhanced ZLD system at the West Range Site.

**Comment 76-03**

The addition of an enhanced ZLD system has changed the water balance for the West Range Site (see response to Comment 76-02, which includes updated water balance figures). The average amount of water required from the HAMP complex is reduced to approximately 2,000 gallons per minute during Mesaba Phases I and II. It is estimated that this rate of appropriation would be sustainable at current pit levels (additional hydrologic modeling would be conducted during the water appropriation permitting process to confirm these estimates). Since Gross Marble and Hill Annex mine pits are hydrologically-connected at this level, it is expected that 2,000 gallons per minute would be available at the proposed pumping location. Minnesota Steel has identified a potential need for 1,300 gallons per minute for water augmentation in the latter stages of its operations. The HAMP complex could meet both needs if water levels were maintained at lower elevation. At that level, land bridges would be exposed, which would require pipelines or pumping between pits in the HAMP complex to balance water levels. The ultimate level at which each pit could feasibly be maintained during operation of the Mesaba Energy Project would be established during the water appropriation permitting process.

Alternatively, Minnesota Steel could meet its augmentation flows from other sources as identified in its Final EIS (p. 4-47 of MSI Final EIS). Another alternative is for Mesaba Phases I and II to appropriate more water from other sources (the estimate of 2,800 gallons per minute from the CMP is assumed to be conservative, and the Prairie River could

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**76-04****3.5.1.1 Surface Water Sources – Canisteo Mine Pit Complex (p.3.5-6).**

The Draft EIS states that there can be ground water outflow from the CMP in the area between the CMP and Trout Lake where the City of Coleraine has two municipal wells. These wells, and others for Taconite and Bovey (Pg. 3.5-11), are down-gradient of the CMP. Although the Draft EIS reasonably demonstrates that the use of the CMP will not affect the available water supply in any of these municipal wells, it has not addressed potential, long-term water quality impacts to these wells. Table 4.5-6. (p. 4.5-42) states that “lowering of the water levels in the CMP should limit any migration of mine pit water into the local aquifers.” This statement is not defended with any data or analysis. In fact, page 3.5-13 states that the static water levels in all of the wells down-gradient of the CMP (1267 ft to 1290 ft) will be below the expected, normal operating elevation of the CMP (range of 1250 ft to 1300 ft, normal 1290 ft.), which strongly suggests that any of these wells could ultimately be pumping CMP water. Page 4.5-3 discusses mercury loading and concentration in the CMP. Present mercury concentration in the CMP is reported to be 0.9 ng/l (Table 3.5-4, Pg 3.5-9) while the estimated mercury concentration of the discharge water to the CMP is 4.7 ng/l for Phase I, and 6.6 ng/l for Phase II (Table 4.5-6, Pg. 4.5-16). The Draft EIS’s mercury modeling for the CMP shows a progressively increasing concentration (Figure 4.5-4). The Final EIS should describe the model used to produce these results, including the assumed hydrologic input parameters. This should include the degree to which CMP water quality will have deteriorating long-term impacts on municipal water supplies and mercury accumulation in fish tissue. Table 4.5.6. (p. 4.5-41) states, “use of the CMP (by Mesaba) may prevent its current use as a recreation facility.” The Final EIS should more fully describe what that statement means, including the circumstances under which this would happen and how Mesaba intends to keep people out of the CMP and prevent them from taking fish. This is an important public impact that is not addressed in the Draft EIS.

**76-05****Table 3.5-4. Current Water Quality for West Range Water Bodies (p.3.5-9)**

This table summarizes the current water quality of each water source; however, there was a lot of missing data in the table. To better evaluate impacts of the cooling tower blowdown (CTB) at both the West Range and East Range Sites, it is important that the Final EIS collect more base level water quality data from possible receiving waters. In addition to Figures 4.5-5, and 4.5-6 (*Chapter 4*), and Figures 3, 4, and 5 (*Appendix H*), more data is needed to model long-term discharges of mercury (and other water quality parameters) to Canisteo Mine Pit (CMP), Holman Lake, and Prairie River at the West Range Site. Collecting more water quality data from possible receiving waters will improve the accuracy of these graphs.

**76-06****3.8.1.1 Biological Resources – West Range Site (p.3.8-8)**

At the end of the “Wildlife Protected Areas” section, there is mention of an unnamed designated trout stream east of the proposed HVTL corridor. This stream is Pickerel Creek.

**76-07****3.8.2.1. Aquatic Communities – West Range Site (p.3.8-12)**

This section does not adequately describe the fisheries in Trout Lake, Holman Lake, or Panasa Lakes. The DNR has specific information for Swan and Prairie River in the vicinity of either the discharge or intake structures that could be included in the Final EIS. The DNR also has detailed information on the lakes in the vicinity of the project area. These are important resources and need to be considered with this project. This section of the Draft EIS references a publication BWCAW, 2007 but the citation is not listed in the reference section.

**Responses****Comment 76-03 (cont’d)**

provide 2,000 gallons per minute more than shown in the updated water balance figure in response to Comment 76-02). In the event of a contingency (e.g., an extended drought), under Minnesota Statute 103G.261, which dictates water allocation priorities, Mesaba Phases I and II would be either a first or fourth priority water use, while Minnesota Steel would be considered either a fifth or sixth priority use. Note that because of the complexities of analyzing water use impacts, water appropriation priorities cannot be confirmed at this time; however, the project proponent will participate in ongoing discussions with MNDNR and other stakeholders, including Minnesota Steel, to ensure that water use conflicts are resolved and impacts to water resources are minimized. See response to Comment 76-11, which discusses potential impacts to Panasa Lake.

**Comment 76-04**

The concern regarding the Mesaba Energy Project’s long-term impact on wells hydrologically connected with the CMP has been eliminated through the project proponent’s decision to use an enhanced ZLD system at the West Range Site. The project proponent has stated its need to secure the proposed intake structure on the CMP from potential post-9/11 threats, which may result in a request to close the CMP for public access in conjunction with the water appropriations permitting process. However, the proponent recognizes that demands for recreational access to the CMP would affect MNDNR’s decision and expects further discussion with the agency on the issue. In general, the project proponent would work with stakeholders to identify options in providing security measures for the proposed cooling water intake structure and pump house (e.g., establishing a designated exclusion zone within the CMP cordoned off with buoys and posted with “No Entry” signs). Section 4.13.3.2 (Volume 1) of the Final EIS has been updated to address this issue.

**Comment 76-05**

The addition of enhanced ZLD treatment has negated the water quality issues as noted in the comment and, thus, precludes the need for more precise water quality data.

**Comment 76-06**

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

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76-07  
(cont'd)

The connection with Trout Lake is very important. The Canisteo Mine Pit is hydrologically connected to Trout Lake through ground water. As the pit water level exceeds 1304 msl, this connection is more evident. Approximately 40% of the Canisteo watershed is also in the historic Trout Lake watershed. In the last two years there has been below normal precipitation. While other surface waters experienced declining water levels, Trout Lake was maintained near normal. The hydraulic residence time in Trout Lake is currently estimated at over 30 years. As some of the point sources of pollution have been eliminated and with the increased addition of pit water (through groundwater), the frequency, duration and severity of algal blooms has decreased. Severing the connection between the pit and Trout Lake because of water needs at the power plant has the potential for effects on Trout Lake that need to be studied in the Final EIS.

Canisteo Pit is currently managed for lake trout. The pit was stocked with marked yearlings annually from 1995 through 2005. Larger surplus broodstock from State hatcheries were also stocked. Evidence of natural reproduction is present and the current stocking plan is yearlings every other year.

Lake trout spawn in the fall in water depths ranging from 1 to 40 feet in inland waters (Scott and Crossman, 1973). The eggs incubate for four to five months and hatch in March or April. Significant water level reductions during this time period has the potential to interfere with lake trout natural reproduction.

### 3.13.3.1. Parks and Recreation – West Range Site and Corridors (p.3.13-2)

This section mentions an estimate of fishing pressure and recreational boating use on the pit. It is important to remember that the estimates are from summer 2001 and winter 2001-2002. This was at a time when the lake trout fishery was still developing. As this fishing opportunity has become more widely known, and a bass fishery has developed, there is likely more fishing pressure now than there was in 2001.

There is similar data on fishing and recreational boating pressure available for Trout Lake, Lower and Upper Panasa, Diamond, Oxhide and Twin. The DNR does not have any fishing pressure data from Prairie River or Holman Lake.

76-08

### 4.5.2.1. Industrial Wastewater Treatment/Discharges – Mercury and Phosphorus (p.4.5-1)

The Draft EIS states the generating station would not use any chemicals that would add phosphorus to the discharges of cooling or other waters. Introducing Prairie River water into the Canisteo Pit is a net addition of phosphorus. Based on available data, phosphorus concentrations in Canisteo are on the order of 5 ppb while the Prairie River is about 30 ppb. Over time, this will increase phosphorus levels in Canisteo and subsequently also Holman, Swan River and potentially Trout Lake. This is in contradiction to the final statement in this section, as it relates to the West Range Site.

76-09

Additionally, while the document states that mercury concentrations will stay below the threshold of 6.9 ng/l, there will be an increase that may lead to greater impairment and more restrictive consumption guidelines. This is directly related to Canisteo Pit, Holman Lake, Swan River and the Mississippi River as receiving waters, but also to other surface waters in the plume from the stacks. This impact should be more fully discussed in the Final EIS.

## Responses

### Comment 76-07

Information on fisheries in Trout Lake, Holman Lake, and the Upper and Lower Panasa Lakes has been added to Section 3.8.2.1 (Volume 1). The BWCAW, 2007 reference is listed in the reference section of the Draft EIS as follows:

“Boundary Waters Canoe Area Wilderness (BWCAW). 2007. “Fish of the Northwoods. Flora, Fauna, Earth, and Sky. The Natural History of the Northwoods.” Accessed March 16, 2007 at <http://www.rook.org/earl/bwca/nature/fish/index.html>.”

No impact on Trout Lake (at a water elevation of approximately 1,288 feet msl) is anticipated given the project proponent's intent to maintain water levels in the CMP at 1,290 ± 2 feet msl. In the unlikely circumstance in which no recharge of the CMP occurred over a five-year period, water levels would drop to a level of 1,260 feet msl. However, even as CMP levels rose dramatically following cessation of mining activity (from 1,250 feet in 1989 to over 1,310 feet at present), there has been no discernible impact on Trout Lake water levels, which over the same time period remained between 1,287 and 1,289 feet as reported by MNDNR (See <http://www.dnr.state.mn.us/lakefind/index.html>).

Though water level variations in the CMP would normally be expected to occur very slowly and not disturb the incubation of eggs, text has been added to Section 4.8.2.2 (Volume 1) of the EIS to address potential impacts of water level reductions on lake trout reproduction.

### Comment 76-08

Section 3.13.3.1 (Volume 1) has been revised in the Final EIS to note that the boating and fishing data were collected in summer 2001 and winter 2001-02 and that fishing pressure has increased since that time as the trout fishery has become established and a bass fishery has developed.

### Comment 76-09

Re-modeling of phosphorus levels in the CMP, based on the updated water balance, was conducted to analyze impacts to water quality in the CMP. In general, use of the enhanced ZLD system at the West Range Site would eliminate discharge and phosphorous levels in the CMP would be within state standards. New text has been added to Section 4.5.3.2 (Volume 1) regarding new analysis on phosphorous levels in the CMP.

Regarding other water quality impacts, the use of an enhanced ZLD system at the West Range Site would preclude any concerns of impacts from mercury discharges.

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**76-10**

4.5.2.1. Industrial Wastewater Treatment/Discharges – Total Dissolved Solids (p.4.5-3)  
TDS concentration in Holman Lake will reach the 700 mg/l standard within the first two years of operation and Mesaba is expected to request a variance for exceeding this threshold. CMP TDS concentration is expected to reach the standard in 26 years. The company should have a plan to mitigate for this and not be expecting to receive a variance.

**76-11**

Figures 4.5-2 and 4.5-3 Phase I and II Water Balance: West Range Site (p.4.5-8)  
This figure illustrates the water balance under phases I and II. In phase I, there would be an augmentation flow of 700 gpm to Panasa Lake from HAMP, while in phase II augmentation would be 0 gpm. The Draft EIS does not describe potential impacts to water quality in Panasa Lake if the flow from HAMP is reduced to 700 gpm and then to 0 gpm. These should be described in the Final EIS.

**76-12**

4.5.3.1 Process Water Supply Systems – Water Resources Management Plan (p.4.5-11)  
The Water Resources Management Plan includes dropping water levels in CMP to stabilize the rail line. The DNR asks that the Final EIS describe the method and efficacy of stabilizing that bank. A large amount of fill will likely be required and this connected action should be evaluated in the Final EIS.

"Several pits" are filled, overflowing, being pumped or threatening to overflow. There should be a discussion on the specific pits, the receiving waters of each pit and whether or not receiving waters do or will benefit from the discharge. Water may be discharging not from just the surface of pits, but also subsurface discharge may be occurring which may benefit nearby receiving waters.

Unknown flow from CMP pumped during mining to Holman Lake is "expected" to exceed the amount to be pumped during Phase I & II. This statement should not be made when the amount of flow pumped to Holman Lake during mining is "not known."

**76-13**

4.5.3.1 Process Water Supply Systems – CMP Pumping Station (p.4.5-12)  
The Draft EIS states that the intake structure would be located at least 200 feet below the water surface and below the thermocline to prevent the inadvertent transfer of smelt to Holman Lake. The figure on page 4.5.5 shows a conceptual design of the caisson structure with a caisson bottom at elevation 1215 msl with the intake tunnel just below the emergency buffer elevation, not 200 feet below the surface. Based on our dissolved oxygen/temperature profiles there is a rapid drop in temperatures between about 20 and 35 feet but dissolved oxygen is sufficiently high to support fish. While the length of cable on our probes extends to only 200 feet, there is still adequate dissolved oxygen at that depth in mid-August. Wenck and Associates was hired by the Western Mesabi Mine Planning Board to develop engineering designs for a conveyance system from CMP to Swan River. They worked with Alden Research Laboratory to investigate fish exclusion strategies for the intake. One strategy was to have a deep intake, however, it was concluded that this did not provide adequate safeguards against the transfer of smelt and was rejected. The Final EIS should also more fully discuss construction techniques for a 10-foot diameter, horizontal shaft through bedrock below 200 feet of water.

**76-14**

Table 4.5-5. Discharge Flow Rates for the West Range Site (p.4.5-15)  
This table provides estimated average and peak flows to CMP as 3,500 gpm and 6,000 gpm during Phase I and II, respectively. Discharge flows to Holman Lake are listed as 6,000 gpm at peak for Phase II. Thermal impacts were modeled using a flow rate of 2,400 gpm. In the Final EIS, thermal impacts should be modeled using the higher anticipated flows to more accurately describe the size of the mixing zone.

**Responses****Comment 76-10**

The use of an enhanced ZLD system would preclude concerns of water quality impacts from proposed wastewater discharges at the West Range Site. See response to Comment 6-01, which addresses the use of the enhanced ZLD system.

**Comment 76-11**

New text has been added to subsection *Water Levels and Water Balance During Operations* (under Section 4.5.3.1 [Volume 1]) which describes potential impacts to Panasa Lakes. The absence of any reported discharge to Panasa Lakes over the two year period 2000 to 2001 (see Table 4.5-8, Volume 1), coupled with the coincidental lack of complaints regarding water quality in Panasa Lakes, suggests that operation of a new wastewater treatment plant installed to improve treatment of domestic sewage from the cities of Marble and Calumet has reduced the likelihood of significant impacts occurring as a result of eliminating discharges from the HAMP to the Panasa Lakes. Additional hydrologic modeling and consultation with MNDNR would be conducted during the water appropriation permitting process to confirm this presumption.

**Comment 76-12**

Stabilization of the rail line is not within the scope of the EIS. CN Railway owns the rail line along the part of the bank that is in closest proximity to the track and would be responsible for restoring the rail to service (CN had determined that repairs to this line were not appropriate in the absence of a long term solution to keep water levels from rising [MEP Env Supplement, 2006]). The specific stabilization method would be determined by CN in the event the Mesaba Energy Project is constructed on the West Range Site. In general, the method would depend on the water level at the time of bank stabilization and the erosion that occurs in the interim, and could involve rip rap or construction of a retaining wall to stabilize the bank at an angle steeper than natural repose, as well as the use of fill material to restore the eroded bank. See also Comment 76-01.

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

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**Comment 76-12 (cont'd)**

discharges and decrease water demand and, thus, reduce most of the water quality and quantity concerns discussed in the Draft EIS. For the East Range Site, text has been added to Section 4.5.4.1 (Volume 1), which provides updates on the water supply alternatives.

**Comment 76-13**

The use of an enhanced ZLD system at the West Range Site would eliminate the need for an outfall to Holman Lake for regular operations of the proposed plant. Also, the gravity outflow device proposed by MNDNR from the CMP to the Prairie River to reduce water levels in the CMP (see also Comment 76-01) would negate the need for an emergency outfall from the CMP intake pumping station to Holman Lake as originally proposed for the Mesaba Energy Project and discussed in the Draft EIS. The project proponent originally proposed to prevent the transfer of rainbow smelt larvae from the CMP to Holman Lake by withdrawing water at depths greater than 250 feet. However, based on comments received from MNDNR on the Draft EIS and research conducted by Alden Research Laboratory, oxygen levels appear to be adequate to support smelt larvae throughout the entire CMP water column (Wenck, 2006). Therefore, a 200-foot or deeper intake structure would not necessarily prevent the transfer of smelt larvae. Instead, Excelsior proposes to install four directionally drilled angle-wells to a depth of approximately 20 feet below the summer thermocline or approximately 60 feet below the surface of the lowest estimated future water level. New figures and text have been included in Section 4.5 (Volume 1) that describe the proposed intakes structures.

**Comment 76-14**

The use of an enhanced ZLD system would negate the majority of water quality concerns at the West Range Site as initially discussed in the Draft EIS, including thermal discharges and concentration of solids. See response to Comment 6-01, which addresses the use of the enhanced ZLD system at the West Range Site. Text has been added/revised in Sections 2.2.1.4, 2.3.1.3, and 4.5 (Volume 1), which reflects the use of the enhanced ZLD system.

Regarding use of the GMMP (and HAMP Complex), the average amount of water required from the HAMP complex has been reduced from 3,500 gallons per minute (as stated in the Draft EIS) to approximately 2,000 gallons per minute for the combined Phases I and II. It is estimated that this rate of appropriation would be sustainable at current pit levels (additional hydrologic modeling and consultation with MNDNR would be

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76-14  
(cont'd)

It is difficult to determine the actual location of the discharge point in the figures, but it appears to be in an embayment very near a spot used as an access point. Additional detail is necessary in the Final EIS to describe the impact to the actual location. This description should cover the biological impacts as well as potential impacts to angler access from a safety perspective if winter discharge is to occur. Also, it might be possible to pump a sustained 2,000 gpm from the HAMP (as previously suggested, the Draft EIS misnames the GMMP as the HAMP - since Mesaba is not proposing to install a pump in the HAMP) for Phase I, but the GMMP will not yield 3,500 gpm needed for Phase II. The Final EIS should state how much water could be pumped continuously from the GMMP. Also, on pg. 4.5-15 it is stated that water will be pumped from the CMP in order to keep the concentration of solids from building up in the pit. Since Mesaba will not be able to pump as much water from the GMMP for Phase II as they need, it seems probable that water quality within the CMP will exceed standards quicker and more frequently than the Draft EIS anticipates. According to the proposed plans, this problem will be transferred downstream to Holman Lake. These water availability numbers and plans should be re-run in the Final EIS.

4.5.3.2. Process Water Discharges and Water Quality Criteria (p.4.5-15)

The Draft EIS states that water hardness, TDS, sulfate and conductivity are expected to exceed water quality standards. The company questions whether MPCA would apply the standards to CMP and Holman Lake because they believe these standards do not apply to these "unlisted" waters. If these standards do apply, the company would have to apply for a variance. As mentioned earlier, the company should propose other water treatment options instead of requesting a variance.

There is research that suggests high sulfate levels may have some influence on the methylation of mercury, especially in wetlands. Since the Swan River and Mississippi River are already listed as impaired because of mercury in fish tissue, some analysis of the effect of raising sulfate levels on mercury needs to be included in the Final EIS.

## 76-15

Page 4.5-17 of the Draft EIS states that the "Generating Station would not add mercury, phosphorus or other pollutants that are associated with impairment concerns to the receiving waters." This is a misleading statement, as blowdown from the Generating Station would concentrate certain constituents, including mercury and certain salts, in addition to substantially reducing the volume of water in the CMP, further concentrating certain constituents to the point of potentially exceeding state water quality standards. Further, on this page it is stated, "the proposed operation of the Phase I Mesaba Generating Station would not increase the mass of mercury or phosphorus over that currently permitted from the HAMP complex under NPDES Discharge Permit MN0030198. Mesaba is apparently concluding that project discharge would not send any greater load of mercury or phosphorus to the Swan River than is presently permitted under the DNR's NPDES permit for the Hill Annex State Park. This is another misleading statement. First, the NPDES permit held by the Hill Annex State Park will soon expire. The MN Pollution Control Agency has concluded that the permit is not necessary since the Park does not discharge any water resulting from industrial processing, as described in the Mesaba plans. Second, the discharge from the HAMP flows to Panasa Lake and has no hydrologic connection with the CMP or Holman Lake. Finally, the implication of "no increased loading = no impact" is misleading since Mesaba is concentrating constituents of concern in the CMP water, which has a direct connection to the Biwabik Iron Formation (an important regional aquifer for municipal water use), and Holman Lake, which is a designated public water.

## Responses

## Comment 76-14 (cont'd)

conducted during the water appropriation permitting process to confirm these estimates). The GMMP would typically be operated in the range of 1,220 to 1,230 ft msl. It is expected that the GMMP and HAMP are hydrologically-connected within the planned operating levels and 2,000 gpm would be available at the proposed pumping location. New text has been added to subsection *Water Levels and Water Balance During Operations* (under Section 4.5.3.1, Volume 1) that discusses potential impacts to the GMMP and HAMP Complex.

## Comment 76-15

The use of an enhanced ZLD system would negate the majority of water quality concerns at the West Range Site, including water hardness, TDS, sulfate and conductivity issues. See response to Comment 6-01, which addresses the use of the enhanced ZLD system at the West Range Site. Text has been added/revised in Sections 2.2.1.4, 2.3.1.3, and 4.5 (Volume 1), which reflects the use of the enhanced ZLD system. Section 4.5.3.2 (Volume 1), *Process Water Discharges and Water Quality Criteria*, has been revised to reflect use of the enhanced ZLD system.



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76-15  
(cont'd)

Page 4.5-18 of the Draft EIS states: “at the expected discharge flow to Holman Lake, the annual phosphorus loading would be less than currently permitted from the Hill-Annex Mine Pit.” This is another misleading statement since the DNR’s dewatering of the Hill Annex Pit does not flow through Holman Lake and the DNR’s NPDES permit will soon expire.

76-16

Table 4.5-9. Chemical Additives Used Per Year (p.4.5-21)

The Draft EIS states, “[chemical additive] quantities are preliminary estimates only and are subject to revision when the specific water chemistry program for the facility is developed for submission to appropriate regulatory agencies.” Water chemistry programs should be fully described in the Final EIS in order to understand the associated environmental impacts.

76-17

4.5.3.3 Domestic Wastewater Treatment – Alternative No.2 (p. 4.5-24, 25)

It appears that the data used to establish average flows to the Coleraine-Bovey-Taconite wastewater plant was taken from a five-month period in 2005. Is this a representative sampling? It is stated the design capacity is 499,000 gpd and during the wettest 30-day period the flow increased to 444,000 gpd. The Final EIS should describe the likelihood of exceeding plant capacity and cause an increase in the frequency, duration and magnitude of bypassing raw sewage to surface waters due to the proposed addition of 30,000 gpd during construction.

76-18

4.5.3.4. Surface Water Resource Permits – MPCA NPDES/SDS Permit (p.4.5-27)

The Draft EIS states in this section that recreational use of the CMP may be discontinued. The Final EIS should explain the basis for this statement. The CMP is developing into a significant lake trout and bass fishery and provides recreational opportunities for many people, both from within and outside the local area. Opportunities to fish for lake trout are very limited in this area and significant State funding has been spent to develop this fishery. This section also states that “increased flows through Holman Lake would potentially benefit recreational users of the Gibbs Park swimming beach as any instances of stagnation in the lake would be reduced” The DNR is not aware of any stagnation problems in this lake. It is again stated on this page that water quality standards for certain parameters would be exceeded in the CMP and Holman Lake, and that “Excelsior would have to apply for a waiver to exceed standards for these parameters and be granted the waiver by MPCA during the permitting process in order to operate the generating station” The East Range Site, because of the stricter mercury standard, could be built with an enhanced ZLD facility. It seems apparent that an enhanced ZLD facility could also be constructed at the West Range Site to avoid contamination of the CMP and Holman Lake.

76-19

Table 4.5.6. Summary of Impacts (p.4.5-41)

This table states, “Cumulative effects on receiving water (for the West Range Site) would be monitored to ensure parameter concentrations do not exceed water quality standards.” This statement is contradicted in numerous other locations in the EIS (e.g., pg 4.5-27).

76-20

4.7.7.1 Wetland Regulatory and Policy Considerations (p.4.7-33)

Although the Draft EIS states that the DNR, Lands and Minerals Division has indicated that it may become the designated local government unit administering the Wetland Conservation Act (WCA), WCA is clear that the DNR, Land and Minerals Division is the designated LGU approval authority for wetland replacement plans only when there is a Permit to Mine involved. Because there will be no Permit to Mine issued for the Mesaba Energy Project, Itasca County SWCD would be the WCA LGU for the West Range Site, near Taconite; and the St. Louis County Planning Department should be the WCA LGU for the East Range site, near Hoyt Lakes.

## Responses

### Comment 76-16

The use of an enhanced ZLD system would eliminate the need for the description of a water chemistry program as no discharges would occur at the West Range Site. Table 4.5-9 that was presented in the Draft EIS has been deleted. Section 4.5.3.2 (Volume 1), *Process Water Discharges and Water Quality Criteria*, has been revised to reflect use of the enhanced ZLD system.

### Comment 76-17

The responses to Comments 26-2 and 76-01 address similar concerns about the existing wastewater facilities. The Coleraine-Bovey-Taconite (CBT) Joint Sewer Authority Wastewater Treatment Facility Plan, to be used as a planning document for wastewater treatment over the next 20 years, was prepared for the CBT Joint Wastewater Commission (SEH, 2007). The report presents historical flow and load data (years 2003 through 2006) and indicates that the average flow at the CBT WWTP was 304,000 gallons per day, which is lower than the 334,000 gallons per day estimate that was reported in Section 4.5.3.3 of the Draft EIS (Volume 1). Per MPCA guidelines, the report indicates that (based on a population of 2,152) inflow and infiltration (I/I) rates are 450,000 gallons per day and 140,000 gallons per day above MPCA thresholds, respectively. Thus, both inflow and infiltration are considered excessive according to state guidelines.

As described in the facility plan, the CBT WWTP’s expansion plan was based on projected wastewater flow from anticipated housing developments the WWTP would need to serve. The 20-year design flow is estimated to be 835,000 gallons per minute, which is much greater than the current design flow of 499,000 gallons per minute. Therefore, based on the report findings, the CBT WWTP would likely need to expand regardless of whether the Mesaba Energy Project is built. Thus, it is expected that Excelsior’s proposal to aid in the rehabilitation of the CBT WWTF would provide improved capacity to more than offset the temporary addition of 45,000 gallons per day of wastewater during construction – provided funds for new WWTF equipment and upgrades were used to significantly reduce I/I flow and increase the facility’s capacity to handle future population growth. In this instance, the likelihood of exceeding the facility’s capacity or discharging raw sewage to surface waters would be minimized.

### Comment 76-18

The response to Comment 76-04 discusses Excelsior’s position with respect to the restriction of recreational access to the CMP for security purposes. The Draft EIS acknowledged that the CMP is stocked with



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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]). See also response to Comment 76-08.

Regarding the potential benefit from increased flows through Holman Lake, the statement “increased flows through Holman Lake would potentially benefit recreational users of the Gibbs Park swimming beach as any instances of stagnation in the lake would be reduced” has been deleted as the use of an enhanced ZLD system would now eliminate any discharges.

Regarding avoidance of potential contamination of CMP and Holman Lake, the use of the enhanced ZLD system negates the majority of water quality concerns at the West Range Site as originally discussed in the Draft EIS. See response to Comment 76-01, which addresses the use of the enhanced ZLD system at the West Range Site and its implications on water quality impact.

**Comment 76-19**

The Final EIS has been updated to reflect the project proponent’s announced decision, to be reflected in revised permit applications to MPCA, to utilize an enhanced ZLD system at the West Range Site, which would eliminate discharges of process water and cooling tower blowdown into any water bodies. See responses to Comments 6-01 and 76-01, which addresses the use of the enhanced ZLD system at the West Range Site.

**Comment 76-20**

As stated in the first paragraph in Section 3.7.2 (Volume 1) of the Draft EIS: “The Minnesota Wetland Conservation Act (WCA) regulates state waters and wetlands (Minnesota Rules Chapter 8420), while the Itasca County Soil and Water Conservation District (West Range), and St. Louis County (East Range) administer the WCA locally.”

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76-21	<p><u>4.8.2.1 Impacts of construction on wildlife and 5.2.6.3 Summary of environmental consequences</u> These two sections do an inadequate job addressing the issue of forest fragmentation brought about by the construction of the power plant and open corridors through a forested landscape for rail roads, transmission lines, pipelines, and access roads. They need to address the issue of forest bird species that are in decline and how this project will affect them. There's little mention about impacts to birds and other resources caused by the construction and maintenance of the 230 kV powerlines and associated 130-foot, high-voltage transmission towers. Some potential long-term, adverse impacts include: wetland type conversions, invasive plant species introductions, vegetation management needs, access road needs, OHV traffic, bird &amp; bat strikes, and forest fragmentation. The Final EIS should elaborate on these impacts, and how they can be mitigated.</p>
76-22	<p><u>4.8.3.2 HVTLL Pipeline and Transportation Corridors – Aquatic Communities (p.4.8-19)</u> The Draft EIS states that the construction and operation of the cooling tower blowdown outfall pipeline is expected to have minimal impact on lake trout in CMP. However, there are no data or analysis presented to substantiate this. Recycling blowdown water to the pit will have effects on water quality, which could impact lake trout. Of particular concern is increasing the concentration of phosphorus. The addition of Prairie River water which has approximately 6 times the concentration, and the further concentration through evaporation over time, could make the pit less suitable for lake trout. A more detailed analysis is necessary to fully understand and quantify the impacts.</p>
76-23	<p><u>5.2.4.1 Cumulative Effects on Water Resources – West Range Water Quantity (p.5.2-14)</u> This section fails to discuss cumulative impacts to Panasa Lakes, Holman Lake, CMP and Trout Lake. Cumulative effects to the water quantity among these water resources should be described and analyzed in the Final EIS.</p>
76-24	<p><u>5.3.2. Additional Mitigation Options – Wetland Resources (p. 5.3-11)</u> In the first paragraph on this page it states that flows from the Prairie River would go to Lind Mine Pit, then to Canisteo and discharged to Holman Lake and Swan River then back to Prairie River. The Swan River discharges to the Mississippi River, not Prairie River.</p>
76-25	<p><u>5.3.2. Mitigation Alternative 2a – Thermal Impacts (p.5.3-13)</u> The Swan River provides marginal summer habitat under low flows for many species of fish. Placing an additional stressor on this resource may tip the balance unfavorably. While additional flow at low water periods may be desirable for some species, low flows are a natural occurrence and the additional flow would be an artificial augmentation. Additionally, the "cost" of water that is too warm may not be worth the "benefit" of additional volume.</p>
76-26	<p><u>Appendix D3</u> The Cumulative Water Resources Effect Assessment presents Table 4 and lists phosphorus concentrations &lt;0.1 mg/l. There are accepted water quality tests that can provide resolution to below 0.01 mg/l. Concentrations of phosphorus on the order of 0.03 mg/l can have negative effects on water quality. A finer level of resolution should be presented in the Final EIS so that a more realistic assessment of effects can be completed.</p>

## Responses

### Comment 76-21

See responses to Comments 14-02, 57-10, 57-11 and 59-02, which address the same concerns. Sections 4.8 and 5.2.6 (Volume 1) have been updated with additional information about forest fragmentation, impacts on bird species, the introduction of invasive species, and the mitigation of impacts.

### Comment 76-22

With the project proponent's announced decision to implement an enhanced ZLD system at the West Range Site (see response to Comment 6-01), discharges to surface waters as discussed in the Draft EIS would not occur. Therefore, lake trout would not be adversely impacted by the discharge of blowdown water to the CMP.

### Comment 76-23

Section 5.2.4.1 (Volume 1) and Appendix D3 (Volume 2) have been updated to reflect use of the enhanced ZLD system. See responses to Comments 76-11 and 76-12, which address the same concern.

### Comment 76-24

The use of the enhanced ZLD system at the West Range Site eliminates discharges to Holman Lake and, consequently, the need for the requested clarification. See responses to Comments 6-01, 76-10, and 76-12.

### Comment 76-25

The use of an enhanced ZLD system would preclude concerns of thermal 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. New text has been added to subsection *Water Levels and Water Balance During Operations*, under Section 4.5.3.1 (Volume 1) that describes potential impacts to Swan River.

### Comment 76-26

Section 5.2.4.1 and Appendix D3 (Volume 2) have been updated to reflect the use of an enhanced ZLD system at the West Range Site, which precludes most of the water quality impacts as originally discussed in the Draft EIS. Regarding impacts to phosphorous levels in the CMP, see new text in Section 4.5.3.2 (Volume 1) for the re-analysis of phosphorous levels in the CMP, which addresses this concern and presents phosphorous estimates at a finer scale.

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### 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.

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.

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.

### 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.

76-27

76-28

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76-29	<p><b>East Range Site</b> 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.</p>
76-30	<p><b>2.2.2.3. Process Water Requirements (p.2-29)</b> 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).</p>
76-31	<p><b>Table 2.3-5. Process Water Sources – East Range Site (p. 2-71)</b> 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.</p>
76-32	<p><b>3.8.2.2. Aquatic Communities – East Range Site (p.3.8-13)</b> 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.</p>
76-33	<p><b>4.5.4. Impacts on the East Range Site and Corridors (p.4.5-31)</b> 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</p>

**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.

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**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.

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) than 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.

**76-34**

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.

**76-35**

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.

**76-36**

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**

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 76-36**

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.

## Responses

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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

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## 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

>>> "Jean Halverson" <[halverjh@mchsi.com](mailto: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 77-03**

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**

**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



**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". 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. 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.

77-05

77-06

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.

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 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 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

**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 7<sup>th</sup> 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 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

78-01

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<sub>2</sub> storage in geologic formations will remain secure for long time periods. The Sleipner project in the North Sea began injection of CO<sub>2</sub> into the Urtisa formation in 1996, and repeated seismic surveys have indicated that the CO<sub>2</sub> 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 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 79-01

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

### 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**

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 the 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

79-01

**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

**Responses**

**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.

**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.

**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.”*

**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.

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.”*

**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.

**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.

**Commenter 80 – Andrew David**

**Responses**

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|--------------|---|
| <b>80-07</b> | 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.   |
| <b>80-08</b> | 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.   |
| <b>80-09</b> | 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. |
| <b>80-10</b> | 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.   |
| <b>80-11</b> | 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.   |
| <b>80-12</b> | 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)   |

**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

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| <b>80-13</b> | 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)   |
| <b>80-14</b> | 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)  |
| <b>80-15</b> | 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. |
| <b>80-16</b> | 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.  |
| <b>80-17</b> | 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.  |
| <b>80-18</b> | 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.  |
| <b>80-19</b> | 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.  |
| <b>80-20</b> | 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**

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|--------------|--|
| <b>80-21</b> | 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 single Census Tract for each site?  |
| <b>80-22</b> | 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.  |
| <b>80-23</b> | 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.   |
| <b>80-24</b> | 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

**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**

**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

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 80 – Andrew David

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.
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.
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.

**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<sub>2</sub> 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<sub>2</sub>. 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.

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](http://www.camp-site.info) Please add this email as part of CAMP's Draft EIS comments.

Ed Anderson  
Citizens Against the Mesaba Project

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## Responses

### Comment 82-01

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

82-01

## 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)

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).

82-02



## 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

### 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 11<sup>th</sup> 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 82-04

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

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

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.

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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.”

82-04

82-05

**Commenter 82 – Ed Anderson**

**Responses**

**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?

**82-07**

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..."

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.

**82-08**

Certificate of Need:  
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

**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<sub>2</sub> 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.

## 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

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.”

#### Canisteo water, recreation, and municipal aquifer risk.

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.

#### Submitted documentation regarding municipal aquifer risk:

\*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

82-08  
 (cont’d)

82-09

**Commenter 82 – Ed Anderson**

**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.

**82-09  
 (cont'd)**

and

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

**Commenter 82 – Ed Anderson**

**Responses**

**82-10  
 (cont'd)**

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."

Despite the cautions cited, many governmental agencies were misled 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

**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<sub>2</sub> 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**

**Responses**

**Comment 82-12**

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

**82-11  
 (cont'd)**

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.

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.

**Certificate of Need:**

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**

**Commenter 82 – Ed Anderson**

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

## Responses

### Comment 82-13

The potential to capture a concentrated stream of CO<sub>2</sub> 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.

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 Koppendrayner 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 2<sup>nd</sup> 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

Commenter 82 – Ed Anderson

Responses

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?

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

Responses

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.

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<sub>2</sub> emissions in tables.

### Comment 82-31

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

**Commenter 82 – Ed Anderson**

**Responses**

**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 CO <sub>2</sub> .  Further, the DEIS assumes a direct route following a road or railroad. A CO <sub>2</sub> 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 CO <sub>2</sub> .
2-21, 2-22	CO <sub>2</sub> capture	Many details are not included about the CO <sub>2</sub> capture, energy required, energy required to pump the CO <sub>2</sub> from 400 to 750 miles, etc. Further, if CO <sub>2</sub> Capture is not required, Mesaba will be the second largest source of CO <sub>2</sub> in the state. It will increase rather than solve the problem.
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.
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.

**82-32**

**82-33**

**82-34**

**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

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

Paragraph 3.2.1.2

82-35

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?

Paragraph 3.3.1

82-36

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.

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

82-37

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.**

3.4 Geology and Soils

82-39

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

**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.

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.

Commenter 82 – Ed Anderson

- 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.



**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

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 in 1985
- 82-43** | 3.5.7 Prairie River....Flow data collected 1967 to 1983 and 2001 to present? DNR was installing flow metering in August of 2007. Mean annual flow was established to be 319 ft<sup>3</sup> 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 than 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.

**Commenter 82 – Ed Anderson****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.

**Commenter 82 – Ed Anderson**

**Responses**

<b>82-51 (cont'd)</b>	restrictions and while water is too solid to control dust), rainfall/snowfall en route to the surface,.
<b>82-52</b>	3.9.2.1 Has burial mound at Big Sucker Lake been examined yet?
<b>82-53</b>	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.
<b>82-54</b>	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.
<b>82-55</b>	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.
<b>82-56</b>	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.
<b>82-57</b>	3.8-6 Habitat fragmentation is a problem primarily <u>around</u> 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.
<b>82-58</b>	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.
<b>82-59</b>	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.
<b>82-60</b>	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.

**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](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.

**Commenter 82 – Ed Anderson****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?
- 82-62** | Appendix  
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

**Commenter 82 – Ed Anderson**

**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

**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.

## Commenter 82 – Ed Anderson

Miltich Comments - 1

## 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?"

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).<sup>1</sup>

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<sub>10</sub> concentration increase in Class II areas is 30 µg/m<sup>3</sup>. The value of 37 µg/m<sup>3</sup> 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 µg/m<sup>3</sup> 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/m<sup>3</sup> 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<sub>10</sub> 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<sub>10</sub>. Therefore, it is not correct to add the increment results of the two sources.

82-69



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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.

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:

82-70

In the analysis of the affect on air quality in the Class II area:

-Mesaba shows an existing background of Sulphur Dioxide (SO<sub>2</sub>) at 10 ug/m<sup>3</sup> in 1 hour, while MN Steel shows 90.

-Mesaba shows background Nitrogen Oxide (NO<sub>x</sub>) 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 SO<sub>2</sub> 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).

### 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.**

82-71

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 (NO<sub>x</sub>) emitted from regional facilities that currently exist,<sup>2</sup> 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 (NO <sub>x</sub> )	40	2,872
Sulphur Dioxide (SO <sub>2</sub> )	40	1,390
PM	25	503
PM10	15	493 (West)
O <sub>3</sub> 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<sup>3</sup> at the West Range Site and 26.3 µg/m<sup>3</sup> 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<sub>2</sub> concentrations in BWCAW: The 1.5 µg/m<sup>3</sup> figure from the Draft EIS refers to predicted impact from the Mesaba Energy Project. The 10.8 µg/m<sup>3</sup> figure from the MSI Final EIS refers to the estimated background concentration. They refer to different quantities and, therefore, need not agree.

## 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

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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.<sup>3</sup> 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.

### 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.<sup>4</sup> 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.

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."<sup>5</sup> 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?

82-71  
(cont'd)

82-72

## Commenter 82 – Ed Anderson

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## Responses

82-73

**IV. Acid Rain:**

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).

82-74

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

Mesaba will emit 9.4-10.6 million tons/year of CO<sub>2</sub>, 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 CO<sub>2</sub>.

82-75

**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”<sup>6</sup> 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 (SO<sub>2</sub>) and nitrogen oxides (NOX) emissions in Northeastern Minnesota. Again, why add more sources of pollution?

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,” 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 phase chemistry is highly simplified. These simplifications are likely to be deficient when applied to situations in which complex chemistry dominates the processes responsible for

**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.

## Commenter 82 – Ed Anderson

Miltich Comments - 5

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”<sup>8</sup>

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<sub>2</sub> 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<sub>3</sub> emissions.”<sup>9</sup>

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 BWCW 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....

Further, Mesaba’s DEIS states that “PM<sub>10</sub> concentrations at the Boundary Waters over a 24-hour averaging period exceeds the SIL,” and that “at the West Range site, SO<sub>2</sub> 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 PM<sub>10</sub> in the Class I area would range from 4.83 to 7 days for the 3 years modeled. The increment standard is 8 g/m<sup>3</sup> for Class I Areas. *It appears the combination of Mesaba and MNSteel’s emission of PM<sub>10</sub> 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 SO<sub>2</sub> concentrations are less than 40 g/m<sup>3</sup>” (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

82-75  
(cont'd)

## Commenter 82 – Ed Anderson

Miltich Comments - 6

### VII. Mitigation:

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.

82-76

### VIII. Inaccurate statement regarding Mineral Loss:

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<sup>10</sup> states that from the west half of the Arcturus Mine to Canisteo there are 460 million long tons of partially oxidized to unoxidized 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.

82-77

**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.

82-78

### Notes

1. [www.epa.gov/epaoswer/hazwaste/id/paint/section5-6.pdf](http://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](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/bcprefiled/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](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.

## Responses

### Comment 82-79

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

### Commenter 82 – Ed Anderson

Miltich Comments - 7

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.

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 warming, 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.

82-79



**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.



## Responses

### Commenter 82 – Ed Anderson

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.

82-80  
(cont'd)

## 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 HVTTL
- 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  
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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.

*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?

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.

82-96

82-97

## 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.

	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

*"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.

82-98

82-99

## Responses

### Comment 82-100

See responses to Comments 53-04 and 53-05, which address 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.*

*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:

*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/sequestration 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?

82-99  
(cont'd)

82-100

## 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

### 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?

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

### 82-102

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 82-103

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

### 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?

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

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

82-102  
(cont'd)

82-103

## Responses

### Comment 82-104

See response to Comment 3-02, 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.

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 100<sup>th</sup> 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.*

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?

82-103  
(cont'd)

82-104

## 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

82-104  
 (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 82-107**  
See responses to Comments 4-04 and 53-13, which address the same concerns.

Commenter 82 – Ed Anderson

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.

82-107

**Commenter 82 – Ed Anderson**

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**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.

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."

**82-109**

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).

## Responses

### Comment 82-110

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

## 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 CO<sub>2</sub> 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 82-111

See responses to Comment 75-13, 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 CO<sub>2</sub> injected, employing advanced technologies could result in Enhanced Oil Recovery (EOR) with 60 percent of the CO<sub>2</sub> stored." This would amount to only 1,049,400 million tons (33%) of the 3,180,000 million tons of CO<sub>2</sub> 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 CO<sub>2</sub> 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) CO<sub>2</sub> emissions of 4,350,000 million tons, (approximately 1000 lbs of CO<sub>2</sub> per 42 gallon barrel). This clearly indicated that CCS is not the answer to reducing global warming CO<sub>2</sub>. Any economic benefits would solely go to the oil industry.

Referring to mitigation measures of CO<sub>2</sub> contamination mentioned on page 5.1-9 it is not clearly outlined how CO<sub>2</sub> contamination can be prevented, located within the injection site or stopped.

How can the exact location of a CO<sub>2</sub> 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.

**Commenter 82 – Ed Anderson**

**Responses**

82-112	<p><u>5.2 Potential Cumulative Impacts</u></p> <p>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.</p>
82-113	<p><u>5.2.3 Air Inhalation Health Risk</u></p> <p>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.</p> <p><u>5.2.3.2 West Range Site</u></p> <p>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.</p> <p>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.</p> <p>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.</p>
82-114	<p><u>5.2 Data Refinements (pg 5.2-13)</u></p> <p>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-</p>

<b>Comment 82-112</b>	See response to Comment 75-14, which addresses the same concern.
<b>Comment 82-113</b>	See responses to Comments 49-13, 57-05, and 75-15, which address the same concerns.
<b>Comment 82-114</b>	See response to Comment 75-17, which addresses the same concern.



## Responses

### Comment 82-115

See response to Comment 75-18, 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.

**Commenter 82 – Ed Anderson**

**Responses**

82-116	<p><u>5.2.6 Wildlife Habitat</u></p> <p>The information in this section is grossly inaccurate. It does not contain the total amount of habitat lost due to the MSI project.</p> <p>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.)</p> <p>This section needs to be corrected to reflect accurate information to determine habitat loss.</p>
82-117	<p><u>5.3.2 Additional Mitigation Options</u></p> <p>5.3.2.1 Cooling Water Discharge Options at West Range Site</p> <p>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.</p>
82-118	<p>5.3.2.2 Mitigation Options for Visibility Impacts to Class 1 Areas – Enhancement of Existing Design Basis.</p> <p>The 1<sup>st</sup> 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.”</p> <p>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.</p> <p><u>5.5 Relationship Between Short-Term Uses of the Environment and the Maintenance and Enhancement of Long-Term Productivity.</u></p>

<b>Comment 82-116</b>	See response to Comment 75-19, which addresses the same concern.
<b>Comment 82-117</b>	See response to Comment 6-01, which addresses the same concern.
<b>Comment 82-118</b>	See response to Comment 49-01, which addresses the same concern.

## Responses

### Comment 82-119

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

### 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 82-120

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.

## 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 than 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 82-123**

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

**Commenter 82 – Ed Anderson**

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

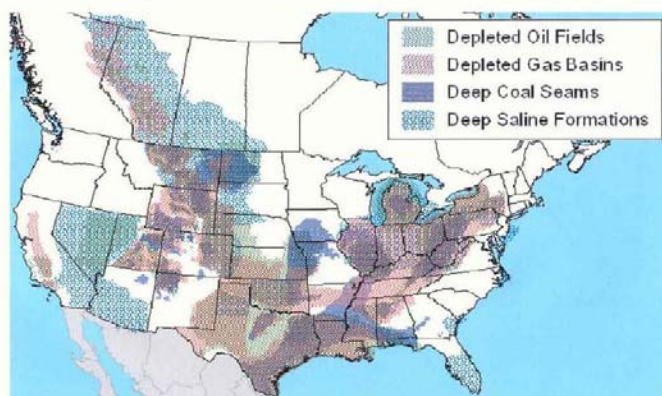
Comments on Draft EIS

Submitted by: Citizens Against the Mesaba Project

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

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

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



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

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82-123

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

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

January 10, 2008

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

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

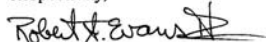
Dear Mr. Hargis:

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

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

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

Respectfully,



Robert S. Evans II

cc William C. Storm, Minnesota Department of Commerce

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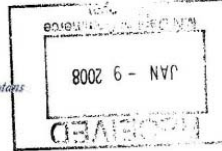
**Responses**

**Comment 83-01**

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

83-01

## Commenter 84 – John Linc Stine

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

January 7, 2008

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

Dear Mr. Storm:

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

**General Comments:**

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

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

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## Responses

**Comment 84-01**

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

84-01



## Commenter 84 – John Linc Stine

Mr. Bill Storm  
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January 7, 2008

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

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

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

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

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

## Responses

84-01  
(cont'd)



**Commenter 84 – John Linc Stine**

Mr. Bill Storm  
Page 3  
January 7, 2008

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

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

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

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

**Specific Comments:**

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

**Responses****Comment 84-02**

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

84-01  
(cont'd)

84-02

**Commenter 84 – John Linc Stine**

Mr. Bill Storm  
Page 4  
January 7, 2008

**84-03**

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

**84-04**

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

**84-05**

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

**84-06**

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

**84-07**

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

**84-08**

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

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

**Responses****Comment 84-03**

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

**Comment 84-04**

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

**Comment 84-05**

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

**Comment 84-06**

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

**Comment 84-07**

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

**Comment 84-08**

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

**Commenter 84 – John Linc Stine**

Mr. Bill Storm  
Page 5  
January 7, 2008

**84-09**

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

**84-10**

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

**84-11**

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

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

Sincerely,



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

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

**Responses****Comment 84-09**

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

**Comment 84-10**

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

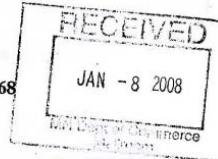
**Comment 84-11**

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

Commenter 85 – Colleen Blade



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



Name: Colleen Blade  
38572 Poplar Dr.

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

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

Address: 38572 Poplar Dr.  
Nashwanuk, MN 55769

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

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

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

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

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

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

Please submit comments to meeting moderator or send to:

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

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

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

Colleen Blade

Responses

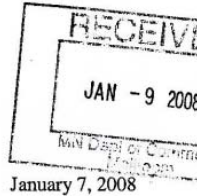
Comment 85-01

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

85-01

**Commenter 86 – David Dahl**

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



Dear Bill,

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

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

**86-01**

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

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

**86-02**

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

**Responses****Comment 86-01**

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

**Comment 86-02**

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

## Responses

## Commenter 86 – David Dahl

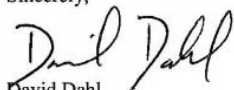
86-02  
(cont'd)

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

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

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

Sincerely,



David Dahl  
9016 Lahti Road  
Hibbing, MN 55746

## Enclosures:



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



## Commenter 86 – David Dahl

Trout lakes: Minnesota DNR


Page 1 of 2

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### Trout lakes









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

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

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

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[Trout lakes](#)

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[Trout lake fishing regulations](#)


[Fishing tips](#)

[Management](#)

[List](#)

[Trout streams](#)

[Trout biology & management](#)



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

12/11/2007

## Responses

## Commenter 86 – David Dahl

Lake information report: Minnesota DNR

Page 3 of 4

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

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

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

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

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

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

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

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

12/11/2007

## Responses



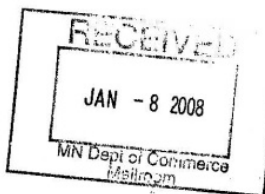
## Commenter 87 – Nathaniel Hart

1 of 2

January 6, 2008

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

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



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

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

87-01

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

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

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

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

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

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

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

87-02

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

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

## Responses

### Comment 87-01

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

### Comment 87-02

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

## Responses

### Commenter 87 – Nathaniel Hart

2 of 2

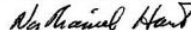
87-02  
(cont'd)

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

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

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

Respectfully yours,



Nathaniel Hart

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

## Responses

## Commenter 87 – Nathaniel Hart

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

Morris Sun Tribune Published Saturday, January 05, 2008

By Nathaniel Hart

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

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

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

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

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

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

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

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

## Responses

### Commenter 87 – Nathaniel Hart

even a fraction of this CO2 into the earth?

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

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

The public is not buying it.

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

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

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

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

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

## Commenter 88 – Chad Karjala



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

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

### Comments:

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

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Please submit comments to meeting moderator or send to:

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

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## Responses

### Comment 88-01

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

88-01

## Commenter 89 – Willard Karjala



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

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

### Comments:

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

Please submit comments to meeting moderator or send to:

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

>>>If mailing, fold along dotted lines and tape closed <<<

## Responses

### Comment 89-01

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

89-01

Commenter 90 – Glenn Perry



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

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

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

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

>>>If mailing, fold along dotted lines and tape closed <<<

Responses

Comment 90-01

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

90-01

Commenter 91 – Darrell White



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

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

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

Please submit comments to meeting moderator or send to:

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

>>>If mailing, fold along dotted lines and tape closed <<<

Responses

Comment 91-01

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

91-01



## Commenter 92 – Delores White



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

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

### Comments:

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

Please submit comments to meeting moderator or send to:

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

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

## Responses

### Comment 92-01

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

92-01

## Responses

### Comment 93-01

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

### Commenter 93 – Dr. Gregory Chester

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

January 8, 2007

Mr. Richard Hargis

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

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

Comments on Draft EIS

Dear Sir,

#### Coal vs. Wind Generated Electricity - Taconite Plant

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

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

The proposed coal burning plant, on the other hand, is designed to produce 600 megawatts or enough electricity for 600,000 homes. Wind would provide electricity for an additional 84,500 homes for the same money and the wind is free! Coal costs. Furthermore, it will be necessary to use a significant amount of that electricity to reduce the toxic pollution and later to sequester the CO<sub>2</sub>.

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

93-01

## Responses

### Commenter 93 – Dr. Gregory Chester

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

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

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

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

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

Thank you for your attention to these facts and observations.

Sincerely,

Dr. Gregory Chester

93-01  
(cont'd)

## Responses

### Comment 94-01

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

### Commenter 94 – William A. Hanson

**From:** W4A3H [mailto:taconite43@jetemail.net]

**Sent:** Thursday, January 10, 2008 10:48 PM

**To:** Bill Storm

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

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

Dear sir:

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

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

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

94-01

## Responses

## Commenter 94 – William A. Hanson

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

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

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

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

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

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

94-01  
(cont'd)

**Commenter 95 – Frank R. Weber**

Mr Storm,

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

- 95-01** | 3.5.1.1 “As most of the taconite mining in the area has ceased,” only Butler was a taconite mine and ceased operations in 1985
- 95-02** | 3.5.7 Prairie River....Flow data collected 1967 to 1983 and 2001 to present? DNR was installing flow metering in August of 2007. Mean annual flow was established to be 319 ft<sup>3</sup> per second using the old data so it would allow 2,468 gpm to be withdrawn? DEIS states water will be taken below Prairie Lake dam, approximately 8 miles from the site. No mention of pipe line, power line, pumping stations needed to move the water to the power plant site. Figure 3.15-1 shows West Range Site at KELLY LAKE????
- 95-03** | 3.16-2 cites 2 closed landfills, doesn’t mention Nashwauk or Nashwauk Township sites.
- 95-04** | 3.15.1.1 cites commercial airport in Grand Rapids (ceased operations three years ago), ~~iron ore~~ being shipped out of Duluth and a four lane highway system (still not completed across the Range).
- 95-05** | 3.14.2.1 During high groundwater or rainfall, the main wastewater pump station in Taconite cannot handle the additional flows, creating a need to bypass untreated wastewater into a natural pond system. Draft makes no mention of correcting the problem before additional waste will be added to the problem.
- 95-06** | 3.13.4.1 School Districts, does not include Bug-Oh-Nay-Sha, Hill City or Big Fork.
- 95-07** | 3.11 Socioeconomics for West Range were based on Iron Range Township, City of Taconite, AND SEVERAL OTHER JURISDICTIONS? What “jurisdictions”? Does this include everything from Hibbing to Grand Rapids.....what is usually referred to as the “West Range”.
- 95-08** | Table 3.11-1 shows Itasca County population has increased since 1980? Range population was at a high point when the 1980 census was completed. Drop started early in 1981 when part of Butler was not called back after shutdown.....big drop came when Butler shut down in 1985. Current population is 700 above the 1980 level and does not include seasonal additions which more than doubles Itasca’s population.
- 95-09** | 3.5.1.3 Site is potentiometric high? Groundwater flow is firmly established to be north to south due to the Giant’s Ridge Batholith. Surface contamination due to handling, storage of coal, storage of waste products (especially during road restrictions and while water is too solid to control dust), rainfall/snowfall en route to the surface,.
- 95-10** | 3.9.2.1 Has Native American burial mound at Big Sucker Lake been examined yet?
- 95-11** | 3.10.5 Publicly owned lands....cites parcels that would be used for corridors.....60% Itasca County, 34% State. Is the remaining 6% private?

**Responses**

**Comment 95-01**

See response to Comment 82-42, which addresses the same concern.

**Comment 95-02**

See responses to Comments 82-43 and 82-44, which address the same concerns.

**Comment 95-03**

See response to Comment 82-45, which addresses the same concern.

**Comment 95-04**

See response to Comment 82-46, which addresses the same concern.

**Comment 95-05**

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

**Comment 95-06**

The Itasca County school districts named in Section 3.13.4.1 (Volume 1) are those listed by the Minnesota Department of Education (see reference MDE, 2006).

**Comment 95-07**

See responses to Comments 82-49 and 82-50, which address the same concerns.

**Comment 95-08**

See response to Comment 82-51, which addresses the same concern.

**Comment 95-09**

See response to Comment 82-52, which addresses the same concern.

**Comment 95-10**

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

**Commenter 95 – Frank R. Weber**

**Responses**

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

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

**Commenter 95 – Frank R. Weber**

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

**Responses**

**Comment 95-23**

The MPCA guidelines set the ambient (i.e., background) mercury deposition rate that occurs in Minnesota to be used in the analysis (see MPCA Mercury Risk Estimation Method for the Fish Consumption Pathway at <http://www.pca.state.mn.us/publications/aq9-16.pdf>). This guidance applies to the whole state and represents deposition that is occurring in Minnesota from all global man-made and natural sources. Note that use of the enhanced ZLD system at the West Range Site eliminates wastewater discharges, including effluent with mercury. Refer to Sections 4.3 and 4.17 (Volume 1) which discuss impacts from mercury emissions.

**Comment 95-24**

See response to Comment 82-63, which addresses the same concern.

**Comment 95-25**

See response to Comment 82-64, which addresses the same concern.

**Comment 95-26**

The list of air toxins provided as potentially emitted from the IGCC Power Station are typical of existing coal-fired power plants. The air toxins emissions from the IGCC Power Station are expected to be less than conventional coal-fired power plants because of the IGCC technology that would be used. See response to Comment 1-01, which addresses the pollution prevention concepts inherent to the E-Gas™ based IGCC technology used in Phase I and Phase II of the Mesaba Energy Project.

**Comment 95-27**

Correct; the cumulative impacts analysis in Appendix D addressed both the West Range and the East Range Sites.

**Comment 95-28**

As stated in responses to Comments 49-12 and 57-05, the emissions inventory for the Mesaba cumulative impacts analysis included all source data that MPCA could provide at the time. Note that since publication of the Draft EIS, Sections 4.3 and 5.2.2 (Volume 1) and Appendices B and D1 (Volume 2) have been revised based on the latest modeling protocol, which includes a more comprehensive listing of regional sources.

**Comment 95-29**

See responses to Comments 49-01, 49-12, and 75-14, which address the same concern.



**Commenter 96 – Edward and Susan Stish**

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

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

**Responses**

**Comment 95-30**

See response to Comment 82-66, which addresses the same concern. Refer to Section 5.2.7 (Volume 1) and Appendix D6 (Volume 2), which discuss the planned rail use by Minnesota Steel and Excelsior.

**Comment 96-01**

See responses to Comments 16-01 and 80-05. The 7 counties in the Arrowhead Region (Northeast Region 3) are defined by the Minnesota Department of Employment and Economic Development: <http://www.deed.state.mn.us/lmi/regional.htm> (see reference DEED, 2006a).

**Comment 96-02**

The map illustrations in the EIS are specifically provided to best depict features and infrastructure associated with the Mesaba Energy Project. The EIS did not intend to minimize the importance of abundant natural resources located to the north of the West Range Site. Data presented in the EIS are intended to describe resources that may be most impacted by the project. The numerous lakes located north of the West Range Site would experience impacts no greater than the impacts described for the closest surface water bodies depicted on the maps.

**Comment 96-03**

See Section 4.2.3.2 (Volume 1), which discusses aesthetic impacts within a 20-mile radius. See response to Comment 6-01, which discusses the use of the enhanced ZLD system at the West Range Site that would eliminate wastewater discharges, and thus, eliminates the potential for mercury to be discharged into any water body. See response to Comment 42-01, which discusses the impacts analysis for mercury emissions. See Section 4.11.3.2 (Volume 1), which discusses the potential impacts to property values at the West Range Site.

**Comment 96-04**

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

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

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

**96-05**

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

**96-06**

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

**96-07**

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

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

**96-08**

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

**Comment 96-05**

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

**Comment 96-06**

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

**Comment 96-07**

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

Responses

**Comment 96-08**  
See response to Comment 24-01, which addresses the complexity of the EIS. The Appendix (Volume 2) contains supporting documents and materials that are referenced within the body of the EIS. These materials are generally summarized within the EIS text but provided in the Appendix for use by individuals interested in reviewing the full documentation. The Appendix is not otherwise intended to be a stand-alone document.

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

Commenter 96 – Edward and Susan Stish

**96-08 (cont'd)**  
thrown together. Throughout the report, much of the statistical information presented by Excelsior is old and outdated. The 10 to 30 year old data is no longer adequate and should not be accepted.

Thank you  
Edward and Susan Stish  
Balsam Township,MN

## Responses

### Comment 97-01

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

### Comment 97-02

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

## Commenter 97 – Darren Vogt and Dave Woodward



### 1854 Treaty Authority

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January 11, 2008

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

RE: Mesaba Energy Project Draft EIS

Dear Mr. Hargis and Mr. Storm,

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

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

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

#### Carbon Capture and Sequestration

Annual emissions from the Mesaba Energy project include over 10 million tons of carbon dioxide per year. The draft EIS states that carbon capture and sequestration (CCS) is not currently feasible for the project. The plant will be designed so it can be modified to capture carbon dioxide in the future if reductions are required by regulation or encouraged by economic incentives. Two primary options exist for such capture. Current available technology would result in an approximately 30% reduction in carbon dioxide emissions. The other potential option would require piping the carbon dioxide to sequestration sites in North Dakota or

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

97-01

97-02



**Commenter 97 – Darren Vogt and Dave Woodward****Responses****97-02  
(cont'd)**

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

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

**97-03**Regional Haze and Visibility

Modeling results indicate that visibility impacts are significant for class I areas including the Boundary Waters Canoe Area Wilderness and Voyageurs National Park. Impacts from the East Range Site are substantially higher than the West Range Site. Much of the explanation and justification for visibility impacts appear to center on seasonal or weather events (winter, clouds, fog, precipitation) and potential future reductions from other power producers in the region. This approach seems flawed. Further, it is our understanding that agreement has not been reached over completion of the Best Available Control Technology (BACT) analysis for the project. A determination on what constitutes BACT for sulfur dioxide and nitrogen oxide emissions must be made, and mitigation plans to offset any impact should then be developed. We have concerns over haze and visibility issues, and support the Minnesota Pollution Control Agency position and issues raised by federal land managers outlined late in 2007.

**97-04**Mercury

Emissions from the project include up to about 54 pounds of mercury per year. As a new source, the project is inconsistent with Minnesota's total maximum daily load (TMDL) goal of reductions in mercury releases. With a statewide goal to reduce anthropogenic sources of mercury by 93% from 1990 levels to annual emissions of 789 pounds per year, an increase of 54 pounds per year is significant. Additionally, the preferred project location is in the vicinity of Minnesota Steel which is also projected to emit mercury. We question how permitting would be handled for yet another facility that increases mercury releases.

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

**97-05**Water Quality

Water discharges would primarily consist of cooling tower blowdown blended with additional wastewater from other plant systems. Constituents in the discharge would essentially be the same as those in the water supply but more concentrated as a result of repeated cycles through the process. The number of cycles of concentration would be determined by mercury concentrations and conditions of NPDES permits. More stringent requirements would be

**Comment 97-03**

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

**Comment 97-04**

Minnesota is currently in the process of determining how to implement the statewide mercury TMDL, which set an annual air emission target of 789 lb by 2025. However, no rules have yet been finalized nor have draft rules been placed on notice for public review. In May 2008, a stakeholder group recommended a set of strategies to MPCA for implementing the TMDL (<http://www.pca.state.mn.us/publications/wq-iw1-19.pdf>). Three recommendations were made for new sources: (1) achieve best controls; (2) complete applicable environmental reviews; and (3) acquire offsets by 2025, preferentially from in-state sources. Excelsior has proposed mercury emission control consistent with a minimum removal rate of 90 percent, which meets or exceeds best available controls (see subsection *Clean Air Mercury Rule* under Section 4.3.2.6). Applicable environmental reviews were conducted in the AERA according to MPCA guidance (see Appendix C). A mercury offset program has not yet been established and any offset project that Mesaba might implement would depend on the specifics of that program, which are not known at this time. Mesaba would be subject to applicable future requirements as final rules are promulgated. Demonstration of this IGCC technology and widespread commercialization as a replacement for conventional coal-fired power plants would contribute to a state-wide and nationwide reduction in mercury emissions and deposition over the long term.

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

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

**Responses**

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

required on the East Range Site to comply with regulations for discharges within the Lake Superior Basin (mercury in particular). Anticipated discharges are expected to exceed water quality standards for hardness, total dissolved solids, sulfate, and conductivity. Evidence suggests that sulfate may contribute to the methylation of mercury and thus be a factor in fish contamination issues. The draft EIS states that Excelsior would have to apply for a waiver if parameters are expected to exceed water quality standards. We have concern over this type of approach and question if it is even allowable under water quality regulations. Water quality standards must be met, and in a situation of a variance, a specific plan and timeline to meet standards must be developed. Variances are time-limited and can only be allowed when the standard can ultimately be attained.

Cumulative Impacts and Site Location

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

**97-06**

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

Cultural Resources

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

**97-07**

Project Need

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

**97-08**

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

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

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

**Comment 97-05**

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

**Comment 97-06**

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

**Comment 97-07**

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



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

**Responses**

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

to accept such a determination when considering potential impacts to the resources. While we support the exploration of innovative technologies, this should not be the overriding justification for a project. In addition to the environmental concerns outlined above, it is our understanding that significant issues exist with rulings from the Minnesota Public Utilities Commission and lack of power purchase agreements. Furthermore, estimates of economic impact and the number of jobs to be provided seem to be declining or are unclear at best. Along with our concerns over environmental impacts, we question if there is a need for this project or if it is the right fit for our region, and believe it is an issue that must be addressed.

**97-09**

Sovereignty and Treaty Rights

Finally, I remind you that both the federal and state governments have the responsibility to work with Indian bands on a government-to-government basis. Tribes are sovereign governments, and must be treated as such. Notification and consultation activities must be completed directly with all tribes potentially affected by the proposed project. The planning process and project implementation must recognize the sovereign status of bands and the rights retained by treaty with the United States. This must be put into practice, and also needs to be more clearly addressed in the draft EIS. Possible locations include section 3.8 to include that treaty rights and tribal management also exist; section 3.9.4 to include that the East Range Site is within the 1854 Ceded Territory where treaty rights exist; section 3.17.4.1 to include tribal uses as a sensitive receptor; and chapter 6 to include that the Treaty of 1854 also retained rights to hunt, fish, and gather in the 1854 Ceded Territory.

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

Sincerely,



Darren Vogt  
 Environmental Director



Dave Woodward  
 Cultural Resource Specialist

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

**Comment 97-08**

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

**Comment 97-09**

As stated in response to Comment 97-01, DOE and MDOC have made appropriate and good faith efforts to ensure that the EIS has addressed issues of importance to the 1854 Treaty Authority and Native American tribes with existing and historic affiliation to northeastern Minnesota. Also, in response to this comment: Additional information about the agencies' coordination with Native American tribes has been added to Section 1.6.1.3 (Volume 1); a statement regarding treaty rights and tribal management of biological resources has been added to the first paragraph in Section 3.8; Section 3.9.4 has been updated to indicate that the East Range Site is within the 1854 Ceded Territory where treaty rights exist; tribal uses have been indicated as a sensitive receptor in Section 3.17.4.1; and Chapter 6 has been updated to include the Treaty of 1854, by which tribes retained the rights to hunt, fish, and gather in the 1854 Ceded Territory.

## Responses

## Commenter 98 – Brandy Toft



### Leech Lake Band of Ojibwe

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

District I Representative  
*Robbie M. Howe*

District II Representative  
*Lymon L. Losh*

District III Representative  
*Donald "Mick" Finn*

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January 11<sup>th</sup>, 2007

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

**Re: Department of Energy's Draft Environmental Impact Statement for  
the Mesaba Energy Project DOE/EIS-0382D**

Mr. Hargis and Mr. Storm,

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

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



## Responses

### Comment 98-01

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

### Comment 98-02

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

## Commenter 98 – Brandy Toft

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

98-01

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

### Best Achievable Control Technology - BACT

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

98-02

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

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

**Commenter 98 – Brandy Toft**

**Responses**

**98-02  
(cont'd)**

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

**98-03**

Regional Haze

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

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

**98-04**

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

**Comment 98-03**

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

**Comment 98-04**

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

**Commenter 98 – Brandy Toft**

**Responses**

**98-04  
 (cont'd)**

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

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

**98-05**

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

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

**98-06**

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

**Comment 98-05**

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

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

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

**Comment 98-06**

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

## Commenter 98 – Brandy Toft

## Responses

98-06  
(cont'd)

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

98-07

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

Mercury

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

98-08

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

Water Quality

Though this letter mainly covers aspects of air quality we do not want to disregard the important aspects and interplay with water quality. Water discharges would primarily consist of cooling tower blowdown blended with additional wastewater from other plant systems. Constituents in the discharge would essentially be the same as those in the water supply but more concentrated as a result of repeated cycles through the process. The number of cycles of concentration would be determined by mercury concentrations and conditions of NPDES permits. More stringent requirements would be required on the East Range Site to comply with regulations for discharges within the Lake Superior Basin (mercury in particular). Anticipated discharges are expected to exceed water quality standards for hardness, total dissolved solids, sulfate, and

98-09

**Comment 98-07**

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

**Comment 98-08**

The Final EIS has been revised to insert a missing sub-section heading (in printed copies of the Draft EIS), "4.17.2.3 Human Health Risks," for the text that addresses risks associated with air pollutants emitted by the project. Additionally, see response to Comment 97-04, which addresses the same concerns.

**Comment 98-09**

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

**Commenter 98 – Brandy Toft****Responses****98-09  
(cont'd)**

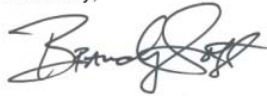
conductivity. The DEIS states that Excelsior would have to apply for a waiver if parameters are expected to exceed water quality standards. This approach is troubling. Water quality standards must be met, and in a situation of a variance, a specific plan and timeline to meet standards must be developed.

Consultation**98-10**

Finally, we want to remind all parties involved in the Mesaba Energy Project that federal and state governments have the responsibility to work with Tribes on a government-to-government basis. Tribes are sovereign governments and must be treated as such. Notification and proper consultation activities must be completed directly with all Tribes potentially affected by the proposed project. The planning process and project implementation must recognize the sovereign status of the Tribes and the rights retained by treaties with the United States government. This must be more clearly addressed in the DEIS, in future dealings regarding the Mesaba Energy Project, and other future projects.

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

Sincerely,



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

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

**Comment 98-10**

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



Commenter 99 – Wayne Dupuis

## Fond du Lac Reservation

### Resource Management

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Administration  
Conservation  
Environmental  
Fisheries  
Forestry  
Natural Resources  
Wildlife

January 11, 2008

Public Comment Contacts:

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

Reference PUC Docket: E6472/GS-06-688

Comments to MN PUC and US DOE

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

Dear Mr. Storm and Mr. Hargis

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

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

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

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

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

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

## Responses

### Comment 99-01

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

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

99-01

## Commenter 99 – Wayne Dupuis

## Responses

99-01  
(cont'd)

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

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

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

### Clear Skies Initiative

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

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

FOND DU LAC RESOURCE MANAGEMENT

## Commenter 99 – Wayne Dupuis

## Responses

99-01  
(cont'd)

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

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

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

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

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

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

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

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

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

99-02

99-03

99-04

### Comment 99-02

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

### Comment 99-03

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

### Comment 99-04

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

FOND DU LAC RESOURCE MANAGEMENT



## Commenter 99 – Wayne Dupuis

## Responses

99-04  
(cont'd)

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

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

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

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

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

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

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

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

FOND DU LAC RESOURCE MANAGEMENT

### Comment 99-05

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

### Comment 99-06

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

### Comment 99-07

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

### Comment 99-08

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

Commenter 99 – Wayne Dupuis

Responses

99-08  
(cont'd)


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

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

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

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

Sincerely,



Wayne Dupuis

Fond du Lac Environmental Program Manager

MM/mm

Enclosures

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

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

FOND DU LAC RESOURCE MANAGEMENT

## Commenter 99 – Wayne Dupuis

### Air Quality Concerns

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

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

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

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

FOND DU LAC RESOURCE MANAGEMENT

## Responses

### Comment 99-09

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

99-09

## Commenter 99 – Wayne Dupuis

## Responses

99-09  
(cont'd)

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

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

99-10

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

99-11

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

99-12

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

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

99-13

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

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

### Comment 99-10

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

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

### Comment 99-11

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

### Comment 99-12

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

### Comment 99-13

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

## Commenter 99 – Wayne Dupuis

## Responses

99-13  
(cont'd)

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

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

99-14

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

99-15

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

99-16

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

FOND DU LAC RESOURCE MANAGEMENT

### Comment 99-14

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

### Comment 99-15

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

### Comment 99-16

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

**Commenter 99 – Wayne Dupuis**

**Responses**

99-17

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

**Mercury:**

99-18

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

FOND DU LAC RESOURCE MANAGEMENT

**Comment 99-17**

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

**Comment 99-18**

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

## Commenter 99 – Wayne Dupuis

### Water Quality and Quantity Issues

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

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

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

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

FOND DU LAC RESOURCE MANAGEMENT

## Responses

### Comment 99-19

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

99-19

## Commenter 99 – Wayne Dupuis

## Responses

99-20

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

99-21

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

### Cumulative Impacts

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

99-22

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

FOND DU LAC RESOURCE MANAGEMENT

### Comment 99-20

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

### Comment 99-21

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

### Comment 99-22

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



Commenter 100 – Darin Steen



*Bois Forte*  
TRIBAL GOVERNMENT

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

Dear Mr. Hargis and Mr. Storm:

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

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

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Responses

**Commenter 100 – Darin Steen**

**Responses**

100-01

**Purpose and Need for the Project**

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

100-02

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

100-03

**Economic and Financial Impacts and Infrastructure Costs**

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

**Comment 100-01**

As stated in response to Comment 37-01, DOE’s purpose and need in this EIS are to demonstrate a specific, advanced coal-based technology selected competitively in response to Round 2 of funding opportunity announcements under the CCPI Program. Section 2.1.1.2 (Volume 1) of the Final EIS describes the reasonable alternatives considered by DOE for the agency’s action. Two applications proposed IGCC technologies among the 13 submitted. DOE selected both of the applicants for co-funding. The Mesaba Energy Project was the only application that proposed to demonstrate the Conoco-Phillips E-Gas™ gasification technology, which is of interest to DOE. Section 2.1.1.2 also explains that the CCPI Program provides for applicants to identify their own site or sites for proposed projects; DOE does not participate in the site selection process, which generally precedes the submission of an application for co-funding. Excelsior proposed two alternative sites in the TTRA of northeastern Minnesota expressly to take advantage of incentives established by the Minnesota Legislature in its 2003 Special Session as summarized in Section 1.2.2 (Volume 1) of the Final EIS. Excelsior has stated that it would not have submitted an application in response to the CCPI announcement if it did not intend to locate the Mesaba Energy Project in the TTRA based on the incentives. No other applicant proposed to demonstrate the particular IGCC technology at a site closer to the source of coal or a suitable geologic formation for sequestration of CO<sub>2</sub>. Therefore, because DOE cannot select alternative projects or choose alternative sites that have not been proposed in response to the funding announcement, the alternative sites are limited to those considered by Excelsior in the TTRA. See also responses to Comments 8-01 and 111-02, which address the same concerns.

**Comment 100-02**

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

**Comment 100-03**

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

## Responses

### Comment 100-04

Sections 3.13.3.1 and 3.13.3.2, respectively, describe the recreational opportunities in proximity to the West and East Range Sites. As discussed in response to Comment 65-01, tourism is a key sector of Minnesota's economy, and northern Minnesota is the second-most popular destination for travelers (after the Twin Cities). As described in response to Comments 1-01, the IGCC technology proposed for the Mesaba Energy Project is considered a clean coal technology, because it would have a substantial overall emissions reduction advantage (less SO<sub>2</sub>, NO<sub>x</sub>, and mercury emissions) when compared to conventional coal-fired power plants. Furthermore, as explained in response to Comment 12-02, IGCC offers the best opportunity among coal-fueled plants to capture concentrated CO<sub>2</sub> emissions. Section 4.3 (Volume 1) addresses air emissions and impacts of the Mesaba Energy Project. See also the response to Comment 49-01 regarding BACT analysis. The elimination of discharges to surface waters at the West Range Site, through the implementation of an enhanced ZLD system as described in response to Comment 6-01, would prevent the introduction of pollutants from plant blowdown water as well as process water at either plant site. As stated in response to Comment 7-03, the human health risk assessment is contained in Section 4.17.2 (Volume 1) of Section 4.17, Safety and Health. The Final EIS has been revised to insert a missing sub-section heading (in printed copies of the Draft EIS), "4.17.2.3 Human Health Risks", for the text that addresses risks associated with air pollutants emitted by the project. From the perspective of environmental justice, Section 4.12.4 (Volume 1) specifically addresses the health risks to American Indian tribes in northern Minnesota, because they may consume higher amounts of locally caught fish than the general population. As discussed in response to Comment 42-01, Diamond Lake was considered representative of the nearest fishable bodies of water to the West Range Site receiving emissions from the plant.

### Comment 100-05

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

## Commenter 100 – Darin Steen

100-03  
(cont'd)

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

100-04

### Environmental Impacts to Air

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

100-05

### Environmental Impacts to Water

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

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

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

**Comment 100-07**

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

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

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

**Cumulative Impacts to the Region****100-06**

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

**Conclusion****100-07**

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

Sincerely,



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## Responses

## Commenter 101 – Harry E. Gallaher

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January 11, 2008

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

Dear Messrs. Storm and Hargis:

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

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

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

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

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

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

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

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

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

**Responses****Comment 101-01**

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

101-01

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**Responses**

**Comment 101-02**

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

**Comment 101-03**

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

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

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

**101-02**

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

**101-03**

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

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

## Responses

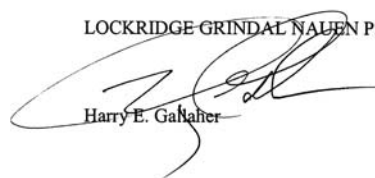
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Thank you for the opportunity to comment on the DEIS.

Very truly yours,

LOCKRIDGE GRINDAL NAUEN P.L.L.P.



Harry E. Gallaher

c: Steve Rutherford  
Charles N. Nauen



## Responses

### Comment 102-01

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

### Commenter 102 – Kristin Henry



January 11, 2008

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

Bill Storm  
 Minnesota Department of Commerce  
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Re: Comments on the Mesaba Energy Project's Draft Environmental Impact Statement [PUC Docket No. B6472/GS-06-668, DOE/EIS-0382D]

Dear Mr. Strom and Mr. Hargis,

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

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

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

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

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## Responses

### Commenter 102 – Kristin Henry

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(cont'd)

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

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

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

#### I. Introduction

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

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

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

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

For example, the DEIS must consider:

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

\* \* \*

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

\* \* \*

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

40 C.F.R. § 1502.16.

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

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

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

## Responses

### Comment 102-02

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

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

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

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

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

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

**B. Failure to Consider Adequate Alternatives**

**Responses**

**Comment 102-03**

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

102-02  
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102-03

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Because the DEIS fails to fairly define the purpose and need for this project, and further fails to consider the true costs of building and operating the Mesaba coal plant (discussed in detail later), it summarily rejects environmentally preferable alternatives on grounds that they are not coal-based generation technology and cannot satisfy MDOC's requirements for base-load power, job creation, and a generating facility in Northeast Minnesota. This failure to undertake meaningful consideration of alternatives violates NEPA. As NEPA's implementing regulations make clear, consideration of alternatives "is the heart of the environmental impact statement ... sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public." 40 C.F.R. § 1502.14.

Here, the DEIS leaves DOE, MDOC, and the public with the false impression that there is no viable alternative except building yet another coal-fired power plant.

**1. The DEIS Improperly Dismissed Alternatives Using Renewable Energy.<sup>1</sup>**

The DEIS also fails to fully consider other economically beneficial means of generating electricity in a less environmentally harmful manner – such as use of renewable energy like solar, geothermal, and wind. There are ample renewable resources available to serve the base-load electricity needs in Minnesota. The DEIS is flawed because it fails to consider any technology for meeting the Statement of Need other than through coal-based generation technology.

First, without any detailed consideration, the DEIS dismissed alternatives that rely on renewable energy, including wind and solar power because they are not forms of coal-based generation. Since renewable alternatives were never evaluated, the DEIS does not discuss whether it is possible to generate 1,200 megawatts of power from renewable sources. Moreover, the DEIS never explores whether renewable energy could meet a smaller base-load demand. Nor does the DEIS offer a comparison between the realistic costs of electricity from Mesaba and up-to-date costs of delivered wind, solar, or geothermal power.

**2. The DEIS Improperly Dismissed the Potential Role of Conservation and Efficiency Programs in Assessing Alternatives to a New Coal Plant.**

The Statement of Need in the DEIS is also flawed because it fails to consider that any future electricity demand can be significantly offset by implementation of environmentally beneficial energy efficiency and conservation measures. The

<sup>1</sup> Minnesota state legislature decided that Excelsior Energy may use the state's Renewable Development fund to finance this project. There should be no mistake; the Mesaba coal-fired power plant is not a form of the renewable energy. In fact, the legislature should not allow Excelsior access to this fund because Minnesota statute clearly states that funds in the Renewable Development are to be granted "only for development of renewable energy sources." Minn. Stat. § 116C.779.

102-03  
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failure to consider energy efficiency/conservation alternatives is a fatal flaw of the DEIS. Had such an alternative been considered, it would severely undercut the Statement of Need for the Mesaba power plant.

Efficiency is the cheapest, fastest, cleanest and safest way to generate power. That is why a number of states and power companies are investing in improving conservation and efficiency. States with high growth, such as Florida and North Carolina, are engaging aggressive energy efficiency and renewable standards to meet energy needs cheaply and cleanly, while at the same time rejecting plans to build new coal-fired power plants. In the Carolinas, Duke and Progress have launched initiatives to generate thousands of megawatts – more than the 6,000 megawatts of base-load power needed to meet demand in Minnesota.

The DOE and MDOC, on the other hand, are taking the opposite approach. They are proposing to build a new coal-fired power plant rather than investing conservation and efficiency. This is the wrong answer for Minnesota. The state of Minnesota and its electric utility industry can introduce a number of conservation and efficiency measures that would mitigate the need for new electricity generating units. Efficiency and renewables also produce more local jobs than a highly automated coal-fired power plant, which burns Power River Basin coal from other states.

Therefore, the DOE and MDOC must consider how to meet this demand with demand side management. A list of some, but not all, demand side management options that should have been considered include the following:

- switching to compact fluorescent lights (CFL) or LED lighting;
- improved insulation and weatherization;
- energy efficiency appliances, such as refrigerators, air conditioners, geothermal heating systems, and hot water heaters;
- switching from electric to natural gas appliances such as heating systems and hot water heaters;
- energy efficient improvements in industrial application such as electric motors and HVACs;
- cycling programs for heating and cooling systems;
- programmable thermostats and down comforters;
- passive solar;
- energy audits;
- general energy education on conservation and efficiency; and
- efficient mobile home purchasing.

By undertaking an independent analysis of conservation and efficiency savings that would reduce energy needs, the DOE and MDOC would also broaden the range of reasonable alternatives.

102-03  
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## Responses

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### III. Description of Proposed Action and Alternatives – Chapter 2

NEPA requires federal agencies to consider reasonable and feasible alternatives to the proposed action. Chapter 2 of the DEIS provides a description of the Proposed Action and Alternatives. The DEIS is flawed because it fails to consider any real and meaningful alternatives to the proposed action. The DEIS only considers three alternatives: the “no action alternative” and an identical, IGCC coal-fired power plant at two different locations. As such, other than the “no action” alternative, which is required by law, the DEIS does not present any meaningful alternative to the proposed action in terms of minimizing environmental impacts. Therefore, the DEIS is fundamentally flawed.

#### A. Failure to consider “clean energy alternatives”

The significant flaw in the DEIS stems from the fact that DOE and MDOC wrongfully eliminated all meaningful clean energy alternatives in the NEPA scoping and DEIS process. In essence, the DOE and MDOC wrongly concluded that none of the renewable energy technologies could provide 1200 MW of power, or a smaller base-load amount. This conclusion is flawed for several reasons. First, it is entirely reasonable that 1,200 MW of electricity could be generated from renewable resources, through staged renewable resource development. This would be a viable alternative to the Mesaba coal-fired power plant. Contrary to the finding in the DEIS, which rejected this alternative out of hand without any mention or analysis, these renewable alternatives are viable and being constructed in the Midwestern United States.

The DEIS also completely fails to consider whether some of the energy needs could be offset by clean and viable energy conservation and efficiency. As noted above, many states are reducing the base-load demand by implementing demand side management programs. Implementation of these programs would also reduce emissions of greenhouse gases and conventional pollutants. Implementation of these efficiency measures would also reduce the overall purpose and need of the Mesaba power plant. By eliminating the need for the project, the benefits of moving forward would be obviated—especially when compared to the adverse environmental impacts. Accordingly, the DEIS should analyze an energy efficiency/conservation alternative to determine whether purported purpose and need for the DFS could be met by these environmentally beneficial alternatives. As stated by EPA Region 9 in its recent comments on the White Pine DEIS “[I]ncreased energy efficiency offers an attractive, cost-effective alternative to building new power plants, and in some cases, even to generating electricity from existing power plants. The FEIS should discuss on-going and planned energy conservation programs undertaken by power distributors and how energy conservation may affect the need for this project.” EPA Region 9, Comments on White Pine DEIS. This statement also applies to the Mesaba DEIS.

102-03  
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**Commenter 102 – Kristin Henry**

In fact, the spirit of Minnesota law requires MDOC to consider these alternatives. Minn. Stat. § 216B.243, subd. 3 (Minnesota Public Utilities Commission precluded from issuing a “Certificate of Need” for a proposed power plant until and unless the applicant proved demand “cannot be met more cost-effectively through energy conservation and load management measures...”). It is the policy of Minnesota to promote energy conservation and renewable energy alternatives. As the current statute states, “It is the energy policy of the state of Minnesota to achieve annual energy savings equal to 1.5 percent of annual retail energy sales of electricity and natural gas directly through energy conservation improvement programs and rate design, and indirectly through energy codes and appliance standards, programs designed to transform the market or change consumer behavior, energy savings resulting from efficiency improvements to the utility infrastructure and system, and other efforts to promote energy efficiency and energy conservation” (emphasis added) (Minn. Stat. § 216B.2401).

**B. Failure to consider other fuel alternatives**

The DEIS also fails to consider alternative fuels in its alternatives analysis such as biomass. Biomass can be co-fired with coal to reduce the emissions of regulated pollutants, including carbon monoxide, as well as to reduce carbon dioxide emissions. There are numerous examples of coal plants co-firing biomass that provide a roadmap for such consideration in the DEIS alternatives analysis. For example, the St. Paul heating plant burns approximately sixty-percent biomass and forty percent coal. The biomass is primarily waste wood from tree trimmings and other industrial activities. The Xcel Bay Point power plant in Ashland, Wisconsin, also burns large amounts of wood waste, consisting primarily of sawdust. While these plants are not IGCC plants, they can still serve as a reference point.

The U.S. Department of Energy has urged federal facility managers to consider co-firing up to 20 percent biomass in existing coal-fired boilers. In the Netherlands, all four electricity generation companies (EPON, EPZ, EZH and UNA) have developed plans to modify their conventional coal-burning plants to accommodate woody biomass as a co-fuel.

In short, the DOE and MDOC should consider as part of the DEIS alternatives analysis the co-firing of biomass as a means to mitigate CO and CO<sub>2</sub> emissions. The possible types of biomass include wood wastes, agricultural waste, switchgrass and prairie grasses.

**C. Improper rejection of “no action” alternative**

The DOE and MDOC rejects the no “action alternative” because it would not advance the commercialization of IGCC. As noted herein, any existing energy demand in the Midwestern United States should be met first by energy efficiency/conservation measures and then by renewable energy. Moreover,

**Responses**

**Comment 102-04**

As stated in Section 1.4.1 (Volume 1), DOE’s need for the project “...is to accelerate the commercialization of clean coal technologies that achieve greater efficiencies, environmental performance, and cost-competitiveness.” DOE’s need is not specifically associated with the demand for power in Minnesota or the Midwest. As explained in response to Comment 75-05, the reference to baseload power generation needs within Minnesota was included in Chapter 1 of the Draft EIS under a section pertaining to the “Project Proponent Need”. The anticipated needs for additional baseload power in Minnesota relating to plans filed in PUC dockets were outlined in Appendix F1 (Volume 2) prepared by Excelsior at the request of USACE, which is a cooperating agency for this EIS (See Comment 116-33). The reference to projected baseload power generation needs has been deleted from Chapter 1 (Volume 1) of the Final EIS, because the project is exempt from requirements for a Certificate of Need as an innovative energy project under Minnesota Statutes 216B.1694. Section 1.2.2 (Volume 1) explains the state legislative incentives afforded to an innovative energy project, which transcend the specific needs for power generation.

For the above reasons, the commenter’s statement that “...any existing energy demand in the Midwestern United States should be met first by energy efficiency/conservation measures and then by renewable energy” is not relevant to DOE’s or PUC’s decision with respect to the proposed action. However, as stated in response to 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.

**102-03  
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**102-04**



**Commenter 102 – Kristin Henry**

**Responses**

**102-04  
(cont'd)**

MDOC's conclusion that it needs 3,000 to 6,000 megawatts of baseload capacity does not discuss whether this need can be met through other proposed coal plants in the Midwest. Failure to consider whether these other alternative power plants can meet the purpose and need of the MDOC is a fatal flaw of the DEIS.

- D. Failure to adequately consider the impacts of coal combustion waste disposal, including cumulative impacts on the region of waste disposal from numerous new coal generating facilities.**

**102-05**

The DEIS fails to adequately consider the impacts on land, water, and local public health related to the disposal of the many tons of toxic coal combustion wastes from this facility annually. These wastes contain arsenic, mercury, selenium and other toxic constituents and have caused drinking water contamination at other sites in the U. S. In particular the cumulative impacts on the region of the coal combustion waste disposal from this project combine with the similar requests other proposed coal plants to dispose of coal waste on local landfills.

**IV. Discussion of the Affected Environment – Chapter 3**

A DEIS must "fulfill and satisfy to the fullest extent possible the requirements established for final statements." 40 C.F.R. § 1502.9(a). "If a draft statement is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portions." *Id.* A crucial and significant role for an EIS in draft or final form is providing a "springboard for public comment." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 370 (1989). Thus a DEIS is defective if it references ongoing or incomplete studies which may or may not be included in the final EIS because the DEIS does not provide enough information to allow for meaningful public comment. This information must be made available for public review in advance of the FEIS. Post-hoc monitoring is not a sufficient examination of the affected environment for NEPA purposes. Rather the affected environment must be identified and analyzed before the federal agency authorizes an irretrievable commitment of resources. A statement about possible effects absent meaningful analysis before an action takes place does not satisfy NEPA's hard look requirement. *See e.g., Sierra Club, Inc. v. Austin*, 82 Fed. App'x 570, 573 (9th Cir. 2003) (citing *Neighbors of Cuddy Mountain v. U.S. Forest Serv.*, 137 F.3d 1372 (9th Cir. 1998)).

**102-06**

In numerous instances, the "Affected Environment" section of the DEIS (Chapter 3) is defective because it does not contain adequate information or relies on future studies or determinations. The BLM must analyze the affected environment before an irretrievable commitment of resources is made. For the reasons stated below, the DEIS is legally defective and premature because it fails to contain vital information on the affected environment.

- A. Air impacts not considered.**

**Comment 102-05**

The two marketable byproducts from operation of the Mesaba Energy Project (elemental sulfur and slag) are non-hazardous in the context of tests designed to identify hazardous waste. Toxicity characteristic leaching procedure results for slag from the E-Gas™ process are provided in Excelsior's Joint Permit Application at Table 3.4-25 (page 234). [This document is accessible at the MDOC website for the Mesaba Energy Project Docket: <http://energyfacilities.puc.state.mn.us/Docket.html?Id=16573>.] These materials are different than wastes from traditional coal-fired power plants as identified in this comment. See response to Comment 53-03, which addresses concerns related to unmarketable slag and sulfur.

**Comment 102-06**

See response to Comment 99-12, which addresses some of the same concerns. Other issues raised in this comment have been addressed in response to Comment 105-11 from MPCA, which is the state agency responsible for air quality and permitting. Health impacts are discussed in Section 4.17 and discussions of the affected environments for health and safety are in Section 3.17 (Volume 1). Additionally, the Final EIS has been revised to insert a missing sub-section heading (in printed copies of the Draft EIS), "4.17.2.3 Human Health Risks," for the text that addresses risks associated with air pollutants emitted by the project. Section 4.17.2.3 includes updated AERA modeling results (reported in Section 5.8 of Appendix C [Volume 2]), including a discussion on impacts from PM<sub>2.5</sub>.

**Commenter 102 – Kristin Henry**

**Responses**

**102-06  
 (cont'd)**

Section 3.3-6 of the DEIS fails to adequately discuss the health impacts associated with PM 2.5 emissions from the proposed Mesaba plant. While the DEIS mentions the National Ambient Air Quality Standards (“NAAQS”), the secondary standards and Minnesota Ambient Air Quality Standards (“MAAQS”) for all associated air pollutants, including PM 2.5 emissions, the DEIS does not discuss the health impact of fine particulate matter pollution from the Mesaba power plant.

In 2006, the U.S. EPA stated, after conducting its review of the National Ambient Air Quality Standards for PM10 and PM 2.5, that PM 2.5, which the U.S. EPA sometimes refers to as “fine particulate matter” has a variety of adverse health effects including premature mortality, increased hospital admissions, emergency room visits and development of chronic respiratory disease. 71 Fed. Reg. 2,620 (Jan. 17, 2006).

U.S. EPA has also stated:

The research on which EPA based the 1997 standards did not identify a specific threshold concentration below which individuals have no PM related health effects, meaning that emissions reductions resulting in reduced concentrations below the level of the standards may continue to provide additional health benefits to the local population.

70 Fed. Reg. 65,983, 65,988 (Nov. 1, 2005). In U.S. EPA’s most recent review of the PM10 and PM2.5 National Ambient Air Quality Standards, U.S. EPA was unable to find evidence supporting the selection of a threshold level of PM2.5 under which the death and disease associated with PM 2.5 would not occur at the population level. 71 Fed. Reg. 2,620, 2,635 (Jan. 17, 2006). The US EPA also noted that in “the extended ACS [American Cancer Society] study, the authors reported that the associations for all-cause, cardiovascular and lung cancer mortality “were not significantly different from linear associations.” *Id.* A linear relationship means that more pollution tends to cause more health impacts at the population level.

For the foregoing reasons, the amount of PM 2.5 emissions from Mesaba power plant must be quantified and the associated human health impacts analyzed and compared against a true no action alternative.

**B. Failure to consider impact to “global” environment**

**102-07**

The U.S. Department of Interior Director’s Order No. 3226 (U.S Dep’t of Interior, Jan. 19, 2001) acknowledges that “[t]here is a consensus in the international community that global climate change is occurring and that it should be addressed in government decisionmaking.” That Order further instructs “[e]ach bureau and office of the Department [of Interior] [to] consider and analyze potential climate change impacts . . . when making major decisions regarding the potential utilization of resources under the

**Comment 102-07**

Secretarial Order 3226 of the Department of the Interior is not applicable to planning efforts by DOE. Section 5.2.8 (Volume 1) has been added to 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 would 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.

See also response to Comment 12-02, which addresses similar concerns regarding global climate change.

## Commenter 102 – Kristin Henry

Department's purview." <sup>2</sup> The same should apply to branches of the Department of Agriculture.

As noted elsewhere herein, the DEIS fails to adequately list the affect the Mesaba power plant will have on the broader global environment. For example, the DEIS fails to adequately analyze the broader environmental affects the emission of over 5 million tons of global warming pollution each year from the Mesaba power plant. Chapter 3 of the DEIS fails to adequately characterize the potential effect to the global environment caused by the Mesaba power plant's release of over 5 million annual tons of global warming pollution: global climate change, global temperature change, rising sea levels, effect on wildlife (corals, polar bears), glacier reduction, less snow, more rain and earlier snowmelt runoff. The DEIS is flawed for failing to characterize this impact to the global environment.

**102-07  
(cont'd)**

### C. Failure to list impacts of other U.S. government actions

Moreover, the DEIS fails to analyze that these same environments will be affected by the cumulative impacts of the actions of the U.S. government regarding numerous pending coal-fired power plant proposals currently undergoing NEPA review, including the White Pine power plant, the Toquop plant, the Ely Energy Center, the Bonanza plant, the Big Stone II plant and others in the United States.

**102-08**

### D. Failure to consider impacts to visibility from emissions

Section 3.3 of Chapter 3 (Visibility and Regional Haze) fails to recognize that emission of pollutants from the Mesaba will affect visibility, including visibility at nearby Class I areas. Instead, the DEIS notes that under the new federal Regional Haze Act, the plant may be regulated in the future to address haze. These visibility impacts caused by pollutants must be acknowledged and analyzed now and not put off until some undetermined future point in time.

**102-09**

### E. Failure to specifically consider exposure to coal combustion waste

The DEIS fails to note that groundwater resources could be impacted from coal combustion waste disposal at the power plant site. The DEIS notes that sludge and waste from the Mesaba power plant would be taken to a local landfill for disposal. Given the history of coal combustion waste causing groundwater contamination, the DEIS must not only acknowledge this potentially affected environment, but also analyze potential public health impacts. The DEIS must characterize the pollutants of concern, the pathways of exposure and the human health risk as a result of coal combustion waste produced throughout the life of the mine and power plant.

**102-10**

### F. Failure to acknowledge potential impact of groundwater pumping on area springs and seeps

**102-11**

<sup>2</sup> [http://elips.doi.gov/app\\_so/act\\_getfiles.cfm?order\\_number=3226](http://elips.doi.gov/app_so/act_getfiles.cfm?order_number=3226)

## Responses

### Comment 102-08

See response to Comment 102-07, which addresses the same concerns. The plants referenced in the comments are located in Nevada, Utah, and South Dakota; therefore it is unlikely that the cumulative effect of their emission combined with those of the Mesaba Energy Projects would be significant. With respect to cumulative CO<sub>2</sub> emissions the effect of Mesaba Energy Project's impact on global climate change with respect other facilities in the energy sector are discussed in Section 4.3.5.6. See also response to Comment 12-02, which addresses similar concerns regarding global climate change.

### Comment 102-09

The impacts on visibility in Class I Areas were discussed in Section 4.3 (Volume 1) of the Draft EIS (see Section 4.3.3.2 for the West Range Site and Section 4.3.4.2 for the East Range Site). See also response to Comment 49-01, which addresses the same concerns.

### Comment 102-10

IGCC power plants do not produce the coal combustion wastes referenced by the commenter; thus, the comments regarding potential health risks from such wastes are not applicable to this project. See Sections 2.2.3.3, 2.2.3.4, and 4.16.2.2 (Volume 1), which discuss solid wastes, marketable byproducts, and waste management. See Comment 105-50 by MPCA regarding the rules pertaining to the beneficial use of coal combustion slag and sulfur. See response to Comment 53-03 regarding the selection of a landfill for disposal of slag or sulfur in the event that these byproducts cannot be marketed. See response to Comment 82-51, which addresses concerns regarding potential groundwater resources.

### Comment 102-11

Section 2.2.2.3 (Volume 1) describes the process water requirements for the Mesaba Energy Project. The proposed facility would not require any groundwater pumping and is not in the same watershed as the Boundary Waters Canoe and Wilderness Area; thus, there would be no impact on that resource from groundwater pumping. New text has been added to subsection *Water Levels and Water Balance During Operations* (under Section 4.5.3.1, [Volume 1]), which discusses potential impacts on water level fluctuations in nearby water bodies as a result of water appropriation during the proposed facility's operation.

**Commenter 102 – Kristin Henry****Responses****102-11  
(cont'd)**

Abandoned mine pits would be the primary source of water for the proposed Mesaba power plant. A water pipeline and pumping system would convey water from the abandoned mine pits to the Mesaba Generating Station. The DEIS fails to acknowledge impacts to area surface waters, springs, and seeps as a result of groundwater pumping to serve the Mesaba power plant. In addition, the DEIS should explore whether this pumping would have any impact on the water resources of the Boundary Waters Canoe and Wilderness Area. This impact must be acknowledged and analyzed.

**G. Failure to acknowledge potential impact of groundwater pumping on existing groundwater wells****102-12**

The DEIS fails to acknowledge impacts to existing water wells as a result of groundwater pumping to serve the Mesaba power plant. This impact must be acknowledged and analyzed.

**H. Failure to analyze electromagnetic field impacts****102-13**

The DEIS fails to identify electromagnetic fields generated by the power plant and transmission facilities as part of the effected environment. The DEIS must analyze impacts to public health and the environment as a result of electromagnetic fields.

**I. Lack of project design plans in Draft EIS****102-14**

There are no detailed design plans (stack heights, schematics of conveyance systems, road improvements, etc.) included in the DEIS. This prevents a complete analysis of the proposed Mesaba power plant.

**J. Human health risk assessment****102-15**

The DEIS also largely fails to acknowledge that emissions and releases from the plant will pose risks to human health. The DEIS must acknowledge these risks and quantify the impacts from the plant against a true no action alternative.

**V. Environmental Consequences- DEIS Chapter 4****A. Failure to Adequately Examine Global Warming Impacts**

The Mesaba facility would emit approximately 5 million tons of CO<sub>2</sub> and would operate for at least 40 years. Thus, the total emission of CO<sub>2</sub> over the life of the plant is expected to be 200 million tons of CO<sub>2</sub>.

NEPA requires governmental agencies to consider impacts on the global environment, as well as local and regional impacts. For example, NEPA Section 102(F) requires that the federal government “recognize the world-wide and long-range character of environmental problems and, where consistent with the foreign policy of the United

**Comment 102-12**

The proposed facility would not require any groundwater pumping, and thus, would not result in impacts to existing water wells. See response to Comment 7-02, which discusses potential impacts to aquifers.

**Comment 102-13**

See response to Comment 3-01, which addresses the same concerns.

**Comment 102-14**

The Mesaba Energy Project EIS is based on project information provided by Excelsior in i) the Joint Permit Application (referenced as Excelsior Energy, 2006a) submitted June 19, 2006 to the PUC and ii) the Application to the MPCA for a New Source Review Construction Authorization Permit (Air Permit Application) appended thereto. The Joint Permit Application and the Air Permit Application include stack height information and plot plan diagrams. The Joint Permit Application is a planning level document required by the Minnesota Power Plant Siting Act, which can be accessed at the MDOC website for the Mesaba Energy Project Docket:

<http://energyfacilities.puc.state.mn.us/Docket.html?Id=16573>. The level of detail contained in the Joint Permit Application is as customary for an EIS by DOE and MDOC. Chapter 2 (Volume 1) of the Final EIS provides information about the project.

**Comment 102-15**

The human health risk assessment is contained in Section 4.17.2 (Volume 1) of Section 4.17, Safety and Health. The Final EIS has been revised to insert a missing sub-section heading (in printed copies of the Draft EIS), “4.17.2.3 Human Health Risks”, for the text that addresses risks associated with air pollutants emitted by the project. See also responses to Comments 38-01 and 42-01, which address similar concerns.

## Responses

## Commenter 102 – Kristin Henry

States, lend support to initiatives, resolutions, and programs designed to maximize international cooperation in anticipating and preventing a decline in the quality of mankind's world environment." This includes global climate change. As the Ninth Circuit recently held, federal agencies have an obligation to evaluate "the expected amount of CO<sub>2</sub> emitted" as a result of their activities, and the "incremental impact" that these emissions will have "on climate change or on the environment more generally in light of other past, present, and reasonably foreseeable actions . . . ." *Center for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 2007 U.S. App. LEXIS 26555 at \*111 (9th Cir. Nov. 15, 2007).

The Intergovernmental Panel on Climate Change ("IPCC") was established by the World Meteorological Organization ("WMO") and the United Nations Environment Programme ("UNEP") in 1988. The IPCC's mission is to comprehensively and objectively assess the scientific, technical and socio-economic information relevant to human-induced climate change, its potential impacts, and options for adaptation and mitigation. *See* <http://www.ipcc.ch/about/about.htm>. The IPCC completed its First Assessment Report in 1990, its Second Assessment Report in 1995, and its Third Assessment Report in 2001. *Id.*

In February 2007, the Intergovernmental Panel on Climate Change ("IPCC") released a summary of the contribution of Working Group I to its Fourth Assessment Report. The Summary concludes, among other things:

- The global atmospheric concentration of carbon dioxide has increased from a pre-industrial value of about 280 ppm to 379 ppm in 2005;
- The atmospheric concentration of carbon dioxide in 2005 exceeds by far the natural range over the last 650,000 years;
- The primary source of the increased atmospheric concentration of carbon dioxide since the pre-industrial period results from fossil fuel use;
- There is at least a 9 out of 10 chance that the global average net effect of human activities since 1750 has been one of warming;
- Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level;
- At continental, regional and ocean basin scales, numerous long term changes have been observed. These include changes in arctic temperatures and ice, widespread changes in precipitation amounts, ocean salinity, wind patterns and aspects of extreme weather including droughts, heavy precipitation, heat waves and the intensity of tropical cyclones;

**Responses****Commenter 102 – Kristin Henry**

- There is greater than a 90% likelihood that most of the observed increases in global average temperatures since the mid-20<sup>th</sup> century are due to the observed increases in anthropogenic greenhouse gas emissions;
- For the next two decades, warming of about 0.2 Degrees Celsius per decade is projected for a range of emission scenarios;
- There is greater than a 90% likelihood that hot extremes, heat waves and heavy precipitation events will continue to become more frequent; and
- Anthropogenic warming and sea level rise would continue for centuries due to the time scales associated with climate processes and feedbacks, even if greenhouse gas concentrations were to be stabilized.

In April 2007, the IPCC released a summary of the Contribution of Working Group II to its Fourth Assessment Report. Working Group II is responsible for assessing the vulnerability of socio-economic and natural systems to climate change, the consequences of climate change, and the options for adapting to it. <http://www.ipcc.ch/about/about.htm>. The Working Group II Summary concludes, among other things:

- By mid-century, annual average river runoff and water availability are projected to decrease by 10-30% over some dry regions at mid-latitudes and in the dry tropics, some of which are presently water stressed areas;
- In the course of the century, water supplies stored in glaciers and snow cover are projected to decline, reducing water availability in regions supplied by meltwater from major mountain ranges, where more than one-sixth of the world population currently lives;
- Warming in the mountains of western North America is projected to cause decreased snowpack, more winter flooding, and reduced summer flows, exacerbating competition for over-allocated water resources;
- Drought-affected areas will likely increase in extent. Heavy precipitation events which are very likely to increase in frequency, will augment flood risk;
- Increases in the frequency of droughts and floods are projected to affect local crop production, especially in subsistence sectors at low latitudes. (The DEIS then fails to consider how emitting over 5 million tons of CO<sub>2</sub> annually would impact the current drought.
- Poor communities can be especially vulnerable, in particular those concentrated in high-risk areas. They tend to have more limited adaptive capacities, and are more dependent on climate-sensitive resources such as local food and water supply;

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- Disturbances from pests, disease and fire are projected to have increasing impacts on North American forests, with an extended period of high fire risk and large increases in area burned;
- In North America, major challenges are projected for crops that are near the warm end of their suitable range or depend on highly utilized water resources;
- The resilience of many ecosystems is likely to be exceeded this century by an unprecedented combination of climate change, associated disturbances (e.g., flooding, drought, wildfire, insects, ocean acidification), and other global change drivers (e.g., land use change, pollution, over-exploitation of resources);
- Approximately 20-30% of plant and animal species assessed so far are likely to be at increased risk of extinction if increases in global average temperatures exceed 1.5-2.5 Degrees Celsius;
- For increases in global average temperature exceeding 1.5-2.5 Degrees Celsius and in concomitant atmospheric carbon dioxide concentrations, there are projected to be major changes in ecosystem structure and function, species' ecological interactions, and species' geographic ranges, with predominantly negative consequences for biodiversity, and ecosystem goods and service, e.g., water and food supply;
- Projected climate change-related exposures are likely to affect the health status of millions of people, particularly those with low adaptive capacity; and
- Even the most stringent mitigation efforts cannot avoid further impacts of climate change in the next few decades, which make adaptation essential, particularly in addressing near-term impacts. Unmitigated climate would, in the long term, be likely to exceed the capacity of natural, managed and human systems to adapt.

On or about May 4, 2007, the IPCC released a summary of the contribution of Working Group III to its Fourth Assessment Report. Working Group III is responsible for assessing options for limiting greenhouse gas emissions and otherwise mitigating climate change. <http://www.ipcc.ch/about/about.htm> The Working Group III Summary, concludes, among other things:

- Global greenhouse gas (GHG) emissions have grown since pre-industrial times, with an increase of 70% between 1970 and 2004;
- The largest growth in global GHG emissions between 1970 and 2004 has come from the energy supply sector (an increase of 145%);
- With current global climate change mitigation policies and related sustainable development practices, global GHG emissions will continue to grow over the next few decades;

**Commenter 102 – Kristin Henry**

- There is substantial economic potential for the mitigation of global GHG emissions over the coming decades, that could offset the projected growth of global emissions or reduce emissions below current levels;
- There are mitigation opportunities with net negative costs, in other words, for which the benefits such as reduced energy costs and reduced emissions of pollutants equal or exceed their costs to society, excluding the benefits of avoided climate change;
- Fuel switching from coal to gas, renewable heat and power (hydropower, solar, wind, geothermal and bioenergy), and early applications of carbon capture and storage (e.g., storage of removed carbon dioxide from natural gas) are key mitigation technologies and practices currently commercially available;
- Near-term health co-benefits from reduced air pollution as a result of actions to reduce GHG emissions can be substantial and may offset a substantial fraction of mitigation costs;
- It is often more cost-effective to invest in end-use energy efficiency improvement than in increasing energy supply to satisfy demand for energy services. Efficiency improvement has a positive effect on energy security, local and regional air pollution abatement and employment;
- Renewable energy generally has a positive effect on energy security, employment and on air quality; and
- In order to stabilize the concentrations of GHGs in the atmosphere, emissions would need to peak and decline thereafter.

Hansen and others have stated that global emissions of CO<sub>2</sub> and other global warming pollutants must be immediately reduced to avoid exceeding the 475 ppm ceiling for significant irreversible impacts.<sup>3</sup> The World Health Organization has estimated that approximately 154,000 human lives are lost each year as a result of global warming.<sup>4</sup>

**102-16**

DOE and MDOC should consider the entirety of the Fourth Assessment Report and make it part of the administrative record for the DEIS. Due to the severe impacts of the Mesaba power plant's carbon dioxide emissions on the health, welfare, economy, and environment of the state of Minnesota, the nation, and the planet as a whole as described

<sup>3</sup> Hansen, et al. *Global Temperature Change*, PNAS published online September 25, 2006; doi:10.1073/pnas.0606291103. See also, Hansen, et al. 2006, *Dangerous Human-made Interference with Climate: A GISS modelE study*; available at <http://arxiv.org/abs/physics/0610115>.

<sup>4</sup> World Health Organization (WHO) 2002, *The World Health Report*, available at <http://www.who.int/whr/2002/en/index.html>.

**Responses****Comment 102-16**

Greenhouse gas emissions by the Mesaba Energy Project are described in Section 5.2.8 (Volume 1) of the Final EIS, which has been added to the Final EIS and includes information from the current IPCC Report. See response to Comment 102-07. The response to Comment 12-02 explains DOE's responsibilities for energy development and notes that the CCPI Program is only one of numerous DOE initiatives, programs, and projects intended to achieve national energy goals through renewable and non-renewable sources, as well as conservation. See response to Comment 102-30 for discussions regarding the economic impacts of CO<sub>2</sub> emissions.



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 (cont'd)

in the IPCC report, the DEIS should examine alternatives and mitigation measures designed to eliminate or minimize carbon dioxide emissions.

The DEIS should also assess the impacts of global warming pollution on different environmental receptors—such as wildlife, vegetation, water resources, humans, or land. The DEIS should analyze the local, regional, and global environmental impacts of CO<sub>2</sub> emissions from the Mesaba power plant. The DEIS should also consider the economic impacts of CO<sub>2</sub> emissions from the Mesaba power plant. In addition, the DEIS should consider the cumulative impacts of this significant new source of CO<sub>2</sub> emissions in combination with other existing and proposed CO<sub>2</sub> sources.

**B. Failure to Adequately Consider Impacts of Ozone Pollution**

On July 11, 2007, EPA published proposed revisions to strengthen the national ambient air quality standards for ozone. *See* 72 Fed. Reg. 37,818. In October 2006, the EPA Clean Air Scientific Advisory Committee unanimously and unambiguously advised EPA Administrator Stephen Johnson: “(1) There is no scientific justification for retaining the current primary 8-hr NAAQS of 0.08 parts per million (ppm), and (2) The primary 8-hr NAAQS needs to be substantially reduced to protect human health, particularly in sensitive subpopulations.”<sup>5</sup> The Committee also unanimously agreed upon a recommended range: “Therefore, the CASAC unanimously recommends a range of 0.060 to 0.070 ppm for the primary ozone NAAQS.”<sup>6</sup> These recommendations leave no room for misinterpretation. Indeed, the CASAC pointedly found that “there is no longer significant scientific uncertainty regarding CASAC’s conclusion that the current 8-hr primary NAAQS must be lowered” and “[r]etaining this standard would continue to put large numbers of individuals at risk.”

*[T]here is no longer significant scientific uncertainty regarding the CASAC’s conclusion that the current 8-hr primary NAAQS must be lowered. A large body of data clearly demonstrates adverse human health effects at the current level of the 8-hr primary ozone standard. Retaining this standard would continue to put large numbers of individuals at risk for respiratory effects and/or significant impact on quality of life including asthma exacerbations, emergency room visits, hospital admissions and mortality.*<sup>7</sup>

In sum, CASAC unequivocally found that there is no basis in public health considerations for EPA to retain the current standard.

The scientific evidence of mortality effects is one of the significant scientific developments since EPA’s 1997 decision to lower the ozone health standard. The

<sup>5</sup> Dr. Rogene Henderson, Chair, CASAC, to Stephen Johnson, EPA Administrator, “Clean Air Scientific Advisory Committee’s (CASAC) Peer Review of the Agency’s 2nd Draft Ozone Staff Paper,” (Oct. 24, 2006).

<sup>6</sup> *Id.* at 2 (italics in original).

<sup>7</sup> *Id.* at 5 (italics in original).

## Responses

### Comment 102-17

The impacts from emissions of ozone precursors (i.e., VOC and NO<sub>x</sub>) are discussed in detail in Section 4.3 (Volume 1) of the EIS. Additionally, associated cumulative impacts are addressed in Section 5.2.2 (Volume 1).

### Commenter 102 – Kristin Henry

CASAC expressly pointed to the studies on ozone mortality effects as part of the body of evidence documenting adverse health effects below the current health standard. The CASAC found:

- “Several new single-city studies and large multi-city studies designed specifically to examine the effects of ozone and other pollutants on both morbidity and mortality have provided more evidence for adverse health effects at concentrations lower than the current standard.”<sup>8</sup>
- “[A]dverse health effects due to low-concentration exposure to ambient ozone (that is, below the current primary 8-hour NAAQS) found in the broad range of epidemiologic and controlled exposure studies cited above include . . . an increase in mortality (non-accidental, cardio-respiratory deaths) reported at exposure levels well below the current standard.”<sup>9</sup>
- “Retaining this [the current] standard would continue to put large numbers of individuals at risk for . . . mortality.”<sup>10</sup>

CASAC’s series of statements in its October 2006 correspondence to the Administrator placed CASAC’s full force, unanimously, on the evidence of mortality and other health effects in compelling EPA to adopt a lower standard to protect public health with an adequate margin of safety.

In addition, both CASAC and EPA found that ozone has serious adverse welfare effects at concentrations well below the current ambient standard. These welfare effects are addressed in the October 2006 CASAC letter to EPA Administrator Stephen Johnson and EPA’s July proposal on the national ambient air quality standards for ozone. *See* 72 Fed. Reg. 37,818. Both documents are incorporated here by reference as part of the administrative record for this proceeding.

DOE and MDOC must fully evaluate the potential for the proposed Mesaba power plant to contribute to elevated ozone concentrations that threaten human health and the environment. In such analysis, the extensive ozone-forming pollution associated with the Mesaba power plant must be evaluated together with all other emission sources in the region.

#### 3. Failure to Adequately Consider Impacts to National Parks and Class I areas

Within a 300 km range of the Mesaba power plant there are numerous Class I areas, the Boundary Waters Canoe Area, Rainbow Lake Wilderness Area, Voyageurs National Park, and Isle Royale National Park. DEIS at 3.3-6. These Class I areas are already under

<sup>8</sup> *Id.* at 3 (citations omitted).

<sup>9</sup> *Id.* at 4.

<sup>10</sup> *Id.* at 5.

102-17

**Commenter 102 – Kristin Henry**

tremendous pressure from numerous existing and proposed coal-fire power plants and other emission sources in Minnesota and the Midwestern United States.

In 1977 Congress amended the Clean Air Act and designated certain federal lands as class I areas, giving them the greatest level of protection under the Act. To protect the air in class I areas, Congress created the prevention of significant deterioration or PSD program. PSD seeks to “preserve, protect, and enhance the air quality in national parks, national wilderness areas, national monuments, national seashores, and other areas of special ... natural, recreational, scenic or historic value.” Clean Air Act Sec. 160.

Under PSD, Congress established limits (known as increments) on additional amounts of pollution in class I areas over baseline conditions that existed in 1977 when PSD was enacted. Increments are in place for emissions of sulfur dioxide, particulate matter, and nitrogen oxides. Because Congress sought to protect air quality not just from long-term pollution increases, but also from fluctuations and “spikes” that occur at certain times of year (e.g., peak summer energy demand), it created both annual and short-term (3 and 24 hours) increments for these pollutants.

Since Congress wants class I areas to have the cleanest air in the country, these parks and wilderness areas have the smallest increments, or allowable amounts of new pollution. The DOE and MDOC need to do a study (known as an increment analysis) to show how much pollution is already in the class I area and how much additional pollution it will add.

While DOE and MDOC performed an increment analysis this was flawed in many ways. When the draft air permit for this facility is issued, Sierra Club will submit extensive comments on the deficiencies with this increment analysis, including problems associated with the modeling. The Sierra Club hereby incorporates by reference any future comments by the Club on air impacts.

**102-18**

The Mesaba power plant will likely have impacts at these Class I areas, as well as on regional haze. The National Park Service, U.S. EPA, and Forest Service will probably be commenting on the proposed Mesaba power plant air permit. The Sierra Club thus request that finalization of the EIS be delayed until the Park Service, Forest Service and U.S. EPA have formally commented on the air permit. The Sierra Club hereby incorporate herein by reference any future comments regarding air impacts from the Mesaba power plant from any governmental agency, including but not limited to the Park Service, EPA, and National Forest divisions.

Further, states will soon have to comply with the federal regional haze rule which will require improvements to visibility on the best days and no impairment on the worst days. The DEIS should analyze how the Mesaba power plant, and all other proposed coal plants cumulatively, will impact the federal regional haze rule.

**4. Failure to Evaluate Mercury Deposition in Class I areas****Responses****Comment 102-18**

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

**Commenter 102 – Kristin Henry****Responses****102-19**

The DEIS fails to properly evaluate mercury deposition in Class I areas. This impact must be recognized and analyzed against a no action alternative. The DEIS should also include a cumulative impact analysis of the combined impacts of mercury deposition from all existing and proposed power plants in the region.

Numerous scientific studies show that elemental mercury accumulates closely around the point of emission.<sup>11</sup> The two possible sites are 40 and 100 kilometers from the Boundary Waters Canoe and Recreation Area, which is a popular area for angling and canoeing. Once emitted into the environment, elemental mercury is transformed by biochemical processes into methylmercury. Methylmercury is highly toxic to humans and wildlife, even in minute amounts. For these reasons, the American Medical Association says that allowing power plants to escape mercury cleanup through cap-and-trade “is inconsistent with the AMA’s health-protective approach to air pollution.”<sup>12</sup>

- Research in the eastern United States shows significant bioaccumulation of methylmercury in salamanders, Peregrine falcons and forest songbirds. In recent decades, the number of wood thrushes in the southeast region has declined 45 percent, and researchers now suspect that accumulation of airborne mercury in forest ecosystems could be part of the cause.
- Monitoring has shown that concentrations of methylmercury in game fish from many interior lakes in Voyageurs National Park in northern Minnesota substantially exceeds criteria for the protection of human health. Researchers recently concluded that nearly all of the mercury in fish in this seemingly pristine environment was derived from industrial emissions.<sup>13</sup>
- Extremely high mercury levels were recently found in the endangered Indiana bats living in Mammoth Cave National Park in Kentucky, which is located in an area that has among the greatest concentrations of coal-fired power plants of anywhere in the country.<sup>14</sup>

**102-20**

The DEIS fails to discuss or provide any data on the mercury levels in Minnesota’s air and water.

**5. The DEIS Does Not Adequately Analyze Impacts to Wilderness**

<sup>11</sup> E.g., Gerald J. Keeler, M.S. Landis, G.A. Norris, E.M. Christianson, and J.T. Dvonch, “Sources of Mercury Wet Deposition in Eastern Ohio, USA,” *Environmental Science and Technology* (American Chemical Society), Vol. xx, No. xx, xxx (published online September 8, 2006).

<sup>12</sup> American Medical Association, <http://www.ama-assn.org/ama/pub/category/17086.html>.

<sup>13</sup> J.G. Wiener, B.C. Knights, M.B. Sandheinrich, J.D. Jeremianson, M.E. Brigham, D.R. Engstrom, L.G. Woodruff, W.F. Cannon, and S.J. Balough, “Mercury in Soils, Lakes and Fish in Voyageurs National Park (Minnesota): Importance of Atmospheric Deposition and Ecosystem Factors,” *Environmental Science and Technology* (American Chemical Society), vol. 40, no. 20 (September 6, 2006).

<sup>14</sup> The Louisville Courier-Journal, “Contaminated BATS? Mercury found in animals at Mammoth Cave,” August 7, 2005

**Comment 102-19**

PSD regulations and application guidelines do not include or address deposition of mercury. In cumulative Class I analysis for Mesaba, total mercury was included as a transported pollutant (see Table 5.2.2-7 [Volume 1]). 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 mercury substances. Therefore there is no current methodology for reliable modeling of total mercury deposition. The human health risk assessment is contained in Section 4.17.2 (Volume 1) of Section 4.17, Safety and Health. The Final EIS has been revised to insert a missing sub-section heading, “4.17.2.3 Human Health Risks”, for the text that addresses risks associated with air pollutants emitted by the project. See also responses to Comments 38-01, 42-01, and 82-64, which address similar concerns.

The following text has been added to Section 4.8.2.2 (Volume 1): “In general, mercury exposure can cause negative impacts to terrestrial and avian wildlife species including adverse effects to neurological, endocrine, and reproductive processes. There are two major guilds of wildlife that have the potential to act as a baseline for bioaccumulation: fish and insects. Therefore, species that prey on fish or insects have the potential to be affected as well (Colman, 2007).”

**Comment 102-20**

Mercury concentrations in water bodies closest to the West Range and East Range Sites are provided in Sections 3.5.1.2 and 3.5.2.2. See response to Comment 102-19 regarding atmospheric mercury.

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**Responses**

**102-21**

The DEIS fails to analyze the impacts that the visible blighted plume from the Mesaba coal plant will have on observers in the surrounding wilderness areas. The DEIS fails to consider whether the plume will adversely impact recreation in the area due to a loss of the current unspoiled characteristics in the area. The DEIS also fails to analyze whether industrialization near these wilderness areas will have an adverse impact on the local economy as a result of reduced wilderness uses of the area. These impacts must be analyzed. An individual and cumulative haze analysis should be performed of the Mesaba plant and all other existing and proposed power plants in the region.

**Comment 102-21**

Section 4.2.3.2, Aesthetics, as updated in the Final EIS, discusses the impacts related to plume visibility in more detail. The plume would potentially be visible to an area with a radius of up to 20 miles. The closest public lands in the areas are the Hill Annex Mine State Park (5 miles), the Forest History Center (15 miles) and the eastern edge of the Chippewa National Forest (20 miles). Cumulative visibility impacts are discussed in Section 5.2.2 (Volume 1), and Section 5.3.2.2 presents a discussion of the mitigation options for potential visibility impacts. Additionally, see response to Comment 100-04, which address impacts to recreation and tourism.

**102-22**

**6. Noise**

The DEIS fails to present data on the cumulative impacts of noise on the wilderness and nearby recreation areas from operation of the Mesaba coal-fired power plant, operation of the railroad line, and operation of water pumping stations. The DEIS must recognize that recreational receptors value the area for its “solitude”. A cumulative noise impact analysis should be performed to specifically quantify the collective noise from all of this development and then determine its likely impact on solitude in the local wilderness areas and recreation areas.

**Comment 102-22**

The noise analysis presented in Section 4.18 (Volume 1) indicated that proposed rail transportation and plant noise impacts to residential receptors would be minor; therefore, because recreational receptors and designated wilderness areas are located at a greater distance from the rail corridor than the residential receptors, it is expected that impacts to recreational/wilderness areas would be negligible.

**102-23**

**7. Failure to consider impacts caused by coal combustion waste disposal**

The DOE and MDOC failed to “succinctly describe the environment of the area(s) to be affected or created by the alternatives under consideration.” as required by 40 CFR 1502.15. Without a detailed description of baseline environmental conditions, there is no means for assessing and comparing the impacts of the alternatives on water quality.

First, the DEIS did not assess baseline groundwater monitoring or surface water data. Second, the neither the DEIS or its Appendices contain a baseline description of the area(s) where waste will be disposed, including the large volumes of ash that will be disposed. Site-specific baseline geochemical data of the stratigraphy and layers of earth as well as water flow pathways at these specific disposal sites are necessary to understand and predict the consequences of placing large volumes of coal combustion waste into the ground. Baseline information is necessary to understand the amount of water that will interact with the coal waste, the quality of that water prior to the interaction, and the rates, directions and pathways that water will flow in from that interaction. This information is necessary to understand the potential for that water to reach any human and ecological receptors. Without this information, the information in the DEIS severely deficient for assessing and commenting on the environmental impacts of the preferred alternative.

The potential impact on aquatic life, terrestrial life and human health from exposure to coal ash contaminants from a large disposal of coal waste from the Mesaba power plant into the ground/landfill should have been discussed comprehensively in this DEIS. *See* Hopkins, W.A, C.L. Rowe, J.H. Roe, D.E. Scott, M. T Mendonta and J. Congdon. 1999. Ecotoxicological impact of coal combustion byproducts on amphibians and reptiles. Savannah River Ecology Laboratory, presented at the Society for environmental

**Commenter 102 – Kristin Henry****Responses****102-23  
(cont'd)**

Toxicology and Chemistry, 20th annual meeting, Philadelphia, PA, Abstract # PMP009; Skorupa, Joseph P., 1998. Selenium poisoning of fish and wildlife in nature: Lessons from twelve real world examples. From Environmental Chemistry of Selenium, Marcel Dekker, Inc. New York; and Cherry, D.S. et al. 2000. Review of the global adverse environmental impact to ground water and aquatic ecosystems from coal combustion wastes. Final Report. Prepared for the Hoosier Environmental Council and Citizens Coal Council, March 28, 2000 for coal ash impacts on aquatic ecosystems and Agency for Toxic Substances and Disease Registry. Health Consultation, Town of Pines Groundwater Plume, Town of Pines, Porter County, Indiana, June 14, 2002, [http://www.atsdr.cdc.gov/HAC/PHA/townpines/top\\_p1.html](http://www.atsdr.cdc.gov/HAC/PHA/townpines/top_p1.html) for potential impacts to human health.

The DEIS also fails to provide leach data or other detailed waste characterization of the coal ash to be disposed. There is no field or laboratory data in the DEIS describing the leaching tendencies of the coal waste that will be generated by Mesaba. Along with the limited site-specific baseline information about the coal waste disposal areas, the failure to provide any in depth discussion of the chemistry of the coal waste involved further limits the ability to assess direct or indirect impacts from the preferred alternative. Site specific knowledge of the coal waste integrated with how it will behave in the disposal site in question are crucial to this understanding.

**102-24**

Coal combustion wastes are known to leach numerous harmful contaminants at levels harmful to health and the environment. EPA's 2006 report, entitled Characterization of Mercury-Enriched Coal Combustion Residues from Electric Utilities Using Enhanced Sorbents for Mercury Control confirmed that coal ash leaches arsenic and selenium at levels of potential concern.<sup>15</sup> The report tested both laboratory leachate and field leachate of coal combustion waste and found significant exceedances of Maximum Contaminant Levels (MCLs, a.k.a. Primary Drinking Water Standards) for arsenic and selenium in groundwater in a substantial percentage of the samples. In fact, the concentrations of some samples approached 100 times the MCL. The report concludes that use of activated carbon injection to capture mercury at coal-fired power plants substantially increases the arsenic and selenium content of coal combustion waste. The report found, in addition, that coal ash commonly leached arsenic and selenium in excess of 10 times the MCL from both plants that employed sorbent technologies and those that did not.

Recent congressional concern about the adverse impacts of this practice lead to the National Research Council (NRC) 2006 report entitled, "Managing Coal Combustion Residues in Mines." The NRC Report concluded that "that the presence of high contaminant levels in many CCR ("coal combustion residue") leachates may create human health and ecological concerns at or near some mine sites over the long term."<sup>16</sup> While the NRC committee found that monitoring systems at coal mines were generally

<sup>15</sup> F. Sanchez, Keeny, R., Kosson, D., Delapp, R., Thorneloe, S. Characterization of Mercury-Enriched Coal Combustion Residues from Electric Utilities Using Enhanced Sorbents for Mercury Control, EPA/600/R-06/008, January 2006.

<sup>16</sup> Committee on Mine Placement, National Research Council. Managing Coal Ash Residues in Mines. National Academies of Science, page 4, 2006.

**Comment 102-23**

See responses to Comments 53-03, 102-05, and 102-10, which address the same concerns.

**Comment 102-24**

As stated in responses to Comments 102-05 and 102-10, IGCC power plants do not produce the coal combustion wastes referenced by the commenter. See Sections 2.2.3.3, 2.2.3.4, and 4.16.2.2 (Volume 1), which discuss solid wastes, marketable products, and waste management. Toxicity characteristic leaching procedure results for slag from the E-Gas™ process are provided in Excelsior's Joint Permit Application accessible at the MDOC website for the Mesaba Energy Project Docket. See Comment 105-50 by MPCA regarding the rules pertaining to the beneficial use of coal combustion slag and sulfur. See response to Comment 53-03 regarding the selection of a landfill for disposal of slag or sulfur in the event that these byproducts cannot be marketed. See response to Comment 82-51, which addresses concerns regarding potential groundwater resources. Section 4.3.2 (Volume 1) addresses fugitive dust emissions and mitigation.

## Responses

## Commenter 102 – Kristin Henry

102-24  
(cont'd)

inadequate to detect contamination from coal combustion waste, it dedicated Chapters 3 and 4 of its Report to the behavior of coal ash in the environment, threats to human health and damages that have occurred to groundwaters, surface waters, ecological systems and private property from coal combustion waste. As a result, the committee found that “enforceable federal standards are necessary to guarantee acceptable minimum levels of environmental protection wherever CCRs are disposed.”<sup>17</sup>

Substantial clouds of fugitive dust migrating across property lines and permit boundaries can regularly occur from ash piles and deposits. Fugitive dust is also generated regularly when ash is left exposed for indefinite periods in pits. This occurs despite the wetting of ash that is undertaken during its transport because, the permits often do not require daily or intermediate cover of the ash or scrubber sludge dumped in them and these materials dry out quickly when left exposed in the dry environment of the area.

These clouds of dust from ash and dried scrubber sludge pose a health threat to nearby residents or recreationalists that is entirely ignored by the DEIS. Numerous studies document severe cytotoxic effects in the lung cells of animals inhaling fly ash dust. The dust alters lung and liver tissue structure and kills or harms the alveolar macrophages, cells that protect against infection.<sup>18</sup> Toxic metals concentrated in inhaled fly ash are readily transferred to other organs in animals.<sup>19, 20</sup> Absent some evidence or research indicating otherwise, the authors of this DEIS cannot assume that humans are immune to these effects. Indeed, inflammatory interleukin-8 levels (proteins causing damage) increased in human lung epithelial cells exposed to fly ash by as much as 8 times.<sup>21</sup> These studies (Aranyi et al. and Smith et al.) have concluded that smaller particles prevalent in fly ash (below 1 micron) present the greatest inhalation hazard.

Aside from its concentrating effect, the combustion of coal leaves metals and other pollutants in a more soluble state in the waste left behind, another basic reality entirely ignored by the DEIS. Numerous researchers have long documented adverse environmental impacts caused by soluble constituents in coal combustion waste to groundwater and surface waters, plants, aquatic life, and other organisms. Carlson and Adriano (1980) maintain that the major environmental impacts of coal combustion waste include: leaching of potentially toxic metals and other substances into soils, groundwater and surface waters; hindering effects on plant communities; and the accumulation of toxic elements in the food chain. Elseewi et al. (1980), Phung et al. (1979), and Menon et al. (1990) analyzed the chemical and physical composition of fly ash under various

<sup>17</sup> *Id.* at page 186, Chapter 8.

<sup>18</sup> Aranyi, Catherine et al. *Cytotoxicity to Alveolar Macrophages of Trace Metals Adsorbed on Fly Ash*, ENVIRONMENTAL RESEARCH 20, 14-23, 1979.

<sup>19</sup> Chauhan et al. Induction of Pulmonary and Hepatic Cytochrome p-450 Species by Coal Fly Ash Inhalation in Rats, Toxicology, 56, 95-105, 1989.

<sup>20</sup> Srivastava et al. Distribution of Metals of Inhaled Fly Ash in Various Organs of Rats at Various Periods After Exposure, Environmental Science Health, A19(6), 663-677, 1984.

<sup>21</sup> Smith et al. *Interleukin-8 Levels in Human Lung Epithelial Cells Are Increased in Response to Coal Fly Ash and Vary with the Bioavailability of Iron, as a Function of Particle Size and Source of Coal*, American Chemical Society, October 1999.



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**Responses**

**102-24  
(cont'd)**

experimental conditions and documented the environmental impact of inorganic constituents at disposal sites, including the release of trace elements in water and soils treated with the ash. Sandhu et al. (1993) specifically studied the leaching of nickel, cadmium, chromium, and arsenic from coal ash impoundments of different ages and reached the general conclusion that leaching produces a measurable release of metals into the environment from both old and new ash deposits: “[A]sh deposits...weathered and leached for over 10 years, yet still may provide a source of metal contamination to infiltrating water. Thus, ash disposal basins may be potential sources of ground water contamination for many years after ash deposition has ceased.”

More recently, research has documented that oxyanionic trace metals such as arsenic that are not only in coal ashes, but in mined earth and soils that the ash is placed into contact with, become more vulnerable to leaching when the pH of waters moving through those materials is raised by the alkalinity of the ash. Yet the estimation of cumulative risk in the DEIS and its Appendices have left out any examination of the obvious potential for increased harm from exposure to the metals that are likely to be mobilized by this activity.

**102-25**

Failure to include a full range of alternatives renders an EIS inadequate under NEPA. *See Resources Ltd. v. Robertson*, 35 F.3d 1300, 1307 (9th Cir. 1993). NEPA requires that in preparing an EIS, each agency “[r]igorously explore and objectively evaluate all reasonable alternatives to the proposed action. 40 CFR 1502.14. The DEIS presents no alternatives to disposal of coal ash on site.

**102-26**

The DEIS fails to describe in detail the nature of the landfill that will receive the coal combustion waste. An engineered landfill with all the required safeguards, including a liner, leachate collection system, and groundwater monitoring system is a minimum requirement. However, the DEIS fails to commit to these safeguards. Most coal combustion waste in the U.S. is disposed in engineered landfills. *See* United States Environmental Protection Agency and United States Department of Energy, Coal Combustion Waste Management at Landfills and Surface Impoundments, 1994-2004 (August 2006). An engineered landfill is thus a reasonable alternative which must be specified and considered in the DEIS.

**102-27**

The DEIS should also specify more detailed mitigation measures for coal combustion waste. The DEIS should examine the impact of fugitive emissions from Mesaba’s coal combustion waste and propose daily cover or wetting requirements and/or other mandatory, enforceable safeguards (e.g., restrictions on locations and timing of coal combustion waste placement) to prevent an increase in exposure to toxic airborne dust from the transport, storage and land filling of ash. Land filling mitigation measures should also be specified, including the adequate characterization of the coal combustion waste, the integration of those characterizations to enable effective monitoring systems to be installed, adequate monitoring of the ash after placement (from enough points, for enough parameters and for a long enough period), isolation of the ash from water, cleanup standards and meaningful participation of the public in permitting decisions.

**Comment 102-25**

See responses to Comments 37-01, 111-02, 111-03, and 116-11, which address the same concerns. In response to these comments, DOE has revised Chapter 2 of the Final EIS (Volume 1) to more clearly explain the alternatives determined to be reasonable for the EIS in Section 2.1.1.2 (Volume 1). No alternatives for disposal of coal ash on site have been presented because there will be no coal ash disposed for the IGCC Power Station.

**Comment 102-26**

See responses to Comments 53-03, 102-05, and 102-10, which address the same concerns. Once a plant site is selected for permitting, Excelsior will identify one or more landfills with the suitable engineered safeguards (liner, leachate collection system, and groundwater monitoring) to accept wastes from the Mesaba Energy Project.

**Comment 102-27**

See responses to Comments 53-03, 102-05, and 102-10, which address the same concerns. Section 4.3.2 (Volume 1) addresses fugitive dust emissions and mitigation during construction and operations.



## Responses

## Comment 102-28

As explained in the response to 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. 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. Between 1990 and 2005, annual PRB coal shipments doubled – from 200 to 400 million tons. As stated in Section 4.15.2.2 (Volume 1), under peak use scenarios for both Phases I and II, the Mesaba Energy Project could utilize up to 6 million tons of coal annually, which represents 1.5 percent of the PRB's annual output for 2005. The extent of impacts analysis associated with coal mining are discussed in relation to transportation and greenhouse gas impacts. Section 2.2.3.1 (Volume 1) provides a discussion of greenhouse gas emissions associated with the Mesaba Energy Project, including emissions from coal mining and transportation. Section 4.3.2.2 (Volume 1) describes and analyzes transportation-related emissions, including emissions from trains that would haul coal from mining locations. Section 5.2.8 (Volume 1) describes cumulative environmental impacts of climate change particularly with respect to continued fossil fuel combustion.

## Commenter 102 – Kristin Henry

## 8. The DEIS Should Have Considered the Environmental Impacts How the Coal is Mined

102-28

The DEIS did not analyze the environmental effects of mining the coal that would be used to fuel this power plant. It should have analyzed these impacts because these are indirect, secondary environmental effects that are clearly foreseeable. Building the proposed coal-fired power plants will, by definition, require that more coal be mined to feed the plants, and the proposed plants are slated to burn Powder River Basin coal. Thus, the DEIS should have analyzed the environmental impacts of the coal mining activity that will occur in the basin in order to provide coal for this proposed plants.

## 9. The EIS Must Consider Carbon Costs

The United States emits more greenhouse gases, including carbon dioxide, than any other nation.<sup>22</sup> The United States is responsible for 24% of the global carbon dioxide emissions. *Id.* Within the United States, the electricity sector is responsible for 39% of carbon dioxide emissions, and within that sector, coal-fired power plants are responsible for 82% of carbon dioxide emissions.<sup>23</sup> *Id.* As a result, any regulatory program addressing domestic global warming emission will require significant reductions in emission from electric generating units, particularly coal-fired power plants.

In addition, controlling emissions from large, stationary point sources is easier, and often cheaper, than controlling emissions from smaller and/or mobile point sources. *Id.* Therefore, the electric sector is likely to play a key role in future carbon regulation scenarios. *Id.* In fact, it is predicted that 65% to 90% of energy-related carbon dioxide emission reductions will come from the electricity sector. *Id.* The Mesaba power plant is thus likely to be subject to intensive carbon regulation in the future.

In fact, there is a very high likelihood that mandatory CO<sub>2</sub> regulation will be adopted early in the lifespan of any coal-burning power plant constructed in the near future. Multiple bills have been proposed in Congress that would impose mandatory, market-based limits on carbon dioxide emissions. These proposals would employ a cap-and-trade regulatory approach that would require power plant operators to own an allowance for each ton of carbon dioxide emitted. Allowances would be tradable among emitters, and market forces would set the price of the allowances. Federal legislators are beginning to lay the groundwork for such a national regulatory program. In fact, Senator McCain, author of one of the climate bills under consideration in the Congress, said that the chances of approving meaningful legislation before 2008 were “pretty good” and he believed “we’ve reached the tipping point in this debate, and it’s long overdue.”

<sup>22</sup> Synapse Energy, Inc., *Climate Change and Power: Carbon Dioxide Emissions Costs and Electricity Resource Planning* (June 2006) available at: <<http://www.synapse-energy.com/Downloads/SynapsePaper.2006-06.0.Climate-Change-and-Power.A0009.pdf>>.

<sup>23</sup> Gas-fired plants and oil fired plants are responsible for 13% and 5%, respectively, of carbon dioxide emissions from the electricity sector.

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Similarly, there is general agreement that a very aggressive regulatory program will be necessary to address global warming. The consensus is that ambient carbon dioxide must be stabilized to 450-550 parts per million in ambient air, in order to avoid serious climate disruption. To stabilize greenhouse gases at this level; we will need to reduce annual carbon dioxide emission from current levels by some 60-80% by the year 2050.

Not only will the Mesaba power plant likely face federal regulation, it may also face state carbon regulation. To date, state governments have taken the lead on implementing climate change policy. For instance, Governor Schwarzenegger and the California legislature reached an agreement on AB32, the Global Warming Solutions Act. The Act creates an economy-wide cap on greenhouse gas emissions, which limits California's greenhouse gas emissions to 1990 levels by 2020. Similarly, the Governor of Arizona issued an Executive Order (EO 2006-13) establishing a statewide goal to reduce Arizona's greenhouse gas emissions to 2000 levels by 2020 and 50% below this level by 2040.

Carbon regulation at the federal level is inevitable and perhaps may occur at the state level. Based on the inevitability of carbon regulation, there will unquestionably be a significant cost differential between zero emitting sources, such as energy efficiency and operating moderately carbon dioxide emitting sources, such as a natural gas unit, and a high carbon dioxide emitting source such as a coal-burning power plant.

Under Minnesota law, "No large energy facility shall be sited or constructed in Minnesota without the issuance of a certificate of need by the [Public Utilities] commission..." Minn. Stat. § 216B.243, subd. 2. In addition, the Public Utilities Commission must "quantify and establish a range of environmental costs associated with each method of electricity generation" Minn. Stat. § 216B.2422, subd. 3. The statute also requires that utilities legitimately apply not only those cost projections but also "other external factors, including socioeconomic costs" in evaluating any proposed resource. Minn. Stat. § 216B.2422, subd. 3.

**102-29**

The DEIS should have considered the prospect of future regulatory costs in order to determine the full costs of the proposed Mesaba facility and compare that with costs of different alternatives. Excelsior Energy has proposed to build an IGCC power plant that is not carbon capture and sequestration ready. In addition, Excelsior Energy has not projected how much it will cost once its carbon emissions are regulated and how those costs will be paid. The EIS must carefully consider this issue to ensure that residents of Minnesota don't get stuck paying off a bad decision.

**10. The EIS Must Consider the Economic Impact of Emitting Greenhouse Gases.**

**102-30**

The DEIS should have considered the economic impacts of emitting 5 million tons of CO<sub>2</sub> annually. Peer reviewed studies have been performed modeling the economic costs

**Responses**

**Comment 102-29**

As stated in response to Comment 53-04, Section 2.2.1.3 (Volume 1) of the Final EIS (under Potential Carbon Capture Retrofit) explains that CCS options presented in the EIS are based on a potential future requirement to reduce CO<sub>2</sub> emissions from the Mesaba Energy Project, along with potential financial incentives such as carbon removal credits traded in a "carbon market" that would limit the cost of CCS passed on to utility customers. CO<sub>2</sub> emissions are not currently limited under the CAA, and a viable carbon market has not been established in the U.S. Therefore, as stated in Appendix A2 (Volume 2), the effect of CCS on the cost of electricity from the Mesaba Energy Project has not been quantified. Assuming that legislation restricting carbon emissions would eventually be passed by the U.S. Congress and signed into law, the real costs associated with CO<sub>2</sub> emissions and required reductions would be determinable at that time. Under the standards established by 40 CFR 1502.22 of the CEQ NEPA regulations, the EIS has addressed "reasonably foreseeable" impacts from CO<sub>2</sub> emissions and CCS to the extent practicable without resorting to unwarranted conjecture. See also responses to Comments 4-01 and 4-03, which address the same concerns.

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102-30  
(cont'd)

of global warming and CO<sub>2</sub> emissions.<sup>24</sup> For example, it has been estimated that each ton of CO<sub>2</sub> emitted causes approximately \$85 in damage. *Id.* When this is extrapolated out that means that the Pee Dee facility 5 million tons of CO<sub>2</sub> will cause almost \$425 billion dollars in damage. The DOE and MDOC cannot turn a blind eye to these damages. The DEIS should have analyzed the economic impact of emitting over 5 million tons of CO<sub>2</sub> annually. *See, e.g.,* Minn. Stat. § 216B.2422, subd. 3 (requiring the PUC to consider other external factors and costs).

**12. The EIS Must Consider the Local Economic Impact of the Different Alternatives.**

102-31

Renewable energy sources, energy efficiency and conservation produce more local jobs than a highly automated plant burning dirty imported fuel. The DOE and MDOC should have considered these impacts to the local economy in its DEIS. This is especially true given that one of MDOC's stated purposes for the project is to create jobs.

**13. The DOE must fully analyze the proposed project's impacts to species listed protected under the Endangered Species Act.**

As part of its evaluation of the impacts of the proposed project to species listed as "endangered" or "threatened" under the Endangered Species Act, 16 U.S.C. § 1531, et seq. ("ESA" or "Act"), DOE must comply with additional procedural and substantive requirements of the Act, as explained below.

**a. The requirements of the Endangered Species Act**

The Endangered Species Act was enacted, in part, to provide a "means whereby the ecosystems upon which endangered species and threatened species depend may be conserved . . . [and] a program for the conservation of such endangered species and threatened species..." 16 U.S.C. § 1531(b). The ESA "is the most comprehensive legislation for the preservation of endangered species ever enacted by any nation." *Tennessee Valley Authority v. Hill*, 437 U.S. 153, 180 (1978). The Supreme Court's review of the ESA's "language, history, and structure" convinced the Court "beyond a doubt" that "Congress intended endangered species to be afforded the highest of priorities." *Id.* at 174. As the Court found, "the plain intent of Congress in enacting this statute was to halt and reverse the trend toward species extinction, whatever the cost." *Id.* at 184.

The ESA vests primary responsibility for administering and enforcing the statute with the Secretaries of Commerce and Interior. The Secretaries of Commerce and Interior have

<sup>24</sup> Stern, N., *Stern Review on the Economics of Climate Change*. Cambridge University Press. Available at [http://www.hm-treasury.gov.uk/independent\\_reviews/stern\\_review\\_economics\\_climate\\_change/sternreview\\_index.cfm](http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/sternreview_index.cfm)

**Comment 102-30**

DOE considers the development of economic estimates of incremental damage from GHG emissions to be beyond the scope of this EIS. The U.S Climate Change Science Program integrates Federal research on global climate change and oversees both the U.S. Global Change Research Program (USGCRP) and the President's Climate Change Research Initiative (<http://www.climate-science.gov/about/default.htm>). The U.S Climate Change Science Program is a coordinated interagency research program overseen by the U.S. Office of Science and Technology Policy, the CEQ, the National Economic Council, and the Office of Management and Budget with participation by DOE and 12 other Federal agencies. DOE considers that any estimate relating to economic damage from global climate change is under the jurisdiction of that program. The U.S Climate Change Science Program and USGCRP have been funded at approximately \$2 billion per year since 1993 (<http://www.climate-science.gov/infosheets/ccsp-8/>), and no such estimate has been published to date.

DOE acknowledges that the Stern Review (Stern et al., 2006), cited in the comment, and other studies have modeled and attempted to predict the costs of global climate change. However, as evidenced in a review by Dr. Richard S. J. Tol (2005) of 28 published studies on the subject, consensus is lacking on the marginal damage costs of CO<sub>2</sub> emissions. Tol statistically combined the results of the 28 studies and reported a mode of \$2/ton carbon (C), a median value of \$14/ton C, a mean of \$93/ton C, and a 95<sup>th</sup> percentile value of \$350/ton C. These amounts equate to respective values for CO<sub>2</sub> (at 3.664 grams CO<sub>2</sub> per gram carbon) of \$0.55/ton, \$3.82/ton, \$25.38/ton, and \$95.52/ton. Tol found that the discount rate used in the studies had a strong bearing on the results, and he also noted that peer-reviewed studies gave lower estimates for marginal damage costs with smaller uncertainties than studies that were not peer-reviewed.

In a critique of the Stern Review, Tol (2006) noted that Stern's estimate of \$85/ton CO<sub>2</sub> would be considered an outlying value in the 28 published studies. Other researchers (Dasgupta, 2006; Nordhaus, 2007; and Weitzman, 2007) also found fault with the Stern Review and its assumptions, particularly with respect to the use of an extremely low (near-zero) discount rate that greatly overstates the costs of future impacts in today's dollars. As best expressed by Dasgupta (2006): "To be critical of the Review isn't to understate the harm humanity is inflicting on itself by degrading the natural environment – not only in regard to the stock of carbon in the atmosphere, but also in regard to so many other

**Commenter 102 – Kristin Henry**

delegated this responsibility to the National Marine Fisheries Service (“NMFS”) and the U.S. Fish and Wildlife Service (“FWS”) respectively. 50 C.F.R. § 402.01(b). NMFS has primary responsibility for administering the ESA with regards to most marine species, including corals, sea turtles and most marine mammals, while FWS has responsibility for terrestrial species, as well as some marine mammals, and all seabirds.

Section 2(c) of the ESA establishes that it is “the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act.” 16 U.S.C. § 1531(c)(1). The ESA defines “conservation” to mean “the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary.” 16 U.S.C. § 1532(3). Similarly, Section 7(a)(1) of the ESA “contains a clear statutory directive (it uses the word ‘shall’) requiring the federal agencies to consult and develop programs for the conservation of” listed species, and requires the Secretary to review “other programs administered by him and utilize such programs in furtherance of the purposes of the Act.” 16 U.S.C. § 1536(a)(1); *Sierra Club v. Glickman*, 156 F.3d 606, 617 (5th Cir. 1998). The ESA “was enacted not merely to forestall the extinction of species (i.e., promote a species survival), but to allow a species to recover to the point where it may be delisted.” *Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv.*, 378 F.3d 1059, 1070 (9th Cir. 2004); *see also id.*

(“‘Conservation’ is a much broader concept than mere survival” – the “ESA’s definition of ‘conservation’ speaks to the recovery of a threatened or endangered species”). Species listed as endangered or threatened are entitled to the ESA’s substantive protections. The “take” of listed species is generally prohibited. *Id.* at § 1538(a); 50 C.F.R. § 17.31(a). “Take” means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” 16 U.S.C. § 1532(19). The Services may, however, permit “incidental” take on a case-by-case basis if they find, among other things, that such take will be minimized and mitigated and that such take will not “appreciably reduce the likelihood of survival and recovery of the species.” *Id.* at § 1539(a).

Section 7(a)(2) requires that for all discretionary activities carried out by federal agencies, such as the proposal to permit the proposed project, the acting agency must “insure” that its actions neither “jeopardize the continued existence” of any of the nation’s listed species nor “result in the destruction or adverse modification” of listed species’ “critical habitat.” *Id.* at § 1536(a)(2). In order to fulfill the substantive purposes of the ESA, Federal agencies, such as BLM, are required to consult with NMFS or FWS to “insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the adverse modification of habitat of such species . . . determined . . . to be critical . . .” 16 U.S.C. § 1536(a)(2). As the Supreme Court recently reiterated, Section 7(a)(2)’s prohibition against jeopardy is “imperative.” *Nat’l Ass’n of Home Builders v. Defenders of Wildlife*, 127 S. Ct. 2518, 2532 (U.S. 2007).

**Responses****Comment 102-30 (cont’d)**

environmental matters besides. But the cause isn’t served when parameter values are so chosen that they yield desired answers.”

In the absence of either a published estimate from the U.S Climate Change Science Program or clear consensus on the marginal damage costs of CO<sub>2</sub> emissions, DOE elected not to speculate on the potential economic impact of the Mesaba Energy Project on global climate change. In doing so, DOE has not intended to diminish concerns about the future costs of global climate change. However, DOE has a responsibility to evaluate technologies that have the greatest potential to meet the future energy needs of the nation using available resources. As stated in response to Comments 37-01, 63-01, and 102-03, DOE’s responsibility for this EIS within the restrictive context of the CCPI legislation is to evaluate an advanced coal-based technology that offers promise to reduce pollutant emissions compared to conventional coal-fueled power plants. Also, as stated in response to Comment 12-02, IGCC technologies offer the best opportunities among coal-fueled plants to capture concentrated CO<sub>2</sub> emissions. When coupled with other technologies to be demonstrated under the CCPI Program as well as under DOE’s Carbon Sequestration Program, these technologies offer the best opportunities for minimizing or eliminating future CO<sub>2</sub> emissions from coal-fueled power plants.

**Comment 102-31**

See response to Comment 37-01, which explains the reasonable alternatives available to DOE to achieve the purpose and need.

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In completing this formal consultation, DOE must address both the jeopardy and critical habitat prongs of Section 7 by considering the current status of the species, the environmental baseline, the direct and indirect effects of the proposed action, as well as its cumulative effects. 50 C.F.R. § 402.14(g)(2)-(3); 50 C.F.R. § 402.02 (emphasis added) (the “‘effects of the action’ refers to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action, that will be added to the environmental baseline”); id. (the “environmental baseline” includes the “past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process”).

This analysis must be critical, comprise more than a mere “recitation” of the activities, and consider the “total impact” to listed species. *Defenders of Wildlife v. Babbitt*, 130 F. Supp. 2d 121, 128 (D.D.C. 2001). The analysis may not be unduly constrained – the regulations broadly define “action area” as “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.” 50 C.F.R. § 402.02 (emphasis added).

**b. Local and Regional Species Affected by the Project**

There are numerous listed species located in or in the vicinity of the project area whose individuals and habitat will be impacted by construction and operation of the Mesaba power plant, including the threatened and endangered species that inhabit the Boundary Waters Canoe and Wilderness Area, such as the peregrine falcon. The Project will adversely affect these listed species directly, indirectly, and cumulatively, and these impacts must be analyzed by DOE pursuant to the statutory and regulatory requirements of Section 7 of the ESA.

**c. Species impacted by the project as a result of greenhouse gas emissions and global warming**

In addition to adversely impacting listed species located in the vicinity of the project area, there is a growing number of listed species that are not located in or in the immediate vicinity of the proposed project, but which are nevertheless adversely affected by concentrations of greenhouse gas emissions in the atmosphere, which the proposed project will increase.

There are numerous listed species that are affected by global warming, triggering the consultation requirement. Global warming impacts on United States species already listed as threatened and endangered have been well documented. Affected species include two listed coral species, elkhorn and staghorn corals, as the final listing rule for these species specifically discussed the impacts of global warming and greenhouse gas emissions on the species. *See* 71 Fed. Reg. 26,852. Sustained increased ocean temperatures cause these coral to expel symbiotic algae on which they depend for photosynthesis and energy, the

**Responses****Comment 102-32**

As discussed in Sections 3.8.3.1 and 4.8.2.1 (Volume 1) of the Final EIS, DOE consulted with the USFWS for compliance with Section 7 of the Endangered Species Act as evidenced by the correspondence in Appendix E (Volume 2). In accordance with this consultation, DOE completed a Biological Assessment for USFWS addressing project impacts on the Canada lynx and gray wolf (see Volume 2, Appendix E). No other species were identified by USFWS for specific assessment. The USFWS concurred with DOE’s conclusions at the West Range site. In the event that the East Range site would be selected for the Proposed Action, DOE would resubmit the Biological Assessment to the USFWS for concurrence. DOE also addressed potential impacts on Minnesota protected species in Sections 3.8 and 4.8 (Volume 1). DOE does not agree that any effects of global climate change that can be attributed to emissions of greenhouse gases from the Mesaba Energy Project require a determination of effect under the Endangered Species Act, nor has the USFWS required such a determination during the Section 7 consultation. It may be relevant that the Department of the Interior stated in its decision to list the polar bear as “threatened” (May 14, 2008) that the Endangered Species Act would not be used to regulate global climate change.

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

102-32

Responses

**Comment 102-33**  
NOAA reviewed the Draft EIS and submitted Comment 55-01. The Draft EIS appropriately documented coordination with the USFWS. Sections 3.8.3 and 4.8.2 (Volume1) describe consultation with USFWS in accordance with Section 7 of the Endangered Species Act. Copies of correspondence between DOE and USFWS, as well as the Biological Assessment prepared for the Canada lynx and gray wolf, are included in Appendix E (Volume 2) along with the USFWS concurrence. USFWS commented on the Draft EIS through the Department of Interior (see Comments 57-10 through 57-12).

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deadly phenomenon known as “coral bleaching,” 71 Fed. Reg. 26,858. In addition, increased levels of dissolved carbon dioxide in surface seawater acidifies the oceans and decreases the ability of these corals to calcify. 71 Fed. Reg. 26,858-9. Coral reefs are among the first ecosystems to show the significant adverse impacts of global warming. As the National Marine Fisheries Services stated in the listing rule, the “major threats to these species’ persistence (i.e., disease, elevated sea surface temperature, and hurricanes) are severe, unpredictable, have increased over the past 3 decades, and, at current levels of knowledge, the threats are unmanageable.” 71 Fed. Reg. at 26,858. Each of these threats is directly related to greenhouse gas emissions. Moreover, CO2 emission themselves are resulting in acidification of the ocean, inhibiting coral growth. The impacts of greenhouse gas emission and global warming on the elkhorn and staghorn corals are well established. By ignoring these impacts, DOE will be in abrogation of their ESA responsibilities.

DOE must also consult on the impact of the proposed project’s greenhouse gas pollution on the polar bear. FWS has formally proposed listing the polar bear as a threatened species due to the melting of the Arctic sea ice, following a Petition and lawsuit by the Center for Biological Diversity, NRDC, and Greenpeace. 72 Fed. Reg. 1064-99 (Jan. 9, 2007). Polar bears are completely dependent upon Arctic sea-ice habitat for survival. Polar bears need sea ice as a platform from which to hunt their primary prey (ringed seals, *Phoca hispida*), to make seasonal migrations between the sea ice and their terrestrial denning areas, and for other essential behaviors such as mating. The polar bear’s sea-ice habitat is melting away due to global warming, and the Arctic may be ice-free in the summer well before the end of this century. Overpeck et al. 2005. Polar bears cannot be expected to survive the near complete loss of their sea-ice habitat.

VI. Consultation and Coordination (DEIS Chapter 7)

The DOE should consult with the agencies with specific expertise on global climate change with regard to the impacts and implications of the Mesaba power plant. More specifically, Section 102(c) of NEPA states that “prior to making any detailed statement, the responsible federal official shall consult with and obtain the comments of any Federal agencies which has jurisdiction by law or special expertise with respect to any environmental impact involved.” The term “special expertise” is defined in 40 C.F.R. 1508.26 as a “statutory responsibility, agency mission, or related program experience.”

There is no evidence in the record that the DOE consulted with the agencies with the greatest expertise on global warming impacts—namely, the National Oceanic and Atmospheric Administration or National Aeronautic and Space Administration. There is no evidence in the record that either of the agencies were consulted with regard to the global warming impacts of the TEP. *See*, DEIS Chapter 5 Tables 5-3 and 5-4. Moreover, there is no evidence in the record that BLM consulted with U.S. Fish and Wildlife Service (“FWS”) or National Marine Fisheries Administration regarding impacts to animals and habitat as a result of Mesaba’s release of global warming pollution. The DOE should not issue the Final EIS without undergoing the required consultation with these agencies regarding the global warming impacts of the proposed Mesaba power plant. The results of any such consultation should be made public. Given the

102-32  
(cont’d)

102-33

## Responses

### Commenter 102 – Kristin Henry

102-33  
(cont'd)

acknowledged significant adverse environmental impacts of the Mesaba power plant, this consultation must be conducted before undertaking this project.

#### CONCLUSION

Thank you for the opportunity to comment on the DEIS and please keep us informed of developments in this process. In addition, thank you for your attention to our concerns.

Respectfully submitted,

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## Commenter 103 – Carol Overland

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January 11, 2008

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RE: Draft Environmental Impact Statement – Comments of mncoalgasplant.com

Dear Mr. Hargis and Mr. Storm:

Enclosed for filing please find the Comments of mncoalgasplant.com regarding the Draft Environmental Impact Statement.

#### DEIS IS INCONSISTENT WITH SCOPING DOCUMENT

The Mesaba Project DEIS is inconsistent with the September 13, 2006 scoping document signed by the Commissioner of Commerce and there is no apparent scoping document by the DOE.

1) The Department of Commerce scoping document and DEIS misstate prohibitions of review. From the scoping document:

*Because the Department has concluded that this facility qualifies as an "innovative energy project" and because Minnesota Statute 216B.1694, subdivision 2, item 1, has exempted such a project from demonstrating need, issues related to the need, size or type of the facility are excluded from consideration in this matter. Thus, such issues are not within the scope of the EIS. The DOC will not, as part of this environmental review, consider whether a different size or different type plant should be built instead. Nor will the DOC consider the no-build option.*

## Responses

### Comment 103-01

MDOC stands by its statement in the Scoping Report and the project's exemption from a Certificate of Need.

103-01



## Commenter 103 – Carol Overland

## Responses

103-01  
 (cont'd)

Scoping Document, p. 4. Under Minnesota rules, consideration of size, type and timing is prohibited where a Certificate of Need has issued, and not where a project is exempt:

### 7849.5920 FACTORS EXCLUDED.

When the Public Utilities Commission has issued a Certificate of Need for a large electric power generating plant or a high voltage transmission line or placed a high voltage transmission line on the certified HVTL list maintained by the commission, questions of need, including size, type, and timing, questions of alternative system configurations, and questions of voltage shall not be factors considered by the commission in deciding whether to issue a permit for a proposed facility.

The Department may claim that there is a statutory prohibition, but the statutory prohibition applies only to the siting/routing permits, and this project has a much broader scope under the PUC. Environmental issues were raised in the PPA proceeding, and are a part of the statutory criteria at issue. See Minn. Stat. §§ 216B.1693; 216B.2694.

### 216B.1694 INNOVATIVE ENERGY PROJECT.

**Subdivision 1. Definition.** For the purposes of this section, the term "innovative energy project" means a proposed energy-generation facility or group of facilities which may be located on up to three sites:

(1) that makes use of an innovative generation technology utilizing coal as a primary fuel in a highly efficient combined-cycle configuration with significantly reduced sulfur dioxide, nitrogen oxide, particulate, and mercury emissions from those of traditional technologies;

... and ...

### Subdivision 2. Regulatory Incentives.

(8) shall be eligible for a grant from the renewable development account, subject to the approval of the entity administering that account, of \$2,000,000 a year for five years for development and engineering costs, including those costs related to mercury-removal technology; thermal efficiency optimization and emission minimization; environmental impact statement preparation and licensing; development of hydrogen production capabilities; and fuel cell development and utilization.

103-02

2) The Department of Commerce scoping document also states: "*Nor will the DOC consider the no-build option.*" There is no authority or rationale for the statement. The no-build option must be considered by the PUC.

103-03

3) The DOE scoping document has not been distributed to stakeholders, parties and interested persons. At the very least, notice and links, if not hard copies, must be provided.

### Comment 103-02

As stated in response to Comments 99-01 and 102-04, the PUC's decision on the basis of this EIS and MDOC's recommendation would result in the approval of permits for either the West Range or East Range Site, or the disapproval of permits for the Mesaba Energy Project. The disapproval of permits would be equivalent to a no action (no-build) alternative, because the project could not be constructed without them.

### Comment 103-03

As stated in response to Comment 7-01, DOE conducted its scoping process in accordance with department policy and the CEQ NEPA requirements (specifically 40 CFR 1501.7). 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. There is no Federal requirement for the publication and distribution of a scoping document. However, all comments received during the Federal and state scoping periods were posted at the MDOC website for the Mesaba Energy Project Docket: <http://energyfacilities.puc.state.mn.us/Docket.html?Id=16573>.

**Commenter 103 – Carol Overland**

**Responses**

- 103-04** | 4) In many instances, the DEIS has no distinction between DOE and DoC analysis and information. This should be made clear throughout the DEIS.
- 103-05** | 5) Section 1.3.1 claims to address the “Project Proponent Proposed Action” but the narrative is misdirected, and should address Excelsior Energy’s applications to DOE for funding, the “Project Proponent Proposed Action” that is the trigger of the DOE DEIS.
- 103-06** | 6) The DEIS, in Section 1.4, p. 1-6 to 1-9, improperly shifts the purpose of the project, from that of public need, as framed in the DoC scoping document, to one focusing on project proposer need. EIS must address the public need for the project and eliminate discussion of “project proponent need.”
- 103-07** | 7) The DEIS, in section 1.4.1.2, provides a narrative regarding the DOE purpose, and it does not include “demonstrate” in line one where the purpose of the DOE’s action is explained. This is a “demonstration” project, mentioned elsewhere, and that is a material term in the purpose of this project.
- 103-08** | 8) In section 1.4.14 of the DEIS, the State Purpose is addressed. One important omission that must be corrected is the state’s need to provide for public participation opportunities under the Power Plant Siting Act and in the PPA docket.
- 103-09** | 9) Section 1.4.2.1 accepts the project proponents’ claim of a “need within Minnesota for 3,000 to 6,000 MW of base load power generation over the next 15 years.” That is not substantiated, has not been independently verified, and it is not true – this “need” is a repeated exaggeration on the part of Excelsior Energy, and in the words of the PUC chair in November, specifically regarding Excelsior’s Mesaba Project’s projected generation, “No one needs it, no one wants it, and we’re not going to force it on anyone” or words to that effect.. The EIS must include substantiation of this claimed need. CapX 2020 claims a “need” for 4,500-6,000MW in the REGION, the shaded multi-state area below:
- Diagram 1 – CapX 2020 Region
- Xcel, the largest utility in this area, was found by PUC to have a “need” for an RFP for only an additional 375 MW by 2015, and has since returned to PUC with “Changed Circumstances” that eliminates the need for an RFP. See Xcel’s Notice of Changed Circumstance:  
<http://nocapx2020.info/wp-content/uploads/2007/09/xcel-notice-of-changed-circumstances.pdf>

**Comment 103-04**

The EIS has been prepared as a joint Federal and Minnesota document for compliance with NEPA and the Minnesota Power Plant Siting Act. As stated in the Cover Sheet (Volume 1), because the EIS requirements of both acts are substantially similar, DOE and MDOC cooperated as lead Federal and state agencies in the preparation of an EIS to fulfill the requirements of both laws. There is no Federal or Minnesota requirement to indicate in the EIS which analyses were done by the respective agencies.

**Comment 103-05**

As stated in response to Comment 75-05, the “Project Proponent Need” section in the Draft EIS (Volume 1) was based on language in the document (Appendix F1, Volume 2) prepared by Excelsior at the request of USACE as a cooperating agency for the EIS (see Comment 116-33). The information contained in the Draft EIS section has been replaced with a brief statement referencing the project proponent’s purpose in Appendix F1. Sections 1.3 and 1.4 (Volume 1) of the Final EIS have been revised to correctly focus on DOE’s and MDOC’s proposed action, purpose and need.

**Comment 103-06**

As stated in response to Comment 103-05, Section 1.4 (Volume 1) of the Final EIS has been rewritten to focus on the purpose and needs of DOE and MDOC. The broader public needs associated with the project are explained in Section 1.2 (Volume 1) of the Final EIS consistent with DOE’s CCPI Program and Minnesota’s innovative energy technology statute. The discussion of the project proponent’s purpose has been replaced with a reference in Section 1.4.3 (Volume 1) to Appendix F1 (Volume 2), which was prepared by Excelsior at the request of USACE, a cooperating agency for the EIS.

**Comment 103-07**

The Final EIS has been revised in Section 1.4.1 (Volume 1) to clearly indicate DOE’s purpose.

**Comment 103-08**

The State Purpose and Need has been revised in the Final EIS Section 1.4.2 (Volume 1).

**Comment 103-09**

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

## Commenter 103 – Carol Overland

## Responses

103-09  
(cont'd)

Where the area's largest utility has no need for additional generation, that raises questions about Excelsior's claimed "need within Minnesota" and that claim should not be accepted without independent verification.

### DEIS MUST INCORPORATE ENVIRONMENTAL DATA FROM PPA DOCKET

6) In its characterization of "State Involvement" (§1.4.2.3, p. 1-9), the DEIS limits state involvement to "responsibility for siting power plants... and transmission lines." It refers only to PUC Docket E6472/GS-06-668. **PUC DOCKET E6472/05-1993 HAS BEEN ENTIRELY OMITTED.** The DEIS must incorporate all environmentally focused testimony and documents in the PPA record (05-1993); including, but not limited to:

Direct testimony of Ronald R. Rich:  
<http://legalelectric.org/ff/2008/01/mcgp-direct-ronrich.pdf>  
[The Challenge of Integration](#)  
[Climate Vixion Risk Framework](#)  
[UMD Itasca County Mesaba Economic Impact Study 2006](#)

Issues raised by Ron Rich that should be included in the EIS include:

- 6a) Cost of Carbon Dioxide Emissions and Sequestration
- 6b) Air Emissions from Proposed Flares – Cost of Control and Mitigation
- 6c) Cost of Plant Safety and Off-site Safety
- 6d) Evaporative Cooling Tower and ZLD Air Emissions – Cost of Control and Mitigation
- 6e) Cooling Water Blowdown ZLD – Cost of Control and Mitigation
- 6f) Cost of Cumulative Impacts in Conjunction with the MSI project
- 6g) Overstated Economic Benefits and Costs not addressed

Rebuttal testimony of Edwin Anderson, M.D., and Ronald R. Rich:  
[MCGP Rebuttal Testimony of Edwin Anderson, M.D.](#)  
[Exhibit 2](#)  
[Exhibit 3](#)  
[Exhibit 4](#)

The Rebuttal testimony of Edwin Anderson, M.D., includes the following issues that should be included in the EIS (see DEIS Community Health Issues, 3.17.3, p. 3.17-4):

103-11

- 6h) Emissions modeling representing "health benefits" presents false conclusion, and would have detrimental health impact, including increased mortality and morbidity.
- 6i) Comparison of smaller IGCC plant in more remote area with larger SCPC plant in less remote area is misleading – plants of similar characteristics must be compared.

### Comment 103-10

The response to Comment 41-01 explains that the final revenues and costs for the project cannot be determined until a power purchase agreement has been settled. The power purchase agreement is the subject of a separate docket, which MDOC has stated it is not a subject for this EIS.

### Comment 103-11

As stated in response to the preceding comment, the power purchase agreement is the subject of a separate docket, which MDOC has stated it is not a subject for this EIS.

As explained in responses to Comment 7-03 and 80-23, the EIS analyzed health risks for the Mesaba Energy Project using the AERA protocol required by MPCA for mandatory EIS categories that include this project. The AERA results indicated that the plant would not exceed established risk thresholds for carcinogenic and non-carcinogenic risk levels of air pollutants, which is not to say that project emissions won't affect human health at all. But, Federal and state agencies responsible for air pollution control establish risk thresholds to protect public health based on exposure pathways as discussed in Section 4.17.1.2 (Volume 1). 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. With respect to points 6l and 6m in the comment regarding the ICF report, see response to Comment 82-93.

## Responses

## Commenter 103 – Carol Overland

6j) A decrease in stack height and decrease of mercury removal means that health impacts, sickness and death, will increase, particularly among those with asthma, Chronic Obstructive Pulmonary Disease (COPD), chronic bronchitis and heart disease, putting children, the aged, and those with compromised immune systems at higher risk.

Expected morbidity:

Morbidity = Non-Fatal Health Effects:	Cases/yr in Minnesota related to PM 2.5
Acute bronchitis	1.6
Non-fatal MI (heart attack)	1.9
Asthma exacerbation	100
Cough, shortness of breath and/or wheezing	
ER visits for asthma	1.3
Lower respiratory Symptoms	19
Minor restricted activity days	791
Feel sick	
Work loss days	18,313
Clinic/urgent care visits	?
See ICF Report, p.3-1, List of Health Endpoints, p. 3-4.	

6k) Mortality costs (morbidity costs estimated at 7-8% of mortality costs)

Minnesota = \$8.7 million per year  
United States = \$84.9 million per year

6l) Dry deposition of mercury is above the highest level measured at several points very near the site proposed for the Mesaba Project. ICF Report, Exhibit 2-13.

6m) Human health effects from chronic exposure of the developing fetus to mercury are:

- Human nervous system toxicity
- Mental retardation
- Growth deformity
- Seizures/Epilepsy
- Blindness
- Deafness
- Severely delayed development

Human Health Effects of Mercury from chronic exposure as infants or small children:

- Impaired reflexes
- Delayed motor development
- Impaired attention
- Impaired memory
- Impaired language

Human Health Effects from high level mercury exposure in adults:

- poisoning symptoms/very high exposure can cause:
- paresthesias- burning or prickling sensation in skin
- fatigue
- vision and hearing impairments
- ataxia (loss of muscle control)
- abnormal heart rhythms and irregular pulse
- coma

103-11  
(cont'd)

## Commenter 103 – Carol Overland

## Responses

## Comment 103-12

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

death

The ICF report notes that “Recent research has indicated that low-level chronic exposure to methyl-mercury via fish consumption may be linked with a higher risk of serious cardiovascular impacts in men, including MI, coronary artery disease, and other cardiovascular disease.” Further, “low level mercury exposure may lead to heart attack, stroke, and hardening of the arteries especially in adult males.” ICF Report, p. A-6.

6n) Specifics that should be disclosed:

1. Regarding expected morbidities, provide the range expected for these morbidities in a given year, and adjust for seasonal variation.
2. Give the expected number and range of clinic or urgent care visits, and factor this in to projected costs both to the State, and to local health care facilities and for specific local health insurance plans such as Itasca Medical Care (IM Care).
3. Explain the apparent discrepancy between low numbers of minor respiratory illness, significant number of minor restricted activity days, and the seemingly out of proportion number of work loss days.
4. Describe and quantify the cost of the predicted 18,000 lost work days to the average family affected, as well as the affect on employers needing to cover for sick workers. In simple monetary terms, if \$20 per hour workers lose 18,000 days of work, that is \$2,880,000 cost to the families in lost wages, and another \$2,880,000 to replace those workers for that time at the same wage (without any benefit or sick time adjustment).

6o) The DEIS should address air quality modeling and adverse health consequences, both local and regional, with regard to secondary particulates, and provide similar analysis of secondary particulate matter health impacts for the general population, individuals with co-morbidities, and the elderly.

6p) The DEIS should estimate the increase in risk for developing childhood asthma and associated costs; estimate risk and associated costs attributable to ozone exposure for people with co-morbidities, including children, individuals with lung disease, and the elderly; including average risk as well as increased risk on hot, sunny days; and estimate the health risk for healthy individuals and children exercising outdoors on hot sunny days and all associated costs.

[MCGP Rebuttal Testimony of Ronald R. Rich](#)

[Exhibit 5](#)

[Exhibit 6](#)

[Exhibit 7](#)

[Exhibit 8](#)

6q) The EIS must consider the internalized and externalized costs of accomplishing Carbon capture and sequestration and the internalized and externalized costs if this is not accomplished.

Dept. of Commerce:

Rebuttal Testimony of Eilon Amit:

<http://legalelectric.org/f/2006/10/05-1993-pub-rebuttal.pdf>

6r) Cost comparison update, p. 1-7.

103-11  
(cont'd)

103-12



**Commenter 103 – Carol Overland**

**Responses**

**103-12  
(cont'd)**

6s) Sequestration of Carbon Dioxide, p. 20-23.

**AIR**

7) The EIS must incorporate all of the MPCA filings regarding air emissions in the PPA docket:

**103-13**

8) The EIS must include, at minimum, truck and train traffic in emissions calculations. The EIS should also address increased train traffic necessary to support Phases I and II of the Mesaba Project. See MPCA Final Emissions Analysis:  
[http://legalelectric.org/f/2007/03/ago\\_docs-1712467-v1-excelsior\\_energy\\_mPCA\\_comments\\_in\\_pdfPDF](http://legalelectric.org/f/2007/03/ago_docs-1712467-v1-excelsior_energy_mPCA_comments_in_pdfPDF)

**103-14**

9) The DEIS states that particulate emissions were “conservatively” assumed to be PM10 (DEIS p. . This is not reasonable, nor is it conservative, as gasification reduces the size of particulate matter, making it even more dangerous. An assumption of PM2.5 would be reasonable and conservative. The PM10 assumption must be corrected to more closely match reality of MEP’s emissions.

**103-15**

10) The Clean Air Act requires regulation of PM2.5, a criteria air pollutant. This must be addressed in the DEIS, for example, in Table 4.3-1, et seq.

**103-16**

11) Because the total of Annual tons per year of HAP Emissions, at 24, is so close to the 25 ton per year threshold, the Compound numbers should be itemized as to source to document that each source is indeed included.

**103-17**

12) Truck and train traffic attributable to MEP operations must also be included in emissions calculations. The MPCA frequently adds this calculation (see Midtown Eco-Energy Air Permit), but this calculation should include MEP operational traffic from its source to the MEP to deliver and then the return trip, not just on-site traffic.

**103-18**

13) The MPCA is soliciting comments for revisions of allocations under the Clean Air Interstate Rule and Excelsior is participating in discussions and making Comments. The EIS must address impact of proposed changes on the impact of the Mesaba Project. See Excelsior CAIR Comments:  
<http://www.pca.state.mn.us/publications/cair-excelsiorenergy.pdf>  
<http://www.pca.state.mn.us/air/excelsior-energy-comments-cair.pdf>

**103-19**

14) The MPCA is having discussions of altering Haze requirements in a Regional Haze Concept Plan, and Excelsior is participating in discussions and submitting Comments. The EIS must address impact of these changes. See Excelsior Haze Comments:  
<http://www.pca.state.mn.us/publications/haze-excelsiorcomments.pdf>

**WATER**

**103-20**

15) Wabash River is the immediate predecessor of the Mesaba Project, and had many, many technical problems, including water contamination. These problems should be anticipated and plans must incorporate “lessons learned,” and there must be preparation for immediate remediation. The EIS must address

**Comment 103-13**

See response to Comment 12-01, which addresses the same concern.

**Comment 103-14**

See responses to Comments 9-01, 20-03, and 99-12, which address the same concerns.

**Comment 103-15**

See responses to Comments 9-01, 20-03, and 99-12, which address the same concerns.

**Comment 103-16**

Section 2.2.3.1 (Volume 1) provides a description of the types of sources and air emissions that they would produce. Table 4.3-5 (Volume 1), provides a list of HAPs that would be emitted annually from sources with the significant emissions of pollutants. The text of Section 4.3.2.4 (Volume 1) discusses the types of sources that are expected to produce minor or negligible emissions.

**Comment 103-17**

See response to Comment 12-01, which addresses the same concern.

**Comment 103-18**

The Final EIS has been updated to include the most current information on the Clean Air Interstate Rule in Section 3.3 and its impact on the Mesaba Energy Project.

**Comment 103-19**

The Final EIS has been updated to include the most current information on the Regional Haze Rule in Section 3.3 and its impact on the Mesaba Energy Project.

**Comment 103-20**

The Wabash River Plant corrected their process water effluent deficiencies (violations of limitations on arsenic and other pollutants) by treating contact process water with a ZLD system. The Mesaba Energy Project already proposed a ZLD system for process water effluent as a lesson learned from the Wabash River Plant. With Excelsior’s decision to implement the enhanced ZLD system at the West Range Site to include blowdown effluent (see response to Comment 6-01 and revised Section 4.5 [Volume 1]), the majority of water quality concerns that were originally discussed in the Draft EIS are no longer applicable.

Regarding stormwater management, the MPCA is still developing the draft rule; thus, any analysis of impacts for the project would be speculative at this time. However, as described in responses to

## Commenter 103 – Carol Overland

## Responses

103-20  
(cont'd)

16) The Wabash River plant was in “routine violation” of its water permit, emitting arsenic, cyanide and selenium into the water. ZLD as a preventative measure and mitigation must be addressed for the West site, not just the East site, and REQUIRED!

17) The DEIS must address each water issue raised in the Wabash River technical report.

18) The MPCA is anticipating and preparing for a Water Quality Trading Scheme, and Excelsior Energy has been participating in discussions. The EIS must address the environmental impact of a Water Quality Trading Scheme. See MPCA Water Quality Trading Meeting Participant List: <http://www.pca.state.mn.us/water/wqtrading/meeting-participants.pdf>

19) Stormwater Management is also being addressed by the MPCA, with Excelsior participating. The EIS must address the impact of proposed changes if instituted by Mesaba Project. See MPCA notes: <http://www.pca.state.mn.us/water/stormwater/swpfocusgroup-notes101107.pdf>

### WETLANDS

20) The Mesaba Project footprint and project area is located in wetlands. EIS must address wetland mitigation and availability of wetlands for compensation of wetland loss: <http://www.duluthsuperior.com/mld/duluthsuperior/news/12999133.htm>

*CRISIS OF CREDITS But a major problem could lie ahead for other developers. A scarcity of available wetlands for developers to compensate for wetland loss could become a large issue for several planned projects in Northeastern Minnesota. Economic development projects such as PolyMet Mining Co.'s proposed base and precious metals mine, Excelsior Energy's coal-gasification plant and Mesabi Nugget will probably require wetland replacement. With the exception of about 10 to 20 acres near Duluth, there's no certified wetlands credits available in Northeastern Minnesota, said Malterer. "It's a crisis," he said. "Where will the credits come from?" Tim Peterson, a U.S. Army Corps of Engineers project manager in Two Harbors, said Northeastern Minnesota needs more wetlands for mitigation. "Up in this area, there isn't too much for banks at the moment," said Peterson. "Compensatory mitigation for these projects hasn't been figured out yet -- they're discussing different options." Replacing wetlands with the same type of wetland and in the same watershed is preferred, he said. However, replacing wetlands with a different type of wetland can also be considered before looking to a bank for replacement, Peterson said.*

### ACCESS ROADS

21) The DEIS, addressing access roads, only discusses “an extension” of CR 7. However, realignment of CR 7 (Scenic Highway 7) is occurring specifically for the Mesaba Project, and the impact of this realignment must be addressed in the EIS. See MCGP Ex. 5058, SEH Presentation on allocation of project infrastructure.

### HIGH VOLTAGE TRANSMISSION

22) The EIS must address the impacts of not just the interconnection transmission, but the system transmission that must be added to deliver Mesaba Project electricity to the metro area. Excelsior has proposed 345kV transmission lines, which under Minnesota law are assumed to

### Comment 103-20 (cont'd)

Comments 84-01 and 105-49, the IGCC Power Station would be designed to ensure that all stormwater is either reused or treated to facilitate compliance with existing and future regulations.

### Comment 103-21

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

### Comment 103-22

See response to Comment 80-11, which addresses the same concern.

### Comment 103-23

See response to Comment 80-20, which addresses the same concern. See also new text in Section 2.2.2.4 (Volume 1) regarding MISO evaluations, scope of the EIS, and findings from recent system impact studies.

103-21

103-22

103-23

## Responses

### Commenter 103 – Carol Overland

103-23  
(cont'd)

have an environmental impact. These lines are part of the project and the impact must be evaluated. The need for this transmission has been documented repeatedly over the years by Excelsior lobbyists and electrical engineers. See MCGP 5041, Scherner presentation to MAPP 3/30/04; MCGP 5042, Scherner presentation to MAPP 10/26/04; MCGP 5043, Scherner presentation to MAPP 5/5/05; MCGP 5044, Scherner presentation to MAPP 8/16/06, MCGP 5045 Excelsior Presentation to MN Senate 2002; MCGP 5046, Excelsior Presentation to MN House 2002.

Thank you for the opportunity to Comment on the Mesaba Project DEIS. If you have any questions, or require anything further, please let me know.

Very truly yours,



Carol A. Overland  
Attorney at Law

Enclosures

cc: Excelsior Energy Mesaba Project Service List (via email)



## Responses

### Comment 104-01

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

### Commenter 104 – Margaret Haapoja

>>> "Margaret Haapoja" <[mhaapoja@northlc.com](mailto:mhaapoja@northlc.com)> 1/13/2008 4:15 PM >>>

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

We are definitely opposed to the Excelsior/Mesaba Energy Project, and it appears we're not alone in that sentiment. It seems to me the consensus of the majority in the county is that the plant is not necessary, would not be good for our air quality, might pollute our aquifer and is an unproven technology. After reading news articles and letters to the editor and speaking with the leaders of CAMP, I can see nothing positive about this project and much that is negative. It looks like the only people who stand to benefit from it are the proponents, and I wonder if they have ever invested any of their own money. Isn't our environment more important than the few jobs such a project would provide--especially when nothing about it makes sense?

*Margaret A. Haapoja*

20043 County Road 70  
Bovey, MN 55709  
218-247-7830

<http://users.northlc.com/mhaapoja>

104-01

## Commenter 105 – Jeff J. Smith



### Minnesota Pollution Control Agency

520 Lafayette Road North | St. Paul, MN 55155-4194 | 651-296-6300 | 1-800-657-3864 | 651-282-5332 TTY | www.pca.state.mn.us

January 11, 2008

Mr. William Cole Storm  
Minnesota Department of Commerce  
Energy Facility Permitting  
85 7<sup>th</sup> Place East – Suite 500  
St. Paul, MN 55155-2198

RE: Minnesota Pollution Control Agency Comments on the Draft Environmental Impact Statement for the Mesaba Energy Project (MN PUC Docket #E6472/GS-06-668; DOE/EIS-0382D)

Dear Mr. Storm:

Thank you for the opportunity to review the Draft Environmental Impact Statement (DEIS) for the proposed Mesaba Energy Project. The Minnesota Pollution Control Agency (MPCA) has the following comments and concerns:

#### I. AIR

##### Industrial Air Quality Permitting

Please contact Marshall Cole (507-280-2992) if you have questions regarding our comments under this section.

105-01

Although the DEIS states (on page 5.3-16) that Selexol could be considered as an enhancement to mitigate unwanted environmental consequences due to sulfur dioxide emissions, the MPCA understands that the combustion turbine sulfur dioxide emissions are based on the use of methyl diethanolamine (MDEA) for removal of syngas sulfur compounds (primarily hydrogen sulfide) to a level of 50 ppmv. The Final EIS should reflect the use of Selexol because the use of Selexol is a cost-effective technology for syngas sulfur removal to a level of 20 ppmv or less, resulting in lower sulfur dioxide emissions and meets the required application of Best Available Control Technology (BACT) as required by the Clean Air Act. This approach will also address impacts Class I areas and regional haze issues.

105-02

The DEIS also states (on page 5.3-17) that selective catalytic reduction (SCR) could be considered as an enhancement to mitigate unwanted environmental consequences due to nitrogen oxides emissions. However, the MPCA understands that combustion turbine nitrogen oxide emissions are based only on the use of nitrogen injection into the syngas before combustion in the combustion turbines to reduce nitrogen oxides formation to a level of 15 ppmv. The Final EIS should reflect the reduction in nitrogen oxide emissions achieved through the application of SCR because the application of SCR is technically feasible to further reduce nitrogen oxides emissions to a level of 3 ppmv. This may be required to fulfill BACT requirements based on the required cost analysis and is a critical step in addressing regional haze concerns (see discussion below).

105-03

The DEIS reports that as many as four non-road diesel engines will be used at the facility. These engines will be a 2,000-kW emergency generator, a 350-kW emergency generator, and one or two 300-horsepower fire pump engines. The Final EIS must indicate the emissions tier that each engine will belong to when installed. For Best Available Control Technology purposes, these engines must meet the highest emissions tier commercially available (Tier II or Tier III, depending on engine size).

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## Responses

### Comment 105-01

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

### Comment 105-02

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

### Comment 105-03

EPA has established a number of emission tiers that will be phased in over time for various non-road diesel engine size; therefore, because the exact plant construction is not known at this time, the applicable emissions tier has not been specified. Excelsior would comply with whichever standard is applicable at the time of construction to ensure that such engines would meet the highest emissions tier.

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**105-04**

The Material Handling Systems Section of the DEIS (on page 2-35) stated that wet spray dust suppression systems will be employed. However, in its September 4, 2007, e-mail transmittal to Marshall Cole of the MPCA, the project proposer had committed to installing a baghouse to control particulate matter (PM) emissions associated with the unloading of coal from railcars. The Final EIS should reflect this change.

**105-05**

Figure 2.2-1 (on page 2-15) shows fugitive emissions (FS-004) from gasification, syngas treating, and mercury removal processes. These fugitive emissions likely include hydrogen sulfide, carbon monoxide, and other gases. The Final EIS should include a discussion of leak detection and repair to reduce these emissions. Excelsior submitted a leak detection and repair plan to the MPCA in June 2007 and the Final EIS should reflect this.

**Air Quality Dispersion Modeling**

Please contact Ruth Roberson (651-296-7349) or Christopher Nelson (651-296-7750) if you have questions regarding our comments under this section.

**Class II: Prevention of Significant Deterioration (PSD) Increment, National Ambient Air Quality Standard, and Minnesota Ambient Air Quality Standard Modeling**

Air quality impacts on Class II areas were modeled for the proposed Mesaba Generating Station. Modeling addressed normal operating conditions as well as transient conditions. The predictive modeling approach and procedures are generally sound (i.e. the use of AERMOD [04300], and the inclusion of nearby and regional sources). Modeled concentrations from PSD increment analysis and AAQS evaluations are below applicable standards. However, MPCA staff must review and verify the emission rate calculations prior to the completion of a more detailed modeling review.

**Modeling Considerations**

- The Final EIS must specify what meteorological data was used in the dispersion modeling. The DEIS indicated that ISC-type model meteorological data was used. However, it is expected that AERMOD-type meteorological data be used.
- For permitting purposes, it is expected that the modeling will be updated to reflect the most recent meteorological data for northern Minnesota. Please note that AERMOD (07026) is the current version of the federally promulgated air dispersion model (40 CFR 51, November 2005).
- Receptor networks should be consistent with MPCA modeling guidance for PSD analysis (MPCA Guidance for Title V and PSD Air Dispersion Modeling, October 2004). The Final EIS should include justification and/or references to support the modeled network, keeping in mind that the receptor network should focus on resolution and location in addition to following modeling guidance.
- Regarding fugitive PM<sub>10</sub> Sources in Appendix B (B.1.1.1) the Final EIS should include a more thorough discussion of PM<sub>10</sub> emissions from the proposed project roadways. The discussion should include justification and references for characterization, emission calculations, and emission factors (see AP 42 13.2, January 1995).
- In Section 4.3.2.2 (page 4.3-7), the Final EIS should include a reference for the 20 percent reduction in vehicle trips due to carpooling.

**Class I Areas**

The MPCA typically collaborates with federal land managers (FLMs) from the National Forest Service and National Park Service on the review of Class I (far field) air dispersion modeling and analyses. The Class I areas potentially affected by the proposed Mesaba Generating Station project include the Boundary Waters Canoe Area Wilderness (BWCAW), Voyageurs National Park (VNP), and Rainbow Lakes Wilderness (RLW). Excelsior Energy analyzed Class I Increments and pollutant deposition in

**Responses****Comment 105-04**

Section 2.2.3.1 (Volume 1) of the Final EIS has been revised to show that a bag filter dust collection system design would be used in the material handling process.

**Comment 105-05**

Section 2.2.3.1 (Volume 1) has been revised to include measures to reduce fugitive emissions through leak detection and repair as presented in the Mesaba Energy Project Leak Detection and Repair Plan.

**Comment 105-06**

The modeling methodology (including assumptions, data used, etc) and receptor network used for the analysis is summarized in Appendix B of the Draft EIS and has been updated in Appendix B (Volume 2) and Section 4.3 (Volume 1) of the Final EIS. The AERMOD-type meteorological data, which were acquired from MPCA, were used for all Class II dispersion modeling. The data were in AERMET format and were prepared for the specific area of the West and East Range Sites. All modeling used AERMOD Version 07026, which was the latest approved EPA version at the time of submittal of the Mesaba Energy Project Air Permit Application. The modeling receptor network was developed to meet or exceed MPCA guidance. It provides a high 10m resolution along the Mesaba fence line, 25m resolution over a 0.25 km x 0.25 km area, and increasing receptor spacing over successively larger areas. The total receptor grid covers a 50 km x 50 km area and includes all areas that could experience significant air quality impacts from Mesaba emissions. Resolution is adequate to identify the specific location of highest predicted concentrations. Emissions factors from trucks on unpaved roads were obtained from AP-42 Section 13.2.2, and applied to Fluor's estimate of annual vehicle miles traveled to transfer slag, assuming 100% annual plant operation, a 0.2 mile round trip, and 80% control from application of dust suppressant on the roadways. This yields annual PM<sub>30</sub> emissions of less than 3 tons per phase and PM<sub>10</sub> emission of less than 1 ton per phase. The Final EIS has been updated to include this information. Also see response to Comment 9-01 for discussions on PM<sub>10</sub> and PM<sub>2.5</sub> emissions. A reference has been added in Section 4.3.2.2 of the Final EIS to the assumption made regarding reduction in vehicle traffic due to carpooling.

## Responses

## Comment 105-07

Minnesota is in the midst of rulemaking to develop a SIP for the Regional Haze Rule with target reductions for 2018. While the final rule is not known, the draft SIP primarily relies on BACT determinations to limit emissions from new sources. The draft SIP includes a target of reducing SO<sub>2</sub> and NO<sub>x</sub> emissions from northeast Minnesota by 30%, which, like the national Regional Haze program, mainly deals with retrofit controls for older sources. Section 3.3.3.3 and Table 3.3-5 (Volume 1) of the Draft EIS, to the extent possible, discussed potential requirements that the Mesaba Energy Project would face due to potential changes to requirements in the Minnesota Regional Haze program; therefore, further speculations cannot be made as to the types of control that may be required. See Section 4.3.1.4 (Volume 1) for more details regarding the modeled scenarios. See also response to Comment 49-01, which addresses the issue of visibility in Class I areas and the MPCA's BACT decision.

DOE acknowledges that the Mesaba Energy Project would be an existing source after 2018 and therefore would be subject to BART in future phases of the Regional Haze Rule. Discussions regarding visibility impacts have been updated based on latest modeling efforts for the Final EIS and are presented in *Class I (Far-Field) Visibility/Regional Haze Analysis* under Section 4.3.2.5 (Volume 1) and *Class I Visibility/Regional Haze Analysis* in Section 5.2.2.2 (Volume 1). DOE understands that the FLMs do not consider reductions by other sources to be "offsets" for visibility impacts of the Mesaba Energy Project. Ultimately, the MPCA must address cumulative visibility impacts as part of its responsibilities under the Regional Haze Regulation. Section 5.2.2 (Volume 1) of the Final EIS identifies such responsibilities and how the project would be designed to be an integral component in supporting them. Note that since publication of the Draft EIS, a revised air modeling analysis was conducted in light of comments on the Draft EIS to accurately evaluate Mesaba Energy Project impacts on air quality and AQRVs in Class I areas near the West and East Range Sites. Section 5.3.2.2 (Volume 1) has new text on conceptual emission offsets and presents results from a supplemental modeling analyses of the effectiveness of a sample offset scenario at reducing model-predicted visibility impacts. These analyses were conducted only as examples to provide information and illustrate the concept of mitigation.

## Commenter 105 – Jeff J. Smith

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105-06  
(cont'd)

BWCAW, VNP, and RLW. Preliminary result of the Class I Increments and deposition analysis are below levels of concern. However, the modeling results will change based on the controls required to fulfill BACT requirements and should be reflected in the Final EIS.

Visibility and Regional Haze

Please contact Catherine Neuschler (651-296-7774) if you have questions regarding our comments under this section.

The DEIS appropriately notes that "visibility issues are significant for the Boundary Waters and Voyageurs Class I areas" and that mitigation measures for the Mesaba facility may be necessary to reduce the facility's visibility impact. As stated under Section 3.3.3.3, Minnesota must submit to the U.S. Environmental Protection Agency (EPA) a Regional Haze State Implementation Plan that demonstrates reasonable progress towards a 2018 visibility goal for each Class I area within Minnesota. The DEIS correctly notes that, "to achieve reasonable progress toward the 2018 visibility goal, Minnesota may need to implement control measures on other sources (including new sources)...and ensure they do not hinder attainment of visibility goals. Any future control strategies on newer facilities that the MPCA implements, would affect the Mesaba Generating Station" (page 3.3-7).

The MPCA is concerned that this statement does not accurately portray the long term nature of the Regional Haze program; the ultimate goal of the program is a return to natural visibility conditions by 2064, requiring ongoing improvements in visibility. Therefore, it is likely that there will be a need to actively search for emission reductions to attain visibility goals, and that the Mesaba Project would be subject to such emission reductions. The Final EIS should reflect reductions achieved under the application of BACT for SO<sub>2</sub> and NO<sub>x</sub>.

## 105-07

The discussion in Appendix D concerning emission reductions from three Minnesota Power facilities, and the statement that Mesaba's contributions to visibility impacts "are small relative to existing regional source contributions" (page 4.3-20), also raise concerns that the DEIS does not accurately characterize the long-term need for emission reductions in order to meet visibility goals. The fact that the visibility improvement from Minnesota Power's emission reductions will generally exceed the visibility impact of the Mesaba Project would be sufficient if the goal was to avoid additional visibility impairment, but does not adequately address the fact that visibility improvement from current conditions is needed. Also, the addition of even a relatively small level of emissions is a concern when overall reductions are needed. The Final EIS needs to reflect this fact.

The MPCA is also concerned with the reliance on the purchase of allowances to mitigate visibility impacts. As noted (page 5.3-17) the facility will be required to purchase Clean Air Interstate Rule (CAIR) allowances equivalent to 100 percent of its sulfur dioxide emissions, and these allowances could "be purchased selectively from sources having modeled visibility impacts on Class I areas, so as to represent an effective means of reducing such impacts from Project operations." Any use of allowances for mitigation will have to be carefully considered for regional impacts, and this should be noted and explained in the Final EIS. Clearly, should Mesaba purchase its CAIR allowances from out of state, this would add to the sulfur dioxide emissions in the region and further contribute to the visibility impact. The Final EIS needs to reflect that the requirement to purchase allowances equivalent to 100 percent of its sulfur dioxide emissions will not result in reduced visibility impacts. Only the purchase and retirement of additional allowances, over and above those needed for facility operation under Title IV or CAIR, from within the region would appear to ensure mitigation of visibility impacts.

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**Air Quality Risk Assessment**

Please contact Kristie Ellickson (651-296-7338) or Mary Dymond (651-296-7992) if you have questions regarding our comments under this section.

**Air Emissions Risk Assessment including RASS, ERER, IRAP, and the MPCA Mercury Fish Intake Model**

The methodology used by the facility for the various exposure scenarios has been reviewed and approved by MPCA during the scoping process. The MPCA has also provided comments and information on previous submittals. Although the results presented in the DEIS are stated to be below risk goals used by MPCA to evaluate projects, the emission and chemical data have not been verified by the MPCA.

- 105-08** The MPCA has authority to craft permit conditions to prevent pollution and to protect human health and the environment. We have found that we garner the necessary information to make these decisions from an Air Emission Risk Analysis (AERA) performed according to our AERA guidance document (<http://www.pca.state.mn.us/publications/aq9-18.pdf>) or from a more refined risk assessment, when necessary. The following questions and comments are intended to clarify portions of the submitted draft risk assessment materials that may be missing steps or that deviate from our AERA guidance or from agreed-upon refined risk assessment methodology. In some cases, simple clarification is requested.
- 105-09** **General Comments on the AERA**  
In the Final EIS, clarify the location of each receptor/sensitive receptor relative to the facility. In the DEIS, some descriptions treat receptors in terms of the distances from the “facility,” while others treat receptors in terms of the distances from the proposed facility stacks.
- 105-10** In the Final EIS, clarify the values used for the emission factors and emission rates. Are they: a statistical descriptor of central tendency; maximum values; or highest potential values? This information is necessary in order to understand how conservative the assumptions and calculations were as far as potential for adverse human health effects.
- 105-11** The Final EIS needs to address PM emissions in the AERA. This particularly pertains to PM<sub>2.5</sub>. The Criteria Pollutant Screen on the MPCA RASS may be used for this assessment. When incorporating PM<sub>2.5</sub> into the risk assessment please clearly state the assumptions that were made as to assessing the PM speciation. This evaluation process is described on page 40 of the updated AERA guidance.
- 105-12** Identify “Insignificant Activities” in the Final EIS and document how these activities met the conditions for exclusion as described on page 40 of the updated AERA guidance.
- 105-13** In the Final EIS explain how the Chemicals of Potential Concern (COPC) list was compiled. Include a description or a flow chart/diagram of how compounds were chosen to be COPCs and then eliminated or kept for the “Chemicals for Evaluation” list.
- 105-14** In the Final EIS, list risk and hazard values at the property boundary and at the fence line.
- 105-15** Generally in the AERA process, risk is calculated for both a resident and a farmer at the location of maximum air concentration on potentially farmable land. In the Final EIS, evaluate farmer risks at the location of maximum concentration at potentially farmable land. Also, have the location of the farmer and resident clearly identified in the text and figures along with the respective risk value.

**Responses****Comment 105-08**

Section 4.17 (Volume 1) and Appendix C (Volume 2) of the EIS have been updated with the results of the revised AERA, which was conducted in accordance with MPCA requirements. See response to Comment 42-01, which addresses the same concerns.

**Comment 105-09**

The Final EIS has been updated to show that revised AERA included a description of the locations of each receptor modeled in the IRAP in a consistent manner and included distances from the facility fence line.

**Comment 105-10**

Section 4.17 (Volume 1) and Appendix C (Volume 2) of the EIS have been updated to include a discussion of the emission factors and emission calculation methods used for the compounds included in the revised AERA. Calculations were based on emission sources operating at their capacities. Emission factors for air toxics were developed based on emission tests from the Wabash River Plant, material balances, and published emission factors.

**Comment 105-11**

Section 4.17 (Volume 1) and Appendix C (Volume 2) of the Final EIS have been updated to address PM<sub>2.5</sub> emissions. Also see responses to Comments 7-03 and 9-01, which address the relationship between PM<sub>2.5</sub> and PM<sub>10</sub>.

**Comment 105-12**

Section 4.17 (Volume 1) and Appendix C (Volume 2) of the EIS have been updated to identify “insignificant activities” and documents how they meet the conditions described in the AERA guidance.

**Comment 105-13**

Section 4.17 (Volume 1) and Appendix C (Volume 2) of the EIS have been updated to explain how the list of chemicals of potential concern was compiled and includes a description of the process used to choose the chemicals of potential concern and eliminate them from the Chemicals for Evaluation list.

**Comment 105-14**

Section 4.17 (Volume 1) and Appendix C (Volume 2) of the EIS have been updated to present hazard indices and risk values for the various scenarios at the location of highest off-property concentration. The IRAP method of estimating risk associated with the proposed facility is conducted at the receptor location having maximum impact from all the sources combined for each air parameter. The receptor location represents the worst-case location where a rural resident, farmer, or

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**Comment 105-14 (cont'd)**

fisher may be found off the proposed facility property boundary. The maximum impact receptor location, R3, can be seen on Figure 2 of Appendix C (Volume 2).

**Comment 105-15**

Section 4.17 (Volume 1) and Appendix C (Volume 2) of the EIS have been updated to show hazard indices and risk values for the various scenarios (including adult and child residents, farmers, and fishers) at the area of highest off-property concentration and includes updated text and tables, indicating receptors with the highest predicted risk, as well as the associated risk values. Appendix C provides the full AERA report and includes figures illustrating receptor locations modeled. The cumulative health risk analysis has also been updated for the Final EIS and is discussed in Section 5.2 and Appendix D2.

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- 105-16** The DEIS does not list the sensitizers and developmental toxicants described in Appendix C (sections 5.4 and 5.5). These should be included in the Final EIS. Health based risk quotients are not completely protective for people who are sensitized to certain chemicals. Also, acute health risk values should never be exceeded by developmental toxicant hourly concentrations.
- 105-17** **Appendix C AERA [ERER (Q/CHI)], Section 4.5**  
In the Final EIS, the AERA spreadsheets (ERER and RASS) should include fugitive emissions, with the exception of road dust.
- 105-18** **Appendix C AERA (IRAP), Section 4.6**  
In the Final EIS, use the toxicological values submitted to you by MPCA in each risk model, including the IRAP. Some chemicals were discussed on page 13 (section 4.6.2) and 23 (section 5.8) of Appendix C as not having toxicological values for one of the risk models, and default toxicological values were used in the IRAP modeling.
- 105-19** **Appendix C AERA (Mercury Uptake Model), Section 4.7**  
Please use the most current Mercury Model for the Fish Ingestion Pathway for this analysis (<http://www.pca.state.mn.us/air/acra-mercury.html>).
- 105-20** In the Final EIS, the MPCA fish consumption pathway model should be applied to the fishable water body that is most impacted by the facility. The evaluation of Lake Diamond was supported by the amount of available fish data and the location of the majority of residences. Is Diamond Lake the “most impacted fishable water body?” If Lake Diamond is not the most impacted water body, and the most impacted water body does not have adequate fish data, the fish data from Lake Diamond may be used as a surrogate.
- 105-21** In the DEIS, the average and the 90<sup>th</sup> percentile fish tissue data were evaluated. In the Final EIS, use the 95<sup>th</sup> percent upper confidence limit of the mean for the fish tissue data.
- 105-22** In the Final EIS, sum the ingestion risks from mercury found using the MPCA fish pathway model and the ingestion risks from mercury found using IRAP.
- 105-23** The DEIS also assumed all mercury emissions to be elemental. In the Final EIS, document the basis for this assumption, use a more conservative approach or identify the mercury speciation inputs.
- 105-24** In the Final EIS, use the Minnesota recommended fish intake value (0.142 mg/day) for the subsistence scenario, and not the IRAP suggested value (0.082 mg/day). The Minnesota recommended value was described in the DEIS, but the input in the fish uptake spreadsheet was the IRAP value.
- 105-25** **Specific Chemicals**  
In the Final EIS, include dioxins and furans in the risk analysis. Although dioxin levels may be very low, their toxicity is exceedingly high. The MPCA recommends the use of dioxin emission data from the Wabash site. If no data are available, you may need to obtain surrogate data to complete the risk assessment.
- 105-26** **Potential Cumulative Impacts, Section 5.2-9**  
The submitted DEIS includes a cumulative effects analysis for the AERA. Only one facility, Minnesota Steel, was included in the cumulative effects analysis. The Final EIS should include all listed nearby facilities that could contribute to increased air concentrations in the 10km zone surrounding the proposed

**Responses****Comment 105-16**

The AERA spreadsheets in Appendix C (Volume 2) of the EIS have been updated to provide a list of the sensitizers and developmental toxicants and the respective hazard quotients. Any chemicals with hazard quotients that are not protective have also been addressed in the Final EIS.

**Comment 105-17**

Appendix C (Volume 2) of the EIS has been updated to include fugitive emissions of carbonyl sulfide, hydrogen chloride, and hydrogen sulfide from equipment leaks. Additionally, the Final EIS clarifies in the Section 4.17.2 that fugitive emission rates of other compounds are less than 1 percent of their respective project emission rates.

**Comment 105-18**

Appendix C (Volume 2) of the EIS has been updated to show that only toxicological values approved by MPCA in the updated IRAP analysis.

**Comment 105-19**

The mercury analysis has been updated using the most current version of the Mercury Model for the Fish Ingestion Pathway from the MPCA website (i.e., Version 1.3, date April 13, 2006) and the results have been provided in the Final EIS.

**Comment 105-20**

Additional information has been provided in Section 4.17 (Volume 1) and Appendix C (Volume 2) of the EIS to show the rationale for choosing Big Diamond Lake in the mercury analysis. See response to Comment 42-01, which addresses the same concern.

**Comment 105-21**

The mercury risk assessment was revised to use the 95<sup>th</sup> percent upper confidence limit of the mean fish tissue data and the results are presented in Section 4.17 (Volume 1) and Appendix C (Volume 2) of the EIS.

**Comment 105-22**

The risk from fish ingestion from the IRAP model and MPCA's fish consumption analysis are provided although a total is not provided. The risk contribution from chemicals of potential concern other than mercury in the IRAP is negligible (on the order of 10<sup>-7</sup> for cancer and 10<sup>-4</sup> for non-cancer hazard quotient).

**Responses****Comment 105-23**

Appendix C (Volume 2) of the Final EIS has been updated to provide further justification of the speciation of mercury emissions.

**Comment 105-24**

The IRAP fish intake value was corrected to 0.142 mg/day to be consistent with the MPCA fish consumption model value in the revised IRAP analysis and the results are presented in Section 4.17 (Volume 1) and Appendix C (Volume 2) of the EIS.

**Comment 105-25**

Because the data was not available from the Wabash River Plant, the risk analysis has been revised to include dioxins and furans from surrogate data approved by MPCA and the results are provided in Section 4.17 (Volume 1) and Appendix C (Volume 2) of the EIS.

**Comment 105-26**

The revised Cumulative Risk Impacts Evaluation (Volume 2, Appendix D2) was completed by Excelsior's consultant in accordance with guidance provided by MPCA (April 30, 2008). DOE independently reviewed the analysis and summarized its conclusions in Section 5.2.3 (Volume 1).

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facility in the cumulative effects analysis or provide clear justification for not incorporating the listed facilities in this assessment. Also ambient air monitoring data should be included in the cumulative effects analyses. Finally, as stated earlier, the cumulative effects analysis investigated the inhalation route of exposure. The cumulative effects analysis should also address ingestion pathways.

### Air Policy and Mercury

Please contact Anne Jackson (651-296-7949) if you have questions regarding our comments under this section.

105-27

The MPCA is concerned that the DEIS does not acknowledge the need for depositional reductions from all sources in Minnesota of mercury emissions. Minnesota's Total Maximum Daily Load Reduction for Mercury establishes a statewide annual air emissions goal of 789 pounds per year. The TMDL goal of 789 pounds is a challenging 78 percent reduction from an estimated 3,638 pounds emitted in 2000. The addition of new sources like this project further increases the magnitude of the task of implementing the TMDL goal. As a result of three initiatives in Minnesota's existing electric utility sector, significant reductions of mercury will occur in the foreseeable future, however, the reductions still fall far short of achieving the goal of 789 pounds. As of December 2007, a TMDL stakeholder workgroup is meeting on a regular basis with the aim of recommending a plan by March 2008. The plan will likely address how new sources, such as this project, are to be permitted to operate while reducing the overall total mercury emissions in the state. The Final EIS needs to reflect these requirements.

The MPCA, therefore, does not agree with the DEIS' description of additional air quality impacts (Section 4.3.5.7 and 4.8.5.8). First, given the total goal of 789 pounds from all sources in Minnesota, without an offset from other sources of mercury emissions, Mesaba Energy's 52 pounds of mercury represents 6.5 percent of the statewide mercury emissions goal. The Final EIS needs to address how the proposed facility will mitigate mercury emissions to aid in achieving the TMDL goal.

Second, the DEIS assumes the existence of "stringent MACT standards." While EPA has promulgated a new source performance standard for mercury from an IGCC unit, the value essentially reflects no control of mercury, and could hardly be called "stringent." The Clean Air Mercury Rule (CAMR) does not restrict the amount of mercury released by a facility, only that the facility purchase allowances in sufficient quantity to equal the facility's emissions. In order to describe the effectiveness of the NSPS and CAMR, the Final EIS should describe the results of EPA's assessment of the impacts of CAMR on deposition in Northern Minnesota.

### Climate Change

Please contact Peter Ciborowski (651-297-5822) if you have questions regarding our comments under this section.

105-28

### Carbon Footprint

The DEIS estimates that, when completed in its entirety, the Mesaba Project will emit 9.4 to 10.6 million tons of carbon dioxide (CO<sub>2</sub>) annually to the atmosphere. This is in absence of carbon capture and sequestration (CCS). These estimates appear to correspond to annual emissions with subbituminous coal and bituminous coal as fuel sources. Annual emissions are calculated using a 92 percent capacity factor.

### Comment 105-27

To date, Excelsior has met with the MPCA to discuss how to permit the Mesaba Energy Project while working within the framework of evolving guidelines being established for new and expanding sources. The discussions have focused around developing offsets in the amount the Project's expected actual annual emissions exceed the *de minimis* threshold of three pounds per year. Based on discussions at these meetings, MPCA would take into consideration the innovative nature of the Mesaba Energy Project (i.e., the lack of a robust historical testing database) and MPCA would allow Excelsior to establish the Project's expected annual emissions using the best information it can assemble from published research studies, expert testimony, and testing results from similar mercury control technologies applied on sources in different industrial sectors (i.e., technology transfer). See also response to Comment 97-04, which addresses the same concern.

### Comment 105-28

A 92 percent capacity factor is consistent with project objectives and represents a reasonable upper bound for estimating emissions of carbon dioxide. The plant capacity was adjusted to reflect ZLD and the heat rate was adjusted to reflect site average conditions and enhanced ZLD. Because the plant capacity and heat rate are fuel-specific (largely dependent on the fuel's heat content), these parameters were adjusted based on preliminary design data for Illinois No. 6 coal, and based on interpolation for 50/50 PRB coal and petroleum coke. Based on these adjustments, which result in capacity factor ranging from 75 to 92 percent, the Final EIS has been updated with the CO<sub>2</sub> emissions that would be emitted from all three fuel sources. New text provided in subsection *Emissions of Greenhouse Gases* under Section 2.2.3.1 (Volume 1) of the Final EIS has been added to provide discussions of non-CO<sub>2</sub> emissions and provide a complete carbon footprint for the Mesaba Energy Project during combustion and as a result of electrical transmission.

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The calculation of annual emissions is sensitive to the choice of capacity factor. The recent experience at the Tampa Electric Co. Polk IGCC unit suggests that 92 percent may overestimate plant availability. Based on DOE Energy Information Agency Form 906 data<sup>1</sup>, in years 2004-6, plant capacity factors at the Polk IGCC were: 57 percent, 76 percent, and 56 percent, respectively.

In addition, the DEIS cited three possible fuel sources: subbituminous coal, bituminous coal and a 50:50 mixture of subbituminous coal and petroleum coke. Annual CO<sub>2</sub> emissions are estimated for only two of these possible fuels sources, omitting analysis of the mixture of subbituminous coal and petroleum coke. The Final EIS needs to provide the annual CO<sub>2</sub> emissions analysis for all three possible fuel sources. The Final EIS also needs to include an estimate for non-CO<sub>2</sub> greenhouse gases (GHGs) emitted during the operation of the Mesaba plant.

Below, we estimate annual CO<sub>2</sub> emissions using information taken from the Excelsior-Mesaba air permit application to the MPCA, with three fuel type and three different possible capacity factors (including the FEIS-proposed 92 percent). Estimated annual CO<sub>2</sub> emissions range from 6.02 to 9.86 million tons per year, assuming no carbon capture and storage. Assuming that CCS is implemented after 2014, the earliest year that is identified for commercial availability of CCS, CO<sub>2</sub> emissions would be lower by 30 percent.

Fuel type	MW(e)	cap. factor	MWH	heat rate (btu/kwh)	MMBtu	btu/lb coal	lb CO2/MMBtu	tons CO2
Subbituminous	1196	0.75	7,857,720	9397	73,838,995	8900	213	7,863,853
Bituminous	1196	0.75	7,857,720	9397	73,838,995	10982	204	7,531,577
50/50 Subbituminous/petroleum coke	1196	0.75	7,857,720	9397	73,838,995	11450	217.8	8,041,067
Subbituminous	1196	0.60	6,286,176	9397	59,071,196	8900	213	6,291,082
Bituminous	1196	0.60	6,286,176	9397	59,071,196	10982	204	6,025,262
50/50 Subbituminous/petroleum coke	1196	0.60	6,286,176	9397	59,071,196	11450	217.8	6,432,853
Subbituminous	1196	0.92	9,638,803	9397	90,575,834	8900	213	9,646,326
Bituminous	1196	0.92	9,638,803	9397	90,575,834	10982	204	9,238,735
50/50 Subbituminous/petroleum coke	1196	0.92	9,638,803	9397	90,575,834	11450	217.8	9,863,708

<sup>1</sup> [http://www.eia.doe.gov/cneaf/electricity/page/eia906\\_920.html](http://www.eia.doe.gov/cneaf/electricity/page/eia906_920.html)

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(cont'd)

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### Comment 105-29

DOE recognizes the present uncertainties of the regulatory status of CO<sub>2</sub> and other GHGs. Table 3.3-5 (Volume 1) of the Final EIS has been updated with information made available since the publication of the Draft EIS and includes discussions on the Minnesota Legislature's Next Generation Energy Act, the proposed Federal regulation, the America's Climate Security Act, and the Midwestern Greenhouse Gas Reduction Accord signed by Minnesota. In general, the Mesaba Energy Project is considered to have much greater flexibility than existing or new conventional coal-fueled plants in complying with future carbon regulations because of the inherent efficiencies of IGCC technology and the capabilities for pre-combustion carbon capture vs. post-combustion capture.

### Comment 105-30

Environmental impacts and cumulative impacts of emissions from the Mesaba Energy Project are discussed in Sections 4.3 and 5.2 of the Draft EIS, respectively. New text regarding the impacts of CO<sub>2</sub> emissions has been added to Sections 2.2.3.1 and 5.2.8 (Volume 1). Additional discussions regarding CO<sub>2</sub> emissions have been included in the Final EIS as provided in responses to Comments 105-28 and 105-29.

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 (cont'd)

Non-CO<sub>2</sub> GHGs typically comprise about 1 percent of all GHG emissions from current electric generating plants and associated electricity transmission. If we expand GHG accounting framework to the complete fuel cycle, total non-CO<sub>2</sub> emissions would be larger. Ruether, et al. (2004) estimate that about 3.5 percent of all GHG emissions associated with the operation of an IGCC are associated with coal mining and transportation.<sup>2</sup> A more complete description of the carbon footprint of the Mesaba project would address these up-stream non-CO<sub>2</sub> GHG emissions, as well as non-CO<sub>2</sub> GHG emissions that are produced during combustion or are emitted to the atmosphere as a result of the electricity transmission. We recommend that the Final EIS explicitly address these issues.

#### Regulatory Status

Greenhouse gases are not currently regulated under Federal or State law. However, recent Supreme and Federal district court rulings have thrown into question the regulatory status of CO<sub>2</sub> and other GHGs under the Clean Air Act. In *Massachusetts vs. US Environmental Protection Agency*, the Supreme Court ruled that, unless the USEPA can provide a compelling justification why it should not regulate GHGs under the Clean Air Act, it must regulate the emissions of these pollutants from mobile sources. The full implications of this ruling for stationary sources will likely be determined in subsequent court cases.

105-29

The Final EIS should recognize the present uncertainty of the regulatory status of CO<sub>2</sub> and other GHGs under the Federal PSD program and the possibility that the regulatory status could change quickly as a result of litigation. At this time, to not recognize the potential for regulation sends the message that these pollutants are not, and will not, be subject to regulation, despite the likelihood that GHGs will be regulated.

Other sources of regulatory uncertainty that should be noted include: pending Congressional legislation on GHGs, the Midwest Governor's regional cap-and-trade initiative on GHGs, and possible state-level action. Under virtually all of these programs the Mesaba project would be brought under some sort of state, regional or Federal regulatory program. We recommend that the Final EIS describe the range of possible future regulatory actions that might affect the operation of the Mesaba project and consider generally how the facility's owners/operators might comply.

#### Cumulative Environmental Impacts

The DEIS for the Mesaba Project addresses environmental impacts only to the extent that it assesses emissions levels. The effects of those air emissions are not considered in any depth. Nor are the cumulative environmental impacts of the operation of the Mesaba project considered. The DEIS does discuss the localized effects of carbon capture, compression, transport, and geologic sequestration, but since those impacts are quite a minor part of the larger impacts picture, this is not an adequate substitute for a full and robust treatment of the Mesaba Project's environmental impacts.

105-30

Generally speaking, in the case of CO<sub>2</sub> the chain of cause and effect linking plant operations to the environment includes: emissions, atmospheric concentration change, climatic change, and impacts from changing climate. Regarding cumulative emissions and concentration change, over its lifetime the Mesaba project will emit roughly 390 million tons of CO<sub>2</sub> to the atmosphere. This assumes a 50-year plant life and a mid-case 75 percent capacity factor. If 55 percent remains airborne, this emission will add roughly 0.05 ppmv to the global atmospheric concentration of CO<sub>2</sub>. While small in relation to the expected 150 to 400 ppmv rise in atmospheric CO<sub>2</sub> levels this century, it still would be measurable.

<sup>2</sup> J. Ruether, et al., "Greenhouse Gas Emissions from Coal Gasification Power Generation Systems," *Journal of Infrastructure Systems* 19 (2004): 111-119.

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Regarding climate impacts, the type of environmental impacts that in the scientific literature are typically associated with future climatic change include:

- Agricultural losses
- Forestry losses
- Human health impacts from heat, disease and air pollution
- Impacts to water infrastructure from flooding and low flows
- Losses associated with coastal flooding
- Impacts resulting from forced migrations of human populations
- Losses from increased storm intensity
- Energy costs of increased cost of summer cooling
- Welfare losses associated with lost amenities
- Implicit costs of habitat loss and species extinction

In the Final EIS, we recommend that the cumulative impacts of the operation of the Mesaba plant be evaluated using this framework or a similar framework of impacts found in the scientific literature.<sup>3</sup> While the Mesaba plant will contribute only marginally to the aggregate global impacts of climate change over the next 50 years, it will nonetheless still contribute. Recently, in *Center for Biological Diversity v. NHTSA*, the Ninth Circuit Court of Appeals found that the assessment of cumulative effects in federal environmental impact statements is required under NEPA. Consistent with this ruling, the Final EIS for the Mesaba project should analyze the cumulative environmental effects of GHG emissions.

**II. WATER****Industrial Water Quality Permit**

Please contact Katrina Kessler (651-296-7376) if you have questions regarding our comments under this section.

**Section 4.5.2.1 – Permit Authority**

The DEIS states that “Discharge limitations for both mercury and phosphorus for the West Range Site would be determined by MNDNR during the National Pollutant Discharge Elimination System (NPDES) and State Disposal System (SDS) permit development process and may vary from the expected levels presented in this EIS.” The MPCA, not the Minnesota Department of Natural Resources (MNDNR), is the state agency responsible for implementing the NPDES/SDS Program. This reference should be corrected.

**Section 4.5.2.1 – Zero Liquid Discharge (ZLD) System**

The DEIS includes little or no information about the design of the ZLD for both the east and west range sites. It is important to understand the design and operation of the system for both potential locations, as it is an integral part of the proposed project. What is the design flow for the ZLD for the east and west range? What individual treatment units are included in the design? The Final EIS should include a flow and solids balance for the ZLD system for both sites, including the design for the west site discharge alternatives described in Appendix H. For the west range site, the DEIS lists a brine concentrator and a heated rotary drum dryer/crystallizer; for the east site, the DEIS mentions a clarifier, a reverse osmosis system, and a brine concentration/crystallizer. Does the design include multiple clarifiers, reverse

<sup>3</sup> For instance, Intergovernmental Panel on Climate Change, *Fourth Assessment Report. Working Group II. Report on Impacts, Adaptation and Vulnerability*, <http://www.ipcc.ch/ipccreports/ar4-wg2.htm>

**Responses****Comment 105-31**

Text in Section 4.5.2.1 (Volume 1) has been revised due to Excelsior's announcement to implement an enhanced ZLD system at the West Range Site and reference to MNDNR as the state agency responsible for the NPDES/SDS Program has been deleted. New text in Section 4.5.2.5 acknowledges that MPCA is the agency responsible for implementing the NPDES/SDS Program.

**Comment 105-32**

In formulating its decision to use an enhanced ZLD system to eliminate all industrial wastewater discharges from the proposed West Range IGCC Power Plant, Excelsior commissioned an independent engineering consultant to study and confirm the economic implications associated with the ZLD system. The details and findings of the report will be reflected in an updated permit application submitted to the MPCA, which will be made publically available. New text has been added to Section 4.5.2.1 (Volume 1), which discusses the enhanced ZLD system. Also, Appendix H (Volume 2) has been updated in the Final EIS, to describe in more detail the conceptual design of the ZLD unit that treats the non-contact wastewater. The ZLD system would be equipped such that equipment redundancy would be provided throughout the system (e.g., pumps throughout the systems including for chemical feed would have spares installed and a surge and equalization pond would be a single pond which would be divided into two areas so that cleaning of solids could occur in one side while the other is in use). The ZLD unit to be used for the Mesaba Generating Station would be the same system that has been successfully employed at the Wabash River Plant to control permit exceedances of metals in that plant's discharges. The Wabash River Plant has never experienced a shutdown due to the ZLD unit not being available (Lynch, 2009).

**105-30  
(cont'd)****105-31****105-32**

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**Responses****Comment 105-33**

As stated in response to Comment 6-01, Excelsior has agreed to implement an enhance ZLD system at the West Range Site. The Final EIS has been updated in Section 2.2 (Volume 1) to describe the use of the enhanced ZLD system, which would eliminate the majority of water quality concerns as originally discussed in the Draft EIS. Section 4.5 (Volume 1) has been revised to describe the changes in water quality impacts anticipated with the enhanced ZLD system at the West Range Site.

**Comment 105-34**

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

**105-32  
(cont'd)**

osmosis, concentrator dryer/crystallizer units such that if one goes down, the remaining units can effectively treat the maximum design flow? The Final EIS should explain the contingency plans for the proposed facility in the event that one of the units is undergoing maintenance. If one of the concentrators needs maintenance, will the entire facility shut down? If not, where will the un-concentrated brine be stored? What is the capacity of that storage unit? Where duplicate units are not provided, structures must be provided so that each unit operation of the plant can be independently removed from service. Where duplicate units are provided, a single flow splitting device must be provided before each unit operation. Duplicate units must be designed such that, with the largest unit out of service, the hydraulic capacity of the interconnecting piping will be sufficient to handle peak design flow through the remaining units. The Final EIS should also include a description of the final disposal plan for the solids generated from the ZLD system from both the west and east range.

**105-33****Section 4.5 – General Comments to Water Resources**

MPCA staff disagrees with the logic behind the Water Resource Management Plan and water discharge scenarios in the DEIS. The water resources section of the DEIS maintains that the proposed project will not increase the pollutant load to the Swan River watershed above the load authorized in the NPDES/SDS Permit issued to the MDNR for the Hill Annex Mine Pit (HAMP) MN0030198. It is not appropriate to compare the proposed water management plan to ongoing MDNR activities at the HAMP and discharges currently permitted in the Swan River watershed. The NPDES/SDS Permit Program does not allow Excelsior Energy to assume any of the flow or pollutant load associated with MN0030198. The proposed project represents a new discharge to the Swan River watershed. The Swan River is impaired for excess nutrients and is subject to a fish consumption advisory due to mercury. Until there is an approved waste load allocation implementation plan for the approved TMDL to address these impairments, the MPCA cannot permit any new or expanded discharges upstream of the impairment that may cause or contribute to the existing impairments. The Final EIS should include operating and discharge scenarios that recognize these permitting restrictions. All scenarios included in the Final EIS should be designed to meet water quality standards and sustain the designated use of the potential receiving waters. The primary goal of the federal and state NPDES/SDS Program is to maintain water quality consistent with beneficial uses.

Data included in the Water Resources Management Plan section of the DEIS suggest that over the long term (14 -24 years), the proposed discharge to the Canisteo Mine Pit (CMP) will result in exceedances of the hardness, total dissolved solids (TDS), and specific conductivity water quality standards and that the discharge to Holman Lake would result in exceedances of the same parameters within three years. The DEIS also suggests that the mercury and phosphorus levels in the CMP and Holman Lake will increase as a result of the proposed discharges in such a way that may not be permitted under the NPDES/SDS Program. In its current form, the Water Resource Management Plan included in the DEIS is not consistent with state and federal regulations governing water discharges.

**105-34****Section 4.5.2.1 –TDS and Hardness**

The proposed project includes two potential receiving waters, the CMP and Holman Lake. The CMP is considered a lake/reservoir by the MPCA, and both the CMP and Holman Lake are classified as 2B, 3B, 4A, 4B, 5, and 6 waters of the state. Section 4.5.2.1 predict that the TDS concentration in Holman Lake will reach the applicable class 4A water quality standard of 700 mg/L within the first two years of operation of the proposed facility. The DEIS states that Excelsior will request a variance from the Class 3B TDS and Class 4A hardness water quality standards. The existing Class 4A hardness water quality standard is 250 mg/L. Changes proposed to Minn. R. ch. 7050 include a reclassification of most Waters of the State from Class 3B to Class 3C, which would result in a change to a 500 mg/L hardness standard.

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 (cont'd)**

Even if the hardness water quality standard for the CMP and Holman Lake is changed to 500 mg/L, the DEIS indicates the proposed discharge to Holman Lake would exceed the 500 mg/L standard within two years of initiation of operation. Modeling data for the proposed discharge to the CMP included in the DEIS indicates that the discharge would result in exceedances of the TDS and hardness standard in year 26 and year 14, respectively.

The DEIS indicates that either treatment would be required for the cooling tower blowdown discharge to comply with water quality standards or Excelsior would have to apply for, and receive, a variance from water quality standards. Applying for and obtaining a variance from water quality standards is a time-consuming process. Water quality variances are rarely granted. In the exceptional cases when a variance is approved, the variance represents a temporary change in the water quality standard. 40 CFR 131.20 requires that the temporary water quality standard change must be reviewed every three years. The intent is that over time there will be a solution to the problem that created the need for the variance, and eventually the underlying water quality standard will be achieved. The DEIS does not include any discussion of methods, technologies, or treatments Excelsior Energy plans to evaluate for compliance with the TDS and hardness standard.

If Excelsior Energy plans to request a variance from water quality standards, the Final EIS should discuss the criteria Excelsior Energy plans to use to complete the variance request. Variance requests should be prepared consistent with Minn. R. 7000.7000 and Minn. R. 7050.0190. All water quality standard variance requests must be reviewed and approved by the EPA following approval by the MPCA Citizen's Board. The Final EIS should include the treatment technologies being considered to comply with water quality standards. If the proposed project includes a variance from water quality standards, the Final EIS should include a description of how the variance criteria will be satisfied.

**105-35**

**Section 4.5.3.2 – Hardness, TDS, Sulfate, Conductivity**

Section 4.5.3.2 and Table 4.5-6 of the DEIS suggest that the proposed discharge to Holman Lake will not meet the water quality standards for hardness, TDS, sulfate, and conductivity. The DEIS states that once the Holman Lake discharge mixes with the Swan River, the concentrations would be below standards. Please note that the MPCA has not approved the use of a mixing zone in Holman Lake, the CMP, or Swan River for the proposed project. On a case-by-case basis, MPCA staff may approve of mixing zones consistent with Minn. R. 7050.0210 only if the proposed discharge will not violate applicable water quality standards. As discussed above in relation to Section 4.5.2.1 of the DEIS, modeling data shows that the proposed discharge will result in a violation of TDS and hardness water quality standards.

Table 4.5-6 indicates that the proposed discharge will also result in an exceedance of the specific conductivity standard. The Final EIS should indicate how Excelsior Energy plans to meet the applicable water quality standards or include the specific criteria that will be used to apply for a variance from the water quality standards.

The sulfate standard for Class 4A, 10 mg/L, does not apply to the proposed discharge. The Class 4A standard is only applicable to discharges to areas where wild rice is growing. Comments on potential impacts from the proposed discharge related to sulfate are included below with comments to Section 4.5.3.4 on mercury discharges.

**105-36**

**Section 4.5.3.2 – Mercury and Phosphorus Loading**

This section of the DEIS states that the proposed project would not add mercury, phosphorus, or other pollutants associated with impairment concerns to the receiving waters. This is not true. The proposal calls for a withdrawal of water from the CMP for use in the plant and a discharge of concentrated

**Comment 105-35**

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

**Comment 105-36**

The Final EIS has been updated in Section 2.2 (Volume 1) to describe the use of the enhanced ZLD system, which would eliminate the majority of water quality concerns as originally discussed in the Draft EIS. Section 4.5 (Volume 1) has been revised to describe the changes in water quality impacts anticipated with the enhanced ZLD system at the West Range Site. Re-modeling of phosphorus levels in the CMP, based on the updated water balance, was conducted to analyze impacts to water quality in the CMP. In general, use of the enhanced ZLD system at the West Range Site would eliminate discharge and phosphorous levels in the CMP would be within state standards. New text has been added to Section 4.5.3.2 (Volume 1) regarding new analysis on phosphorous levels in the CMP.

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constituents to the CMP and Holman Lake. The proposed project represents a new discharge of pollutants to Holman Lake. There is currently no discharge from CMP or any of the other potential water sources to Holman Lake. Therefore, the proposed discharge of concentrated cooling tower blowdown to Holman Lake represents an addition of pollutants.

Section 4.5.3.2 states that the proposed project would not increase the mass of mercury or phosphorus discharged to the Swan River watershed above the load currently authorized by NPDES/SDS Permit MN0030198 issued to the MDNR permit for the HAMP. While it is important to limit the mass of mercury and phosphorus discharged to the Swan River, it is equally important that the discharge not contribute to a local impairment of any of the designated uses for Holman Lake or the CMP. In the absence of a completed implementation plan for the statewide mercury TMDL, the 6.9 ng/L water quality mercury limit cited in the DEIS should be viewed as an upper limit. Similarly, the 1 mg/L phosphorus limited referenced in the DEIS should be regarded as a potential limit. The 1 mg/L limit should be evaluated concurrently with the existing phosphorus data from Holman Lake and the proposed standards for lakes located in the Northern Lakes and Forest Ecoregion. Using very basic modeling, MPCA staff calculated an annual phosphorus load of 68 kg/yr to Holman Lake. Holman Lake is located in the Northern Lakes and Forest Ecoregion. The proposed phosphorus standard for lakes greater than 15 feet deep in this ecoregion is 30 ug/L. The standard for lake trout lakes in this ecoregion is 12 ug/L. The projected concentration of phosphorus in the discharge (30 ug/L – 70 ug/L) will likely increase the concentration of phosphorus in both Holman Lake and the CMP. Consequently, algal levels will increase and secchi depth (measure of transparency) will decrease. This could ultimately lead to the listing of these waters on the state's Impaired Waters List. Therefore the Final EIS needs to address the addition of mercury, phosphorus, and other pollutants to these receiving waters.

The December 7, 2006, *Response to NPDES-Related Questions*, prepared by Excelsior Energy and submitted to the MPCA, noted that to better characterize the raw water source and resulting effluent water quality, samples were collected from the CMP and the HAMP for analysis using an analytical method with a lower phosphorus detection limit. Additional samples were to be taken of other potential cooling water blowdown receiving waters. The results of all of the additional sampling work were to be submitted to the MPCA as soon as the analysis of the samples was complete. The MPCA has not received the results. Without this additional information, it is not possible to comment further on the assumptions related to the proposed discharge scenarios and potential phosphorus limits included in the DEIS. The Final EIS should include the results of these analyses and the proposed discharge scenarios should reflect the most current and relevant data.

Consistent with Federal Regulation C.F.R. 122.4(i), the MPCA cannot authorize a new discharge to impaired waters before a TMDL is complete. To fulfill the Clean Water Act objective to restore and maintain, physical, and biological integrity of Waters of the U.S., federal regulations are in place to make sure that waters are not further impaired while a TMDL is developed and implemented. These regulations prohibit discharges that will cause or contribute to an existing impairment. Lake Pepin is impaired for excess nutrients, including phosphorus. New discharges to the Lake Pepin watershed, including the Mississippi River Basin above Lake Pepin, that are proposing a discharge of at least 1,800 pounds of phosphorus per year to or upstream of Lake Pepin are subject to the 40 C.F.R. 122.4(i). New discharges may choose to meet the requirements by using land treatment options, such as spray irrigation or rapid infiltration basins, enact treatment to eliminate phosphorus, discharge to a permitted wastewater treatment facility with capacity to accommodate the proposed load, or participate in pre-TMDL trading by purchasing pollutant load from another permitted facility. The MPCA developed Pre-TMDL Phosphorus

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**Responses****Comment 105-37**

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

**Comment 105-38**

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

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

Through PTPT, a new or expanding facility may increase its phosphorus discharge by purchasing a phosphorus reduction at another permitted facility. The MPCA documents the transfer of nutrient load, or trade, through the NPDES/SDS permitting process. More information about the PTPT is available online at <http://www.pca.state.mn.us/publications/wq-wwprm1-02.pdf>.

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

**105-37****Section 4.5.3.2, Table 4.5-6 Applicability of Water Quality Standards**

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

**105-38****Section 4.5.3.3 Domestic Wastewater Treatment**

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

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



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

105-39

### Section 4.5.3.4 Surface Water Quality Standards – Mercury

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

105-40

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

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

## Responses

### Comment 105-39

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

### Comment 105-40

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

**Responses****Comment 105-41**

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

**Comment 105-42**

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

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

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

105-41

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

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

105-42

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

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

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

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

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

### Wetlands

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

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

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

## Responses

### Comment 105-43

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

### Comment 105-44

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

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**Responses****Comment 105-45**

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

**Comment 105-46**

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

**Comment 105-47**

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

**Comment 105-48**

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

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

**105-45****4.7 Environmental Consequences – Wetlands**

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

**105-46**

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

**105-47**

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

**105-48**

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

**Responses****Comment 105-49**

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

**Comment 105-50**

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

**Comment 105-51**

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

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**Stormwater**

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

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

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

**III. LAND****Solid Waste and Mining**

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

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

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

105-49

105-50

105-51

## Commenter 105 – Jeff J. Smith

Mr. William Cole Storm  
January 11, 2008  
Page 19

105-52

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

### Storage Tanks and Hazardous Wastes

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

105-53

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

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

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

Sincerely,



Jeff Smith, Manager  
Air Quality Permitting Section  
Industrial Division

JS:mbo

## Responses

### Comment 105-52

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

### Comment 105-53

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

## Responses

### Comment 106-01

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

### Commenter 106 – Cynthia Driscoll

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

11 January 2008

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

Dear Bill Storm:

I live in Grand Rapids, MN and am very concerned about the potential impacts of Mesaba Energy on the environment here in Itasca County and the fact Mesaba energy will not be capturing and sequestering CO<sub>2</sub>.

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

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

Thank you for considering my comments.

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

106-01

**Responses**

**Comment 107-01**

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

**Comment 107-02**

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

**Commenter 107 – Paul J. Milinovich**

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

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

To whom it may concern:

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

**107-01**

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

**107-02**

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

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

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



## Commenter 108 – Kevin Reuther



### Minnesota Center for Environmental Advocacy

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

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Executive Director

January 11, 2008

VIA ELECTRONIC AND U.S. MAIL

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

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

Dear Mr. Storm:

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

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

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

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

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## Responses

### Comment 108-01

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

### Comment 108-02

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

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

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

108-01

108-02

## Responses

## Commenter 108 – Kevin Reuther

Bill Storm  
January 11, 2008  
Page 2

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

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

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

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

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

108-02  
(cont'd)

## Commenter 108 – Kevin Reuther

Bill Storm  
January 11, 2008  
Page 3

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

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

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

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

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

## Responses

## Comment 108-03

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

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

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

108-02  
(cont'd)

108-03

## Commenter 108 – Kevin Reuther

Bill Storm  
January 11, 2008  
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108-03  
(cont'd)

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

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

108-04

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

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

Sincerely,

*Kevin Reuther*  
Kevin Reuther

Enclosure

## Responses

## Comment 108-03 (cont'd)

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

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

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

## Comment 108-04

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

## Responses

### Comment 109-01

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

### Comment 109-02

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

### Comment 109-03

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

### Comment 109-04

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

### Comment 109-05

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

## Commenter 109 – Dave Hudek

**From:** Ly Her [mailto:simp.lyher@hotmail.com]

**Sent:** Friday, January 11, 2008 5:45 PM

**To:** Bill.Storm@state.mn.us

**Subject:** Mesaba Energy Project - PUC Docket No. E6472/GS-06-668

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

Dave Hudek  
 6407 377th St  
 North Branch, MN 55056

## Commenter 110 – William E. Berg

January 7, 2008

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

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

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

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

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

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

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

110-01

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

110-02

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

110-03

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

110-04

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

110-05

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

110-06

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

## Responses

### Comment 110-01

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

### Comment 110-02

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

### Comment 110-03

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

### Comment 110-04

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

### Comment 110-05

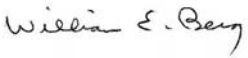
See response to Comment 7-03, which addresses the health risk analysis for the Mesaba Energy Project. The responses to Comments 38-03, 105-04, and 105-05 address dust control measures for coal handling operations.

### Comment 110-06

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

**Commenter 110 – William E. Berg**

Page 2

- 110-07** 7. The draft EIS mentions the economic benefits in terms of increased employment resulting from Mesaba. It fails to quantify how many of these new jobs will be from local, non-local, or transient sources. Increased jobs should never be used as a prime reason to build such an industrial facility with so many adverse impacts as Mesaba Energy.
- 110-08** 8. The draft EIS quantifies 1,000-1,600 tons per day of waste slag as a result of Mesaba operation. It fails to specify what will be done with this waste, or what harmful elements it contains.
- 110-09** 9. The draft EIS states that “IGCC technologies are more efficient, economical, reliable, and more environmentally favorable than conventional coal steam generating electric generation.” Neither Mesaba Energy nor any other coal gasification facility meets any of these criteria, especially with no CO2 sequestration.
- 110-10** Just because Congress has authorized the Clean Coal Power Initiative Program, it does mean that Federal funds in the amount of \$36 million should be allocated to Excelsior Energy, Inc. for start-up of Mesaba Energy, especially on the West Range site. The draft EIS speculates that if these funds are not allocated to Excelsior Energy, Inc., another IGCC facility might not be built elsewhere. This speculation is totally without merit, and should not be included in the draft EIS. In fact, there are likely several other sites where an IGCC facility could be built, with far fewer adverse environmental consequences, and in an area that might be able to handle carbon sequestration on site.
- Any of the above items as stated in the draft EIS are by themselves reasons to not build the Mesaba Energy facility on the West Range site. But when considered together, they are an enormous justification for the Minnesota Department of Commerce and the U. S. Department of Energy to decide on the “NO ACTION” Alternative.
- Very sincerely,  
  
 William E. Berg

**Responses**

**Comment 110-07**

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

**Comment 110-08**

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

**Comment 110-09**

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

**Comment 110-10**

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



## Commenter 111 – Alan Walts

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

JAN 11 2008

REPLY TO THE ATTENTION OF:

E-13J

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

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

Dear Mr. Hargis:

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

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

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

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

## Responses

### Comment 111-01

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

111-01

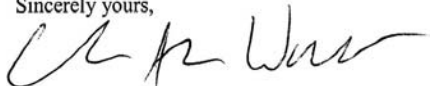


## Responses

### Commenter 111 – Alan Walts

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

Sincerely yours,



Alan Walts  
Acting Director, Office of Enforcement and Compliance Assurance

Enclosures

## Commenter 111 – Alan Walts

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

### Project Purpose and Alternatives Analysis

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

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

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

## Responses

### Comment 111-02

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

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

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

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

111-02

## Commenter 111 – Alan Walts

## Responses

111-02  
(cont'd)

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

### Recommendations:

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

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

111-03

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

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

111-04

### **Wetland Mitigation**

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

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

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

### **Comment 111-02 (cont'd)**

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

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

### **Comment 111-03**

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

### **Comment 111-04**

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

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

**Commenter 111 – Alan Walts**

**Responses**

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

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

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

**Permanent and Temporary Wetland Impacts**

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

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

**111-05**

**Wetlands Classification**

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

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

**111-06**

**Air Emissions**

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

**111-07**

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

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

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

**Comment 111-05**

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

**Comment 111-06**

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

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

**Comment 111-07**

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

**Commenter 111 – Alan Walts**

**Responses**

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

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

**Recreational Use of Canesteo Mine Pit**

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

**111-08**

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

**Water Quality**

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

**111-09**

**Comment 111-08**

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

**Comment 111-09**

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

## Responses

## Commenter 111 – Alan Walts

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

## Environmental Impact of the Action

LO-Lack of Objections

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

EC-Environmental Concerns

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

EO-Environmental Objections

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

EU-Environmentally Unsatisfactory

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

## Adequacy of the Impact Statement

Category 1-Adequate

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

Category 2-Insufficient Information

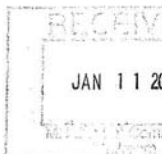
The draft EIS does not contain sufficient information for the EPA to fully assess the environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed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

Category 3-Inadequate

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

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

## Commenter 112 – Paul Minerich

Public Comment Sheet  
Mesaba Energy Project  
PUC Docket No. E6472/GS-06-668Name: PAUL MINERICH  
~~1533 G~~

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

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

Address: 1533 GRAY DRIVE  
HIBBING MN.  
55746

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

## Comments:

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

TOPICS OF INTEREST I'M AGAINST ARE:

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

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

Please submit comments to meeting moderator or send to:

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

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

## Responses

## Comment 112-01

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

112-01

## Responses

### Commenter 112 – Paul Minerich

112-01  
(cont'd)

Comments Continued:

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

(Fold here)

Staple/Tape here

First Class  
U.S. Postage  
PAID  
Permit No. 171  
St. Paul, MN

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

(Fold here)



**Commenter 113 – Helene (Perry) Berg**

JAN 14 2008  
 Minn. Dept. of Commerce

January 9, 2008

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

Dear Mr. Storm,

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

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

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

**Responses**

**Comment 113-01**

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

**Comment 113-02**

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

**Comment 113-03**

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

113-01

113-02

113-03

## Commenter 113 – Helene (Perry) Berg

## Responses

113-03  
(cont'd)

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

113-04

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

Thank you for considering my input.

Sincerely,  
Helene (Perry) Berg  
32680 Co. Rd. 326  
Dovey, Minnesota 55709

## Comment 113-04

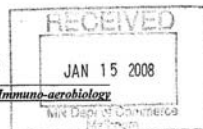
See response to Comment 12-01, which discusses the amount of emissions expected from the Mesaba Energy Project from trains and trucks transportation. The responses to Comment 12-02, 37-01, 46-01 and 111-02 explain DOE's and MDOC's involvement with the Mesaba Energy Project.

Commenter 114 – Darlene J. Swanson



QUAN-TEC-AIR, INC.

Mark C. Swanson



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

Jan 14, '08

Dear Sir:

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

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

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

Darlene J. Swanson  
6898 Trep Rd.

Britt, MN 55710

2206 Deru Ln SW Rochester, MN 55902

Tele: (218) 254-5164

Responses

Comment 114-01

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

114-01

## Commenter 115 – Norman W. Deschampe



## GRAND PORTAGE RESERVATION TRIBAL COUNCIL

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

January 11, 2007

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

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

RE: Mesabi Energy Project Draft EIS

Dear Mr. Hargis and Mr. Storm,

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

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

Carbon Capture and Sequestration

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

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

## Responses

## Comment 115-01

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

115-01

**Commenter 115 – Norman W. Deschampe**



GRAND PORTAGE R.T.C.

**Responses**

**Comment 115-02**

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

**Comment 115-03**

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

**Comment 115-04**

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

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

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

**115-02**

Regional Haze and Visibility

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

**115-03**

Mercury

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

**115-04**

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

## Responses

### Comment 115-05

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

## Commenter 115 – Norman W. Deschampe



GRAND PORTAGE R. T. C.

115-04  
 (cont'd)

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

#### Water Quality

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

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

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

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

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

115-05

**Commenter 115 – Norman W. Deschampe**



GRAND PORTAGE R. T. C.

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

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

Cumulative Impacts and Site Location

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

**115-06**

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

**115-07**

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

**Responses**

**Comment 115-06**

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

**Comment 115-07**

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

## Responses

### Comment 115-08

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

### Comment 115-09

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

## Commenter 115 – Norman W. Deschampe



GRAND PORTAGE R. T. C.

115-08

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

115-09

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

Sincerely,

Norman W. Deschampe  
 Chairman

c.c. R.T.C. members



## Commenter 116 – Robert J. Whiting



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

REPLY TO  
ATTENTION

January 31, 2008

Operations  
Regulatory (2005-5527-WAB)

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

Dear Mr. Hargis:

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

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

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

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

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## Responses

## Comment 116-01

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

116-01

## Commenter 116 – Robert J. Whiting

Operations  
Regulatory (2005-5527-WAB)

- 2 -

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

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

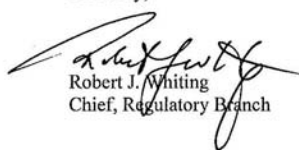
The Corps is aware that the Environmental Protection Agency (EPA) has provided comments to DOE regarding similar issues of an adequate project purpose and sufficient alternatives analysis under Section 404 of the CWA. Although it was our hope that these issues could be resolved, it appears that is not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

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

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

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

Sincerely,

  
Robert J. Whiting  
Chief, Regulatory Branch

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

## Responses

### Comment 116-02

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

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

116-01  
(cont'd)

116-02

## Commenter 116 – Robert J. Whiting

Operations  
Regulatory (2005-5527-WAB)

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

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

## Responses

### Comment 116-03

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

### Comment 116-04

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

### Comment 116-05

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

### Comment 116-06

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

### Comment 116-07

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

## Responses

### Comment 116-08

A Biological Assessment has been prepared to address potential effects on the Canada lynx, which has been incorporated into the main text of the Final EIS and is included in Appendix E (Volume 2).

### Comment 116-09

The statement has been revised in the Final EIS (Volume 1) to delete the phrase indicated.

### Comment 116-10

The most recent baseload electric power projections of Minnesota utilities identified in completed integrated resource plans have been updated in Appendix F1.

### Comment 116-11

DOE discussed this comment with EPA and Corps staff on May 13, 2008. In response to this comment and a related comment by EPA (111-02), DOE has revised Chapter 2 of the Final EIS (Volume 1) clarifying its position with respect to the scope of alternatives analysis and the "reasonable" alternatives available to the agency.

## Commenter 116 – Robert J. Whiting

**Commenter 116 – Robert J. Whiting**

Operations  
 Regulatory (2005-5527-WAB)

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- 116-12** | 10. Page 2-7 second paragraph. The Corps does not concur with the reasons given for the applicant's stated preferred alternative.
- 116-13** | 11. According to an announcement by the applicant on January 23, 2008, Excelsior is proposing to utilize an enhanced ZLD on the West Range Site (please see our previous comments #41 and #80 from February 2007). Please update the analysis in the FEIS to reflect the enhanced ZLD on the West Range Site.
- 116-14** | 12. Page 2-30 Section 2.2.2.4 Infrastructure requirements. The discussion on the MISO studies is from DOE's response to our February 07 comments. What is the current status of the MISO studies? This information should be updated and reflected in the FEIS.
- 116-15** | 13. Page 2-30-31 Section 2.2.2.4. Includes discussion of the network upgrades that would be necessary (Boswell to Riverton, and full power deliverability to the Twin Cities). It does not appear that impacts resulting from these actions are discussed or evaluated.
- 116-16** | 14. Page 2-31 Section 2.2.2.5. Please clarify the last sentence in the first paragraph "The plans for connecting the BNSF and or CN, with the Mesaba...on the West or East Range ..would require plan approvals from the respective companies; however, no other public approvals would be needed." As you are aware, Department of the Army permits may be required for construction of the railway connection or improvements to the existing railway infrastructure. Please clarify.
- 116-17** | 15. Page 2-75 Section 2.3.2.5. The nomenclature used in the HVTL corridors to discuss alternatives for the East Site are different in different parts of the discussion. For example, the text includes the discussion of the 39 Line and the 43 Line and Figure 2.3-8 includes HVTL Alt 1 and HVTL Alt 2. Please clarify the discussion and the figures in identifying the preferred alternative on the East site.
- 116-18** | 16. Page 3.7-1 Section 3.7.2 Regulatory Framework. Please remove the statement "Federally regulated wetlands are governed by Section 404 and Section 401 of the CWA and are characterized as wetlands hydrologically connected or adjacent to Navigable Waters of the US". CWA jurisdiction has become more complicated and is difficult to accurately summarize. Recommend replacing this sentence with – "Under Section 404 of the Clean Water Act, a Corps permit is required for the discharge of dredged or fill material into waters of the U.S."
- 116-19** | 17. Page 3.7-1 last paragraph. The last paragraph is also not entirely accurate. We recommend removing the entire paragraph.
- 116-20** | 18. Page 3.7-2 last sentence in first full paragraph. Please remove the statement "The majority of wetlands identified in each alternative site have a connection to interstate commerce, however, some wetlands appear to be isolated" for the same reason given above. In addition, the Corps has not reviewed a final delineation report for either site or determined the jurisdictional status of wetlands at either site.
- 116-21** | 19. Page 3.7-4 Second paragraph. Please remove the statement "The 1987 Manual requires all wetland criteria, hydrophytic (wetland) vegetation, hydric (wetland) soil, wetland hydrology

**Responses**

**Comment 116-12**

Clarification has been added to the text of the Final EIS to indicate that these are the participant's principal reasons for selecting the preferred alternative and concurrence by USACE or DOE is not implied. Also, as previously noted Appendix F1 has been updated to more effectively and clearly document and explain issues and constraints at alternative sites.

**Comment 116-13**

The Final EIS has been updated to reflect the project proponent's announced decision, to be reflected in a revised permit application to the MPCA, to utilize an enhanced ZLD system at the West Range Site, which would eliminate discharges of process water and cooling tower blowdown into any water bodies (see new figures provided in Section 4.5.3 [Volume 1]). Use of the enhanced ZLD system at the West Range Site would be implemented as described for the East Range Site in Section 4.5.4 (Volume 1) of the Draft EIS. The impacts associated with using the enhanced ZLD system at the West Range Site are discussed under Mitigation Alternative 3 in Section 5.3.2.1 (Volume 1) and Appendix H (Volume 2) of the Final EIS. In general, the enhanced ZLD system would greatly reduce water quality impacts, reduce water appropriation needs, and eliminate wastewater discharge pipelines.

**Comment 116-14**

DOE provided information pertaining to the contents of MISO studies as available in Section 2.2.2.4 of the Draft EIS (Volume 1). New text has been added to Section 2.2.2.4 (Volume 1) regarding updates from feasibility and system impacts studies since publication of the Draft EIS. The information presented in the Final EIS is the latest available on these studies. See also the response to Comment 116-15 below.

**Comment 116-15**

Section 2.2.2.4 (Volume 1) of the Draft EIS explained that the POIs with the regional electrical grid would be the Blackberry Substation for the West Range Site and the Forbes Substation for the East Range Site. The section also discussed the HVTL infrastructure decisions needed from the MISO for the Mesaba Energy Project based on interconnection studies ongoing, planned, and anticipated. Draft EIS Sections 2.3.1.5 and 2.3.2.5 for the West Range and East Range Sites, respectively, described the alternative alignments and required upgrades for HVTL corridors from the plant sites to the POIs. The scope of the EIS did not extend to the power distribution system beyond the respective POIs due to the uncertainties surrounding the MISO interconnection studies and the fact that planned expansions to the regional transmission system did

**Comment 116-15 (cont'd)**

not account for the rapidly changing circumstances associated with expansions to the industrial mining/manufacturing base on the Iron Range.

Section 2.2.2.4 (Volume 1) of the Final EIS has been updated to describe the current status of the interconnection studies underway or in the queue at MISO. Those studies must be completed before the potential environmental impacts of required upgrades down-network from the POIs can be determined with any certainty. In most cases involving physical changes to the HVTL network, the PUC would require a HVTL routing permit application, which would trigger MDOC's preparation of an EIS to address specific routes, proposed actions, and potential impacts.

See response to Comment 80-20, which addresses the same concern.

**Comment 116-16**

The statement in question – “however, no other public approvals would be needed” – refers to additional public approvals on the agreements/contracts between Excelsior and the rail companies. As listed in Chapter 6 of the Draft EIS (Volume 1), Excelsior is required to obtain a CWA Section 404 permit for the discharge of dredged and/or fill material in any jurisdictional wetlands and waters of the U.S., which includes the construction of the rail connection and/or improvements to associated railway structures. The USACE is the regulatory agency with the responsibility of authorizing these actions. For clarification, text has been revised to the effect: “The plans for connecting the BNSF and/or CN with the Mesaba Generating Station on the West or East Range Sites would require plan approvals from the respective companies. No other public approvals would be required for the interconnection itself; however, the construction of the rail line would require permits, such as a Section 404 permit from the USACE for dredging or filling waters of the United States.”

**Comment 116-17**

The labeling of HVTLs for the East Range Site in Section 2.3.2.5 of the Final EIS (Volume 1) has been revised to provide better correspondence between the lines and alternatives in the text and illustrations.

**Comment 116-18**

DOE has revised the second sentence in the first paragraph of Section 3.7.2 of the Final EIS (Volume 1) to read: “Under Section 404 of the Clean Water Act, a USACE permit is required for the discharge of dredged or fill material into waters of the U.S.”

**Responses**

**Comment 116-19**

The third paragraph in Section 3.7.2 of the Draft EIS has been deleted in the Final EIS (Volume 1).

**Comment 116-20**

DOE has removed the following sentence in Section 3.7.2 of the Final EIS (Volume 1): “The majority of wetlands identified in each alternative site have a connection to interstate commerce; however, some wetlands appear to be isolated.” DOE acknowledges that USACE will make determinations about jurisdictional wetlands based on its review of the final wetland delineation reports.

**Commenter 116 – Robert J. Whiting**

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116-21  
(cont'd)

to be present in order for an area to qualify as a jurisdictional wetland,” for the same reasons given above.

116-22

20. Pages 3.7-8 through 3.17-15, The tables summarizing the wetlands on the west and east sites and corridors do not appear to be comparable summaries. For example, the West Range site tables indicate “Summary of Delineated Wetlands” and break down the plant site and associated corridors separately. While the East Range site tables indicate “Wetland Types” and include the plant site and associated corridors in one table. It is not clear if the East range site data is from on site delineation or gathered from desktop spatial tools. In addition, Table 3.7-5 - 565.13 acres of Wetland Type 2/3/4/6/7/8, is this one large wetland complex?

116-23

21. Section 4.7 Wetland Impacts DEIS and Pages 4.7-30 and 4.7-31. There are numerous references and tables on wetland impacts throughout the DEIS, however, it is difficult to understand the full magnitude of wetland impacts.

For example, Tables 4.7-21 and 4.7-22 include “Summaries of Total Temporary and Permanent Wetland Impacts” for the two sites.

- a. The tables do not identify the applicant’s preferred alternatives.
- b. The tables do not include corridor clearing impacts for the HVTL Alternative which are approximately 30.21 acres, according to Table 4.7-3.
- c. Please clarify Temporary/Permanent and Permanent/Permanent.
- d. What are the temporary impacts for the roads identified in the tables?
- e. Temporary ROW/Permanent Impacts in ROW do not appear to be included in the summary impact numbers. For example, the 26.45 acres of impacts under Rail Alternative 1A are secondary clearing impacts within construction limits. Footnote 3 states that the temporary impacts are actually permanent impacts which should be included in the permanent impacts for mitigation purposes. This is misleading.
- f. Are a majority of these temporary impacts actually secondary or indirect impacts that would be considered permanent? The Corps is inclined to look at one total impact number that includes all direct, indirect/secondary and temporary impacts.
- g. Based on our estimates, total impacts for the West Range Site could be approximately 240 acres.
- h. Due to these difficulties, the Corps is unable to utilize the information in the DEIS for consideration in determining the LEDPA.

116-24

22. Appendix D4 – Cumulative Assessment for Wetlands

The tables in Appendix D4 appear to be a more comprehensive list of the total wetland impacts for the sites (although it also appears that some impact numbers have changed). This assessment is presented by impacts by wetland type, which should be a part of the main analysis in the text of the DEIS.

While the Corps agrees that the assessment should be based on watershed boundaries, it appears that the Cumulative Assessment for Wetlands identifies two study areas and delineates “watersheds” that are not listed or established by MnDNR or USGS. The Corps recommends that the study be based on established watersheds.

## Responses

### Comment 116-21

DOE has revised the second paragraph in Section 3.7.4.3 of the Final EIS (Volume 1) to read: “The field investigations identified areas meeting wetland criteria as defined in the USACE Wetland Delineation Manual (USACE, 1987) herein referred to as the ‘1987 Manual.’ Determination of the wetland/upland boundary was accomplished using the three-parameter approach (hydrophytic vegetation, hydric soils and wetland hydrology) as outlined in the 1987 Manual.”

### Comment 116-22

DOE has updated Table 3.7-4 in the Final EIS to reflect only delineated wetlands within the East Range Site, including the breakdown of the 565.13 acre wetland, and has added a new table reflecting only delineated wetlands within utility and transportation corridors for the East Range Site. This change provides comparable summaries for the West and East Range Sites. The East and West Range Sites were delineated as stated in the last paragraph of Draft EIS Section 3.7.4.3 (Volume 1): “A two-person team of wetland scientists delineated boundaries of the wetlands. Up to four teams were used to delineate the wetlands at the West Range Site and one two-person team delineated the wetland boundaries at the East Range Site. Access to the East and West Range was conducted by foot and/or by all-terrain vehicles.” This language remains in the Final EIS.

### Comment 116-23

DOE has revised tables 4.7-33 and 4.7-34 in the Final EIS to more clearly define the anticipated permanent and temporary impacts of the project alternatives. This includes: (a) identifying the preferred alternatives; (b) including type conversion impacts in utility corridors; (c) clarifying temporary vs. permanent impacts; and (d) clarifying temporary road impacts.

### Comment 116-24

DOE has revised the summary tables within Section 4.7 and Appendix F2 of the Final EIS to display wetlands impacts by type. DOE has made the appropriate modifications to the Cumulative Impacts Analysis in Section 5.2.5.



## Responses

### Comment 116-25

Additional information has been gathered to resolve discrepancies between the methodologies used in the Mesaba Energy Project Cumulative Impacts Assessment and in the Minnesota Steel Cumulative Impacts Assessment. Revised data and analysis within the EIS document include habitat mapping to level 3 under the Gap Analysis Program data and, comparably, level 4 of the ECS to match the analysis provided in the Minnesota Steel EIS. Section 5.2.6 (Volume 1) has been updated with this data and a revised analysis has been conducted to maintain consistency between the Mesaba EIS and the Minnesota Steel EIS.

DOE has included ECS and species assemblages that utilize the habitats within the ECS subsections in the biological resources sections of the Final EIS.

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### 23. Appendix D5 - Cumulative Impact Assessment- Wildlife Habitat

In reference to Comment #107 in our February 2007 comments, the Corps wishes to clarify that the request to compare the Cumulative Assessment for the Mesaba Project with the Minnesota Steel Cumulative Assessment was meant to center on a comparison on the methodology used in the MSI assessment.

A letter to DOE dated July 18, 2006, outlined our comments to the DOE's approach for the cumulative impacts analysis for the EIS. With this letter, we attached the April 2006 Cumulative Impact Assessment Approach developed for the proposed mining projects. In our letter, we recommended that the scope of work for this study be adopted by DOE for the Mesaba project.

During a conference call on 3/5/07 regarding the wetland and biological resources sections of the DEIS, the Corps discussed the need to incorporate the same scope of work and incorporate the Ecological Classification System (ECS) and species assemblages that utilize the habitats within the ECS subsections. We forwarded several sections of the ECS and ECS subsection reports and the report "Tomorrow's Habitat for the Wild and Rare – An Action Plan for Minnesota's Wildlife". The Corps continues to recommend that the DOE adopt a similar scope.

116-25

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Mesaba Energy Preliminary Draft EIS Comments  
by U.S. Army Corps of Engineers Regulatory Branch, St. Paul District  
February 23, 2007

General comments:

1. The traditional format of affected environment and environmental consequences is more difficult to review than the updated format of combining the affected environment and consequences by resource. If possible, suggest updating the format to make the EIS easier to review.

**116-26** | 2. I couldn't find any discussion in the DEIS of USFS review requirements.

3. As the lead federal agency, the Corps would like to arrange for the DOE to satisfy NHPA Section 106 and ESA Section 7 requirements for both agencies.

**116-27** | 4. A reasonable alternative would appear to be a phase 1 project only. It appears to satisfy both the DOE and MN purpose & need statements, and would be less damaging to the aquatic environment. Please address this alternative.

5. If the improvements to County Road 7 that are associated with the proposed project would be federally funded, then FHWA should also be involved in the preparation of the EIS.

6. Impact criteria were established for some but not all resources evaluated. Sometimes the criteria were used to designate an impact, sometimes to designate an adverse impact, and sometimes it was used to identify significant impacts. What was the rationale for providing these impact criteria, what is their source, and why were they established at different levels and sometimes not at all for the various resource categories in the EIS?

7. Recommend coordinating the preparation of the EIS with the STB if the proposed new rail line would require their approval.

**116-28** | 8. Based on the wetland impact acreage in the EIS, the East Range site appears to be less damaging to the aquatic ecosystem than the West range site. The 404(b)(1) guidelines specifically require that "no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences" (40 CFR § 230.10(a)). This means that between these two sites, the East Range site would be the least environmentally damaging practicable alternative (LEDPA), causing the West Range site to fail to meet the CWA Section 404(b)(1) guidelines. Consequently, Excelsior must either a. demonstrate that the East Range site would be more damaging to the aquatic ecosystem than the West Range site, b. demonstrate that the East Range site would have other adverse environmental consequences that exceed the West Range site impacts, or c. demonstrate that the East Range site is not a practicable alternative.

**Responses**

**NOTE: As indicated in Comment 116-03, USACE referenced certain comments that were submitted in February 2007 prior to publication of the Draft EIS as requiring further consideration by DOE. Only the comments listed in Comment 116-03 have been assigned numbers and responded to in the following pages. In consultation with USACE, DOE concluded that comments not indicated in Comment 116-03 and not assigned numbers in the following pages were addressed to USACE's satisfaction in the Draft EIS as published.**

**Comment 116-26**

The USDA Forest Service has participated as a cooperating agency for this EIS as stated in Section 1.1 (Volume 1): "As a Federal Land Manager, the USDA Forest Service has an affirmative responsibility to protect air quality-related values of wilderness areas. Accordingly, the USDA Forest Service, as a cooperating agency, provides technical expertise in the review of air quality impacts." This language remains as presented in the Final EIS.

**Comment 116-27**

See response to Comment 116-05, which addresses the same concern.

**Comment 116-28**

DOE recognizes that USACE will not issue a CWA Section 404 permit unless Excelsior can demonstrate that the proposed site represents the LEDPA, as determined by USACE. DOE understands that USACE will make the LEDPA determination based on wetland impacts while taking into consideration impacts to other environmental resources and local communities.

The avoidance and minimization analysis and discussions in the Final EIS have been substantially expanded, and new rail and road alternatives developed (see Section 2.3 [Volume 1] of the Final EIS) in order to reduce direct and indirect wetland impacts, especially at the West Range Site. Additional explanations of the potential for indirect impacts to wetlands have also been added as appropriate to the Final EIS.

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**Responses**

**116-29**

9. Corps staff are still working with Excelsior representatives on the alternatives analysis needed to satisfy Corps NEPA and 404 requirements. Corps comments recently submitted to Excelsior regarding Corps NEPA and 404 requirements are attached for your information. We would like the DOE to include the supplemental information prepared by Excelsior in an appendix to the EIS.

**116-30**

10. We have substantial concerns with the water resources, wetlands, and biological resources sections of the EIS, and would like to have a teleconference with the DOE and preparers of the EIS to facilitate the preparation of constructive comments on these sections.

Specific Comments:

**Section 1, Purpose and Need:**

11. P. 1-3, line 3: Please change "requested" to "agreed" to be a cooperating agency.

12. P. 1-3, line 11: please add, after the description of a cooperating agency, the following: "In the case of the Corps of Engineers, they are a cooperating agency because the placement of dredged or fill material in Waters of the U.S., including wetlands, associated with the proposal would require their authorization pursuant to Section 404 of the CWA. The Corps is participating in the preparation of the EIS from a regulatory perspective. In their role as a cooperating agency, Corps staff have provided input regarding potential aquatic resource impacts and related regulatory requirements."

**116-31**

13. P. 1-4, line 25/29: The EIS states that applications were "evaluated against programmatic criteria ....appropriateness of proposed site..including permits..." What were the programmatic criteria related to CWA Section 404 permit requirements?

**116-32**

14. P. 1-5, line 9/11: The EIS states that DOE reviewed preliminary environmental information during the selection process, pursuant to NEPA. How was this done? Were the preferred and alternate site subjected to the preliminary environmental review? If so, was the extent and magnitude of aquatic resources a consideration in this review?

15. P. 1-5, line 30: change "federal government" to "DOE" since there is more than one federal agency associated with the proposal.

16. p. 1-6, line 5: please change "government" to "DOE"

17. p. 1-6, line 21/22: "analysis of... proposed action and reasonable alternatives" appears to be a poor choice of words, given our understanding of the DOE position that it cannot evaluate alternative sites, regardless of whether they are reasonable, if they are not proposed by the applicant.

**Comment 116-29**

The supplemental information requested by USACE in its comment submitted February 23, 2007 was provided by the project proponent and included in Appendix F1 (Volume 2). A corrected and updated version of Appendix F1 has been included in the Final EIS.

**Comment 116-30**

DOE discussed these issues with USACE representatives in a teleconference on March 5, 2007, before publication of the Draft EIS. In addition, DOE had meetings with the USACE on July 23, 2008 in Washington, August 7, 2008 in St. Paul, and September 3, 2008 in Bemidji and has had numerous phone calls and email exchanges to clarify feedback from the USACE.

**Comment 116-31**

This EIS is a post-selection document. Programmatic criteria are described in Section 1.2 (Volume1). The criterion of "Project Feasibility" covers the appropriateness of proposed site(s).

**Comment 116-32**

DOE explained to USACE how the information supplied by submitters under CCPI, including site information, was considered in its environmental review.

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**116-33**

18. p. 1-7, line 22/29: Corps staff have worked with Excelsior representatives to arrive at an appropriate project purpose relative to Corps NEPA and CWA section 404 requirements. As previously noted, we ask that this information be supplied as part of the EIS, in an appendix. Please add the following or a similar statement to page 1-7: "In consultation with Corps Regulatory staff, Excelsior has developed a purpose and need statement to satisfy Corps NEPA and CWA section 404 requirements. This project purpose, provided in Appendix X, will be carried into the CWA section 404 permit evaluation, and will be the basis for the alternatives analysis required by Corps and EPA regulations."

19. P. 1-8, line 27/30: please take into account the purpose & need documentation prepared by Excelsior subsequent to this draft, and revise accordingly.

20. P. 1-9, line 15/19: Suggest moving this text to the socioeconomics portion of the EIS.

21. p. 1-10, line 20/22: Based on conversations with Excelsior, suggest revising the statement to be more clear that the PUC does not exercise eminent domain until they have approved a site. This is important in terms of practicable alternatives.

22. P. 1-10, line 29: The statement "considering... of, and reasonable alternatives to, their proposed action" appears to be a poor choice of words, given our understanding of the DOE position that it cannot evaluate alternative sites, regardless of whether they are reasonable, if they are not proposed by the applicant.

23. p. 1-11, line 5/6: incomplete sentence

24. P. 1-11: Please add the following discussion about the EIS: " CWA section 404 authorization is required for the proposed project because its construction would require discharges of dredged and/or fill material into waters of the U.S. As a cooperating agency in the preparation of the EIS, and the agency responsible for determining whether to issue a permit for wetland impacts associated with the proposed project, it is the Corps intention to adopt the EIS as part of its permit evaluation."

25. P. 1-21, line 9: The Corps was invited and agreed to be a cooperating agency. Please change "requested" to "agreed"

26. P. 1-28, line 30: The EIS states that the task force recommended constraining the cumulative impact analysis to only those proposed projects that are permitted. This may be more restrictive than current guidance regarding the assessment of reasonably foreseeable activities.

27. P. 1-29, line 4: please change "federal government" to "DOE"

28. P. 1-29, line 20: Based upon our understanding of the national approach taken by the FHWA in evaluating alternative solutions for federally funded highway projects in

**Responses**

**Comment 116-33**

DOE included the following statement beginning on the first line of page 1-7 of the Draft EIS (Volume 1): "In consultation with USACE regulatory staff, Excelsior has developed a purpose and need statement to satisfy USACE NEPA and CWA Section 404 requirements. The project purpose, provided in Appendix F1 and stated below, will be carried into the CWA Section 404 permit evaluation, and will be the basis for the alternatives analysis required by USACE regulations." The Final EIS was revised to include similar language in new Section 1.4.3 (Volume 1).

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their NEPA analyses, the statement made in the EIS regarding DOE's limited ability to evaluate alternatives is difficult to understand. The Corps, as a permitting agency, has the same type of obligation, with 3 options: 1) issue permit for the requested action, 2) issue permit with special conditions/modifications, or 3) deny permit. However, Corps regulations at 33 CFR 325 require the Corps to evaluate alternatives beyond those proposed by the applicant. Corps staff have worked w/ Excelsior reps regarding an appropriate alternatives analysis. Please add the following to this section: "At the request of Corps staff, Excelsior has prepared an alternatives analysis intended to satisfy Corps NEPA and CWA Section 404 requirements. This supplemental alternatives analysis is provided in appendix X"

29. P. 1-29, line 30: Please change "obtain the required permits from the state" to "obtain all required state and federal permits"

**Section 2:**

30. p. 2-1, line 26: Please change "state agencies" to "state and federal agencies"

31. p. 2-1, line 29: 2 potential scenarios are listed for the no action alternative. What about a 3rd alternative: Mesaba energy project modified to meet state & federal permit requirements.

32. P. 2-2, line 1/8: I don't understand why proceeding with the project as proposed would be part of the no action alternative.

33. P. 2-2, line 8: Due to the Corps Regulatory scope of analysis, a federal EIS would be required as part of CWA section 404 permit evaluation.

34. P. 2-2, line 13/19: Please add the following to this section: "However, to satisfy Corps NEPA and CWA Section 404 requirements, Excelsior has prepared an analysis of alternative sites within the TTRA. This supplemental alternatives analysis is provided in appendix X"

35. P. 2-2, line 20/23: A reasonable alternative would appear to be a phase 1 project only. It appears to satisfy both the DOE and MN purpose & need statements, and would be less damaging to the aquatic environment. Please address this alternative.

36. P. 2-3, line 16: what is meant by "in conformance with MN statutes" would it be against MN statutes to site a plant outside the TTRA?

37. P. 2-4: Excelsior has indicated in its alternatives analysis that more coal would be burned at the East Range site than the West Range site. Table 2.1-1 shows the same amount at both sites.

38. P. 2-5, line 25: It is our understanding that the current proposed sites would not meet the criteria in the 2003 legislation, which was amended in 2006 to allow utilization

**Responses****Comment 116-34**

See response to Comment 116-05, which addresses the same concern.

**116-34**

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of the preferred or alternate site. In 2003, the Minnesota Statute required the site to be located in the TTRA on a previous mining or industrial site, have direct rail access to a Great Lake Port, and have onsite access to railroad infrastructure. The 2006 modifications to the statute deleted the requirement that the site be on previous mining or industrial site but still within the TTRA and changed the railroad access to existing railroad infrastructure within three miles of the site. If this is the case, then in the interest of full disclosure, this distinction should be made in the document.

39. P. 2-9, line 2: Please delete "for the federal proposed action" since there is more than one federal action associated with the proposal.

40. p. 2-20, line 4-18: Technology is available for CO<sub>2</sub> capture – Please explain why CO<sub>2</sub> is not included in the project as a reasonable measure to reduce impacts.

116-35 | 41. p. 2-27: The EIS states that the ZLD will be used at either site, and will be enhanced at the East Range site to treat cooling tower blow down. This option should also be evaluated for the West Range site as well. Please see also our comments on the Water Resources Section.

42. p. 2-28, line 17: typo, power vs. powder

116-36 | 43. p. 2-29 line 3: Since a FSQ would have less impact, please explain why it is not practicable.

116-37 | 44. p. 2-33: Please explain the contents of the MISO reports and impact studies and what their findings mean for the practicability of the proposed project. What overall network upgrades or new transmission system infrastructure is necessary in order for the project to deliver output or be designated as a network resource?

45. p. 2-36 line 3: The EIS states that air emissions would be independent of the site, but the analysis shows more PM<sub>10</sub> emissions at the East Range site.

116-38 | 46. p. 2-36 line 16-19: Were truck and train emissions analyzed?

116-39 | 47. p. 2-62 line 1: The EIS states that rail route 1-A is preferred due to less impact, but it shows 77 acres wetland impact vs. 64 acres of impact for route 1-B. For route 1-A to be permissible, the applicant would need to demonstrate that it is the least environmentally damaging practicable alternative.

116-40 | 48. p. 2-69 line 26: Alternative 2 for wastewater treatment appears to be the least environmentally damaging practicable alternative.

116-41 | 49. p. 2-78: Rail alternative 2 at the East Range site appears to be the least environmentally damaging practicable alternative.

## Responses

### Comment 116-35

See response to Comment 116-13, which addresses the same concern.

### Comment 116-36

DOE included the following text in the sixth paragraph on page 2-27 of the Draft EIS (Volume 1): "Operating in fully slurry quench mode would result in reduced fuel use and, consequently, reduced pollutant emissions/discharges, and Excelsior intends to operate the Mesaba Energy Project in the more-efficient full slurry quench mode to the extent feasible. However, full slurry quench is an IGCC design improvement that is subject to further engineering and verification by experience at the Wabash River Plant. Therefore, to avoid unrealistic expectations, neither the maximum resource requirements nor maximum pollutant emissions/discharges operating under full slurry quench are considered in this EIS." This text has been retained in the Final EIS (Section 2.2.2.1, Volume 1).

### Comment 116-37

See responses to Comments 80-20, 116-14 and 116-15, which address the same concerns.

### Comment 116-38

Sections 2.2.3.1 and 4.3.2 (Volume 1) of the Final EIS have been updated to include a subsection with discussions regarding truck and train emissions associated with the Mesaba Energy Project (also see response to Comment 12-01 which addresses the same concern). Emissions from coal unloading and loading from trains are not expected to appreciably change air quality because emissions would be reduced by minimizing unenclosed points of material transfer components, enclosing conveyors and loading areas, and installing control devices such as baghouses and wetting systems.

### Comment 116-39

See response to Comment 116-28, which addresses the same concern.

### Comment 116-40

As stated beginning on the first line of page 2-61 of the Draft EIS (Volume 1): "Excelsior prefers Alternative 2 for treatment of domestic wastewater from the Mesaba Generating Station because it would avoid discharging treated domestic effluent upstream of public waters impaired for DO and nutrients." This text has been retained in the Final EIS (Section 2.3.1.3, Volume 1).

### Comment 116-41

See response to Comment 116-28, which addresses the same concern.

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50. p. 2-84 line 12: The EIS states that there is a significant cost of increased ZLD on East Range site. Does the applicant consider this a factor in the practicability of this site?

**Sections 3 and 4**

Affected environment and environmental consequences were briefly reviewed consecutively by resource. Comments are provided in that sequence. Due to the brief review, lack of comment does not constitute agreement with the content of the EIS. Corps Regulatory staff will likely have additional comments upon a more thorough review of the EIS.

**Aesthetics (3.2/4.2)**

51. P. 4.2-9 line 7: Regarding the GIS visibility analysis of emissions, I don't understand figures 4.2-1 & 4.2-2

**Air (3.3/4.3)**

52. p. 3.3-2 shows a wind rose for West range site. Is there a wind rose for the East range site?

53. p. 3.3-6: Please explain the concept of class I and Class II areas. These are not defined in the glossary.

54. p. 3.3-7: Does the applicant view the closer proximity of the East Range site to the Class I areas as a consideration in the determination of the least environmentally damaging practicable alternative?

**116-42** | 55. Section 4.3: Please address any aquatic resource impacts associated with mercury deposition.

**116-43** | 56. p. 4.3-7: It does not appear that construction emissions were calculated. Why?

**116-44** | 57. p. 4.3-8: Were train and vehicle emissions analyzed with the other emissions, to arrive at total emissions?

**116-45** | 58. p. 4.3-9: The EIS states that plumes will rise to significant heights, several thousand feet. Was this modeled in the visual impact analysis?

59. 4.3-9 line 25 refers to high concentration of dissolved solids in source water. Please provide a complete set of water quality data to allow a comparison of eastern and western site water sources.

60. 4.3-33 Summary indicates the East Range will not comply with PM10. However, this section indicates it can be mitigated through the installation of control technology (pg.4.3-32). Does "mitigation" mean "compliance?"

**Responses**

**Comment 116-42**

Impacts to aquatic resources associated with mercury emissions from the power plant are discussed briefly in Section 4.3.2.6 of the EIS (Volume 1) with more detail on the risks associated with the fish ingestion mercury-exposure pathway in the Section 4.17, Safety and Health (Volume 1). The Final EIS has been revised to insert a missing sub-section heading (in printed copies of the Draft EIS) "4.17.2.3 Human Health Risks" for the text that addresses human health risks associated with air pollutants (including mercury emissions) from the project.

**Comment 116-43**

Vehicle traffic emissions during peak construction were calculated and presented in Section 4.3.2.2 of the Draft EIS (Volume 1). However, emissions from other construction-related activities, such as site grading and soil movement, were not calculated. The qualitative assessment of the impacts from these activities is based on similar types of construction activities, and it was determined that the emissions would be small compared to the regulatory threshold used to determine the need for further impact analysis.

**Comment 116-44**

See response to Comment 116-38, which addresses the same concern.

**Comment 116-45**

The visual impacts of the cooling tower plume are discussed in Section 4.2.2.2 of the Final EIS (Volume 1). The plumes from the cooling towers would consist of water vapor and are expected to be similar to small cumulus clouds and their presence will be dependent on the time of the year, the rate at which coal is being processed into syngas, and the rate at which syngas or natural gas is being consumed in the combustion turbines.

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116-46 | 61. p. 4.3-18: The EIS states that there would be no significant visibility impact. However, in the comparison between the East Range site and the West Range site (p. 4.3-23), would the applicant consider visibility to be a factor in determining the least environmentally damaging practicable alternative?

62. p. 4.3-21, line 16: The EIS states that predicted CO<sub>2</sub> impacts are slightly lower for the East Range site, but elsewhere it says that emissions are independent of site, and on another page it says they are the same except for CO<sub>2</sub>. Please edit for consistency.

116-47 | 63. p. 4.3-23 line 6: What is the USFS position relative to the estimate that on 40 to 60 days per year there will be greater than 10% reduced visibility in the BWCA post-project?

64. p. 4.3-29: was the Excelsior carbon capture plan included as an appendix?

116-48 | 65. p. 4.3-30: The section on mercury deposition does not discuss any predicted human or environmental impact of the mercury emissions associated with the proposed project? Please include this discussion in the EIS.

### Geology (3.4/4.4)

66. p. 3.4-24: Does the CO<sub>2</sub> sequestration plan indicate whether it would be practicable to sequester CO<sub>2</sub> from the proposed project at the sites evaluated in the plan?

### Water Resources (3.5/4.5)

67. Please address the alternative of sending cooling tower blowdown to the local wastewater treatment plant.

68. Please address the alternative of treated wastewater as a water supply.

116-49 | 69. Please address any fisheries impacts that may be associated with water withdrawals from the potential sources of water supply at both the West and East site.

70. Please provide equivalent information together to allow comparisons between sites. If equivalent information is not available, that should be stated. For example:

- a. Table 3.5-8 provides sustainable flow information for the east site (determined adequate for phase I and II), but this information is not provided in this section for the west site. It would be beneficial to place this table next to table 2.3-5. The sustainable flow information for the west site is located in the environmental consequences section at pages 4.5-8 and 9.
- b. A comprehensive list of water quality data for the west site is provided in table 3.5-4. This information is not provided in the section for the east site.

## Responses

### Comment 116-46

DOE's statement in the DEIS reflects DOE's understanding of the known conservatism in the FLAG 2000 guidance on modeling visibility impacts and the proponent's analysis of the actual meteorological circumstances attending times when significant visibility impacts were modeled.

Therefore, although the actual impacts in some circumstances are deemed to be insignificant because of natural conditions, the modeled impacts are not. Given that the FLMs will use modeling results on which to base their initial findings of an adverse impact to visibility, DOE expects that USACE which has the responsibility for making a LEDPA determination, will consider modeled visibility impacts as a factor. However, to respond to the specific question in this comment, DOE understands that Excelsior also considers visibility impacts a factor in determining the LEDPA.

### Comment 116-47

The USDA Forest Service considers the modeled visibility impacts to the nearby Class I areas described in the Draft EIS as significant. See responses to Comments 49-01 and 49-11, which address concerns from the MPCA and the Forest Service regarding the visibility modeling.

### Comment 116-48

Predicted human and environmental impacts of mercury emissions from the power plant are discussed in the Section 4.17, Safety and Health, of the EIS (Volume 1). The Final EIS was revised to insert a missing sub-section heading (in printed copies of the Draft EIS) "4.17.2.3 Human Health Risks" for the section that addresses human health risks associated with air pollutants (including mercury emissions) from the project.

### Comment 116-49

The following text has been added to Section 4.8 (Volume 1) to address potential effects of water withdrawals on fish populations:

"Large quantity water withdrawals for plant process water requirements could alter lake or stream temperatures and reduce the quality and quantity of aquatic habitat. Consequently, this could impact the lake or stream's ability to support certain types of fish, potentially leading to a decline in biodiversity in source waters for the project. Significant water level reductions could interfere with lake trout natural reproduction, as this species deposits eggs in the fall on boulder or cobble habitats in depths usually less than 40 feet and incubation lasts 4 to 6 months after spawning (Snyder and Oswald, 2005). Refer to Section 4.5, Water Resources (Volume 1), for surface water withdrawal predictions."



**Commenter 116 – Robert J. Whiting**

Mesaba PDEIS Comments  
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71. Refer to Table 3.5-1. Regarding mercury FCA impairment: It should be stated here and elsewhere, that surface water bodies not listed as impaired simply may not have been tested. This is particularly important considering the prevalence of mercury fish consumption advisories in the immediate area and regionally.

72. Page 4.5-1, Method of Analysis. The determination or evaluation of whether a “significant impact” will occur is based on subjective and vague terms or conditions. This section needs attention.

- a. “Substantially change capacity”. How is this measured? A challenge for siting the plant was finding adequate water sources. At the west site, it is not clear there will be available sources for phase I and II. It has not been determined if this will substantially affect water withdrawal opportunities for future users?
- b. “Contaminate surface waters” such that water quality no longer meets applicable water quality standards. Would this include an evaluation of compliance with the state’s non-degradation standard? It is suggested the statement be reworded to, “modify surface waters”.
- c. “Change stormwater discharges affecting drainage patterns...” It is difficult to describe a human caused disturbance that does not have this effect.
- d. “Contaminate... listed protected water bodies”. We are unsure what this “list” might include. However, the Canisteo Mine Pit contains lake trout with documented natural reproduction. A waterbody with status as a “lake trout water” might receive special protection in MN law and regulations. For example, it is understood MN is reviewing their water quality standards and have proposed modifications to the phosphorous and mercury standards. The most stringent standards would be applied to lake trout waters. It is recommended you change “contaminate” to “modify”.

73. p. 4.5-1: The Region of Influence for surface water resources should be appropriate sized subwatershed basin(s) encompassing the project site and right of ways.

74. 4.5-3, line 3. It is stated that the impaired status of waterways, due to mercury, is a result of levels found in the surface water. It should be clarified that impairment is a result of levels found in fish flesh.

75. 4.5-3, line 11. Explain in detail why an increase in the concentration of phosphorous and mercury has no deleterious effects. Explain how this is acceptable under the state nondegradation water quality standard.

76. 4.5-3, line 15. The west site requires the development of a water management plan to ensure the facility will maintain compliance with mercury water quality standards and to manage phosphorous levels. A brief conceptual plan should be included in the document to allow a prediction of effects to the aquatic environment.

**Responses**

**Comment 116-49 (cont’d)**

Potentially affected fisheries are the CMP and Prairie River on the West Range and Colby Lake and White Water Reservoir on the East Range. Withdrawals from the Prairie River may not be necessary and would be less than the state limit of 25 percent of 7Q10 flows, which is set to protect the river from excessive withdrawals (see response to Comment 82-43). As part of the water appropriation permit process, the project proponent would be required to provide further hydrologic modeling to ensure that the Mesaba Generating Station would not result in any significant adverse impacts to regional water resources at both the West Range Site and East Range Site. New text has been added to Sections 4.5.3.1 and 4.5.4.1 (Volume 1) which discusses potential impacts on water level fluctuations as a result of water appropriation during the proposed facility’s operation at the West and East Range Sites, respectively.

**Comment 116-50**

As discussed in response to Comment 116-13, the enhanced ZLD system at the West Range Site would not discharge any process-related wastewaters or non-contact cooling tower blowdown and, therefore, eliminates the concerns regarding discharge of pollutants posed by this comment.

116-50

**Commenter 116 – Robert J. Whiting**Mesaba PDEIS Comments  
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**Responses**

- 116-51** 77. 4.5-3, line 20-33. Evaporative losses of water are approximately 3,500 gpm for each phase (7,000 gpm total). Explain the overall effect of this water loss in the subwatershed. Provide a discussion of the water balance impacts, diversions, long-range trend and effects, anticipated or projected hydrological effects to downstream waterways, wetlands, and potential subsequent impacts to biota.
- 116-52** 78. 4.5-6, line 30. The west site is preferred because of “abundant sources of water”. However, it does not appear that the status of available and sustainable water supplies at the west is fully determined (inflow rates/volumes to the mine pits is not clearly known). Additionally, the western site water source includes withdrawals from the Prairie River, which will result in an aquatic resource impact. Provide a discussion of the overall water balance and impacts at the west site.
- 116-53** 79. 4.5-6, it is not clear what effects the withdrawal will have on water levels in the pits or the withdrawal impact to biota and recreation. Provide commentary on maximum withdrawal allowances or anticipated restrictions.
- 116-54** 80. 4.5-6, use of ZLD at the west site would significantly reduce water needs and would possibly reduce the need to withdraw from the Prairie River. More dramatically, this eliminates the discharge of mercury and phosphorous to surface water. Please discuss.
- 116-55** 81. 4.5-15 indicates a transfer of water from the CMP to Holman Lake is necessary to control water level and/or to maintain water quality standard compliance for solids. Previous information indicates that facility water usage would control the water level (is the Prairie River needed as a water source?) in the CMP. In addition, this indicates there will be a reliance on groundwater inflows to the pit to control or “dilute” the buildup of solids. ZLD would eliminate this requirement and would not modify water quality for solids, phosphorous or mercury. 4.5-15 indicates the discharge to CMP will require a mixing zone to comply with TDS and conductivity limits. Will the pit water quality degrade over time for TDS and conductivity, and will that affect the mixing zone or the effluent limits? The current water quality in the CMP for TDS (solids) and conductivity is well below the water quality standard (Table 3.5-4). What is the anticipated level of degradation that will occur in the pit? (anticipated effluent limits in table 4.5-6)
- 116-56** 82. p. 4.5-15: Regarding the transfer of water from one waterbody to another (e.g. CMP to Holman Lake, Prairie River to CMP), provide a discussion regarding the potential adverse effects of biota transfer or the controls that will prevent it.
- 116-57** 83. 4.5-17, line 9. The mass is the same, but concentration will increase. How does this relate to the non-degradation standard?
84. 4.5-25, line 27. This statement indicates water in the lake is suffering from “stagnation” and would benefit from flushing. Previously, Holman Lake has been described as meeting all applicable standards (i.e. is not impaired). The lake has no

**Comment 116-51**

Regarding impacts to water resources resulting from use of mine pit waters, for the West Range Site, new text has been added to subsection *Water Levels and Water Balance During Operations* (under Section 4.5.3.1, Volume 1). The new text also addresses pumping estimates for the CMP and potential impacts to Holman Lake (no discharge to Holman Lake would occur during normal operating conditions). In general, use of the enhanced ZLD system at the West Range Site would eliminate discharges and decrease water demand and, thus, reduce most of the water quality and quantity concerns discussed in the Draft EIS.

**Comment 116-52**

The quantity of water available within the West Range mine pits and the Prairie River is described in Section 3.5.1.1 of the Final EIS (Volume 1). The inflow rates used by the project proponent for the CMP are based on MNDNR monitoring that was conducted when water elevations in the pit were at relatively high levels. Although this method produces a net inflow rate, it produces a measurement that is, in the case of the CMP, considered to be conservatively low. Inflow rates for the HAMP Complex were determined on the same basis and provided to the proponent by the MNDNR. The basis for these computations is included as Appendix E to the Water Appropriation Permit Application.

Flow estimates for the LMP and the Prairie River were determined on a different basis and are discussed in Section 3.5.1.1 of the Final EIS (Volume 1). More information regarding the flow calculation for the LMP can be found in Table 1.12-15 of the project proponent's Environmental Supplement. In general, with the exception of the spring snow melt or torrential rains, the LMP continually overflows to the Prairie River. Available flow measurements include one measurement taken in the summer of 2005 and one taken in the winter of 2005; both measurements produced essentially identical flows.

Calculation of the 7Q10 for the Prairie River is provided in the project proponent's Water Appropriation Permit Application to MNDNR (Appendix F in the application) and discussed in subsection *Prairie River Intake* (under Section 4.5.3.1 [Volume 1]). While the status of water sources would not be 'fully determined' until a Water Appropriation Permit is issued, the amount of available water has been estimated on the conservative bases described above (i.e., the water sources are likely to be more abundant than these conservative assumptions indicate). New text has been added to subsection *Water Levels and Water Balance During Operations* (under Section 4.5.3.1, Volume 1),

**Commenter 116 – Robert J. Whiting**

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- 116-57 (cont'd)** residences but has a public park and recreational beach. Is it possible the discharge might have an adverse impact, including water quality degradation?
- 116-58** 85. 4.5-26, line 30. Indicates mercury concentrations in process water will be allowed to rise until such time it approaches the standard (limit), and then will be discharged. Is this problematic in terms of non-degradation requirements?
- 116-59** 86. Without the water management plan (discussed at 4.5-3, line 15), it is unclear how, when and why discharge points 001 and 002 will be operated.
- 116-60** 87. p. 4.5-33, process water alternatives: Where is the discussion of the impact of water level fluctuations on the affected water resource(s)?
- 116-61** 88. 4.5-34. Mercury water quality standard in GL basin is 1.3 ng/L, at the west site, it's 6.9 ng/L. However, MN also uses a human health based 0.2 mg/kg fish flesh level to assess water quality impairment. MN has proposed to establish a WQ standard based on the fish flesh criteria. Compliance with one mercury standard will not assure compliance with the other. (The Swan River is already impaired for mercury in fish flesh. It is not clear that the CMP, HAMP, Holman Lake, Panasa Lakes have actually been tested.)
- 116-62** 89. 4.5-35, line 7. This points out that the ZLD system is practicable.
- 116-63** 90. p. 4.5-35, line 12: The EIS states that there would be a significant cost increase associated with the ZLD on the East Range site. Does the applicant consider this a factor in the practicability of this site?
- 116-64** 91. 4.5-35, line 25. ZLD eliminates all direct pollutant discharges to surface waters with the exception of domestic wastewater. This suggests ZLD treatment is an essential component of the LEDPA, at the east or west site.
- 116-65** 92. 4.5-38, line 10. This indicates there would not be any restrictions or controls on reducing water levels at the east site.  
a. Are there any implications to aquatic life resources in the east site pits?  
b. Are there any implications to competing water users?  
c. Does this imply there would be restrictions on water levels in the CMP, HAMP, at the west site?
- Wetlands (3.7/4.7)**
- 116-66** 93. Please address the potential for reducing wetland impacts by running the rail loop around the plant instead of off to the side.
94. Wetlands community types should be discussed generally regarding the functions they provide. Types of functions provided by wetlands include flood storage, water quality, habitat and recreation. Methodologies, such as MNRAM (*Minnesota Routine Assessment Method for Evaluating Wetland Functions*), provide a basis for assessing

**Responses**

**Comment 116-52 (cont'd)**

which discusses impacts to water resources from use of the mine pit waters.

**Comment 116-53**

It is anticipated that withdrawal from the CMP would be restricted if water levels reached the 1,250 feet msl elevation range.

**Comment 116-54**

See response to Comment 116-50, which addresses the same concern.

**Comment 116-55**

See response to Comment 116-50, which addresses the same concern.

**Comment 116-56**

See response to Comment 116-50, which addresses the same concern. New text has been added to Section 4.5.3.2 (Volume 1) regarding new analysis on phosphorous levels in the CMP.

**Comment 116-57**

As discussed in response to Comment 116-13, the enhanced ZLD system at the West Range Site would not discharge any process-related wastewaters or non-contact cooling tower blowdown and, therefore, eliminates the concerns regarding discharge of pollutants posed by this comment. The section, *MPCA NPDES/SDS Permit for Cooling Tower Blowdown*, in which this statement was located has been revised and reference to "stagnation" of Holman Lake has been deleted.

**Comment 116-58**

See response to Comment 116-50, which addresses the same concern.

**Comment 116-59**

As explained in responses to Comments 6-01, 76-01, 76-02, and 76-13, the proposed use of an enhanced ZLD system at the West Range Site would eliminate the need for outfalls 001 and 002. MNDNR has proposed construction of an overflow device to regulate water levels in the CMP that would eliminate the need for the Mesaba Energy Project to provide an emergency outfall from the CMP pumping station to Holman Lake as initially discussed in the Draft EIS.

**Comment 116-60**

New text has been added to subsection *Water Levels and Water Balance During Operations* (under Section 4.5.3.1, Volume 1), which discusses impacts to water resources from use of the mine pit waters.

**Comment 116-61**

See response to Comment 116-50, which addresses the same concern.

**Commenter 116 – Robert J. Whiting**

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these functions. MNRAM includes characteristics for landscape features and criteria such as wetland integrity and diversity that are used to evaluate wetland functions. Wetland resources should be assessed using MNRAM. Given the difference in acreage impacts of the two alternatives, a functional assessment by community type is necessary to assess which alternative is the least damaging.

95. P. 3.7-1: The wetland definition from the CWA, as shown on this page, is different from the wetland definition provided in the glossary.

96. P.3.7-1/20: Suggest adding MPCA to list of regulatory agencies, since they are responsible for CWA Section 401 certification.

97. Section 3.7.3 Wetlands were classified under the USFWS Circular 39 system. The Corps of Engineers uses a system that classifies wetlands by wetland plant community type (Eggers and Reed, 1997- *Wetland Plants and Plant Communities of Minnesota and Wisconsin*). Please incorporate this classification system into the EIS.

98. p. 4.7-1, line 29: Please update the definition of fill.

**116-67** 99. p. 4.7-34, line 14: Corps Regulatory staff evaluate wetland loss by function, and therefore give much attention to wetland impacts by type. In determining necessary compensation for unavoidable wetland impacts, Corps staff often use an acreage-surrogate. Please revise this paragraph accordingly.

**116-68** 100. p. 4.7-35, line 14/19: As stated previously, Corps Regulatory staff evaluate wetland loss by function, and therefore give much attention to wetland impacts by type. Wetland mitigation ratios often due vary by wetland type impacted, particularly for losses of forested wetland that require decades to establish. Please revise this paragraph accordingly.

101. p. 4.7-35, line 20: At this time, the Corps cannot concur in the statement that the "proposed action has been designed to minimize impacts to wetlands wherever feasible."

102. p. 4.7-35, line 25: The EIS implies that mitigation for temporary impacts would not be required. Mitigation is often required for temporal wetland impacts.

**116-69** 103. p. 4.7-37, line 1: In this paragraph, the EIS indicates that mitigation is dictated by wetland value. As stated previously, Corps Regulatory staff evaluate wetland loss by function, and wetland mitigation ratios often due vary by wetland type impacted, due to lost functions. Please revise this paragraph accordingly.

**Biological Resources (3.8/4.8)**

**116-70** 104. Section 3.8/4.8 It does not appear that the EIS includes the following: a discussion of fishery or aquatic species resources or key habitat features in surface waters

**Responses****Comment 116-62**

See response to Comment 116-50, which addresses the same concern.

**Comment 116-63**

See response to Comment 116-50, which addresses the same concern.

**Comment 116-64**

See response to Comment 116-50, which addresses the same concern.

**Comment 116-65**

The East Range mine pits are on private property to which the public is not allowed access and the waters therein are not protected under Minnesota Law. As a result, no fishery has been encouraged or established within the pits. See response to Comment 76-31 and new text in Section 4.5.4.1 (Volume 1) on competing water users at the East Range Site.

Water levels in the CMP and Hill-Annex Mine Pit Complex would be controlled as discussed in Section 4.5.3.1 (Volume 1). Water levels in the CMP and Hill-Annex Mine Pit Complex would be controlled as discussed in response to Comment 76-12.

**Comment 116-66**

As noted in response to Comment 116-28 this alternative has, as have other rail alternatives, been evaluated and discussed in the Final EIS.

**Comment 116-67**

In response to this comment in February 2007, DOE revised Section 4.7.7.1 of the Draft EIS (Volume 1) as published. DOE has further revised paragraph 2 of Section 4.7.7.1 of the Final EIS to read as follows: "Special or protected wetlands as discussed above are not known to occur within the West Range Site or the East Range Site IGCC Station Footprint and Buffer Land or utility and transportation corridors. However, areas of tamarack and spruce bogs are located within the facility site and the utility and transportation corridors (Excelsior, 2006b). USACE regulatory staff evaluates wetland loss by function, and therefore gives much attention to wetland impacts by type. In the absence of more definitive information on the functions of a specific wetland site, a minimum one-to-one acreage replacement may be used as a reasonable surrogate for no net loss of functions. Wetland mitigation ratios often vary by wetland type impacted, particularly for losses of forested wetland that require decades to establish. Therefore, a more detailed analysis of wetland loss by function and actual mitigation ratios is addressed in this section."

**Commenter 116 – Robert J. Whiting**

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**116-70  
 (cont'd)**

(lakes, mine pits, streams/rivers) in and around the project areas; a discussion of invertebrate populations and habitat features in and around the project areas; an assessment of impacts to fishery resources or aquatic species habitat; an assessment of the potential for impacts such as mercury bioaccumulation in fish, the potential for biota transfer between water sources in the west range site or impacts to recreational fishing/angling activity.

105. Section 3.8/4.8: Discussions of biological resources, especially wildlife habitat should be based on an association of habitat community types and species use or reliance on habitats. Land cover types depict vegetative coverage and may not associate a habitat type and species use. The project areas should be described using an ecosystem classification system and assessed using methodology such as gap analysis. Gap analysis could be used to identify major habitat types or ecological features in the area and then add information regarding species occurrence. Focus could be placed on important critical habitats or species occurrences and potential impacts.

**Section 5.2.5 Wetland Cumulative Impacts**

106. As noted previously, Corps staff would like to discuss the wetland analysis with the DOE and EIS preparers.

**116-71**

107. The DOE cumulative impact analysis should be compared to the wetland cumulative impact analyses that have been prepared for the proposed MSI and Polymet mining projects located near the proposed Mesaba sites.

108. We are not familiar with Circular 39 types 80 and 90.

**Responses**

**Comment 116-68**

See response to Comment 116-67, which addresses the same concern.

**Comment 116-69**

This comment relates to a preliminary (prepublication) version of the Draft EIS; the text has subsequently been revised. See response to Comment 116-67.

**Comment 116-70**

Additional information has been added to Sections 3.8 and 4.8 (Volume 1) regarding fisheries and potential impacts to fisheries around the project areas. Information on invertebrate populations around the project area has been added to Section 3.8. Mercury bioaccumulation in fish is discussed in Section 4.8.2.2, as well as Sections 4.3 and 4.17 (Volume 1). A reference to Sections 4.3 and 4.17 is included in Section 4.8.2.2 to direct the reader for additional information regarding bioaccumulation of mercury. As discussed in Sections 4.5 and 4.8, the intake structures for process water pumping stations at the various mine pits would be designed to prevent the entrainment of fish species, which would preclude the transfer of live fish between surface waters. Impacts to recreational activities are discussed in Section 4.13 (Volume 1).

**Comment 116-71**

See response to Comment 116-25, which addresses the same concern.

Commenter 117 – Janet L. Brandon



Public Comment Sheet  
Mesaba Energy Project  
PUC Docket No. E6472/GS-06-668

Name: Janet L. Brandon Representing: \_\_\_\_\_  
Address: 26252 Co. Rd 51 Email: \_\_\_\_\_  
Bovey MN 55796 Tel: \_\_\_\_\_

Comments: Vote no to Mesaba Recrafication Plant  
Why is it when the phrase, "It will create  
more jobs," is heard so many people hop on the  
band wagon? Even when there are numerous  
problems with the business proposal and the  
problems have not been researched thoroughly.  
The problem that bothers me the most  
and the one we, the public, are being asked  
to overlook is - what happens to the CO2? Exclusion  
officials say they intend to develop carbon capture  
eventually. I don't believe they ever intend to  
do that. The United States and China are the  
biggest air polluters in the world & we are  
talking of adding more. Shame on us!!  
Please check on why Saskatchewan of Canada  
has decided not to build a 450 megawatt coal plant.

Please submit comments to meeting moderator or send to:  
William Cole Storm  
Department of Commerce  
85 7<sup>th</sup> Place East, Suite 500  
St. Paul, MN 55101-2198.  
Tel: 651-296-9535.

»»If mailing, fold along dotted lines and tape closed ««

Responses

Comment 117-01

Thank you for your comment. It has been noted and will be included in the administrative record for this EIS.

Comment 117-02

See responses to Comments 1-02, 4-01, and 67-01, which address the same concerns.

## Responses

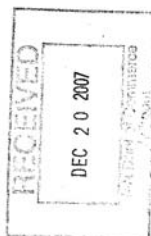
### Commenter 117 – Janet L. Brandon

Comments Continued:

*The US Dept. of Energy with Minn. Dept.  
of Commerce has put out a book on the  
Mesaba Energy Project MN PUC Docket #E64721G5-06-  
668  
It's thick! It's worth looking through,*

(Fold here)

Staple/Tape here



William Cole Storm  
Department of Commerce  
85 7<sup>th</sup> Place East, Suite 500  
St. Paul, MN 55101-2198.

(Fold here)

5510124013 0016

**Commenter 118 – Concerned Individual**

12/03/07

118-01

To whom it may concern - I can't say that I agree with your idea for the new plant - although having this new plant would help lower pollution rates a great deal it does however still pollute at least to some extent.

118-02

I strongly feel and know that I am not alone in this - and your idea to capture carbon is not a permanent solution either - and you didn't even state whether you planned to do that - but even if you did eventually you would run out of places to put it and storing it in the earth where we live will eventually have consequences and there is nobody who can say for sure that it wouldn't, because nothing is for certain.

118-03

So being that this new plant would be at best a temporary solution why go through with it at all. What we really need not only around here but every where is a clean and totally non polluting renewable power source, and when we do get a new plant it should be one that can supply us with that not only in MN but also to the rest of the world.

Signed, a concerned individual



**Responses**

**Comment 118-01**

See responses to Comments 1-01, 12-02, 82-37, and 95-26, which address the same concerns.

**Comment 118-02**

See responses to Comments 1-02, 4-01, 19-03, and 78-03, which address the same concerns.

**Comment 118-03**

See response to Comment 37-01. DOE oversees numerous projects that are investigating and supporting a wide variety of renewable energy generation technologies, such as wind, solar, and hydro power.



## Responses

### Comment 119-01

See responses to Comments 38-01 and 59-12, which address the same concerns.

### Comment 119-02

As stated in Section 4.12.4 (Volume 1), as much as 98 percent of the mercury in Minnesota lakes and rivers comes from the atmosphere. Mercury deposition to Big Diamond Lake from the Mesaba plant was determined to be less than 1 percent of the background deposition rate. Therefore, although the incremental increase in health risk from ingestion of fish posed by mercury from plant emissions would be below state thresholds, the plant would not eliminate existing fish consumption advisories.

### Comment 119-03

The ingestion of meat from deer exposed to coal dust from trains or power plant emissions was not determined to be a risk pathway of concern for the AERA protocol.

## Commenter 119 – Ly Her

I am submitting my comments/questions pertaining to the Mesaba Energy Project:

- 119-01** | - How will the added pollution affect the fish in local area lakes?
- 119-02** | - Will this change the fish advisory consumption?
- 119-03** | - How will this affect the health of deer that may be taken during hunting and ultimately the human consumption of the deer meat that has been exposed to multiple exposure to the coal dust from trains?

Thank you.

Concerned citizen,

Ly Her  
 6407 377th St  
 North Branch, MN 55056

Put your friends on the big screen with Windows Vista® + Windows Live™. [Start now!](#)

**Responses**

**Comment 120-01**

See responses to Comments 7-02, 111-08 and 116-49, which address the same concerns.

**Commenter 120 – Larry Johnson**

**120-01**

I would like to submit my comment for the record of the Draft EIS for the Mesaba Energy Project. In table 2.4-1 I find that the DEIS does not fully explain the social effects of the statement:

**Water Sources and Discharges:** Security requirements for process water intake facilities may necessitate terminating access to Canisteo Mine Pit for recreational boating.

I feel that the EIS should disclose who would make that decision and what controlling factors would dictate their decision. I also feel the DEIS is lacking in that it makes no mention that the Canisteo Mine Pit is currently managed by the Mn DNR as a viable Lake Trout fishery. Fisherpeople use this resource not only in the summer months but also during the winter trout season which runs from mid January to mid March.

Enclosed is a photo of the recreational opportunities that will be lost if this resource is closed for public use.

Sincerely,

Larry Johnson

25159 Trout Lake Acres Road

Bovey, Mn 55709

218 245-3528

## Responses

### Commenter 120 – Larry Johnson



## Responses

### Comment 121-01

See response to Comment 37-01. DOE oversees numerous projects that are investigating and supporting a wide variety of renewable energy generation technologies, such as wind, solar, and hydro power.

### Commenter 121 – MEHHED

From: MEHHED ([mehhed@peoplepc.com](mailto:mehhed@peoplepc.com))  
 To: Bill.Storm

Regarding the proposed Mesaba Energy Project - PUC Docket #E6472/GS-06-668:

I am opposed to any government funding for this project. Even "new" coal energy production technology is really "old" school energy production.

Any public funds proposed for this project should be channeled to clean alternative energy resource development - sun and wind - and energy conservation/efficiency projects.

It is time to start thinking further along the energy production road than only tomorrow.

Thank you.

\_\_\_\_\_  
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121-01

Responses

**Comment 122-01**  
 See response to Comment 30-01, which addresses the same concerns.

Commenter 122 – Bob Tammen

PO Box 398  
 Soudan, MN 55782  
 November 28, 2007

I'm Bob Tammen from Soudan, Mn. 55782. I'd like to address the job creation aspect of this project. Not everyone has the job they want where they want it but we don't appear to have a severe unemployment problem in Northern Minnesota.

I'm a retired electrician and as a condition for drawing a pension I had to quit electrical work. This fall I received a letter from my pension fund authorizing me to return to electrical work while I drew my pension. (Exhibit I) Apparently our economy does not have an adequate supply of electrical workers.

We've also been told about all the spin off jobs this project will create to keep our young people in Northern Minnesota. A few months ago I was reading the want ads and saw that a Hibbing company was advertising for electrical and hydraulic technicians. I suppose that's good news. The bad news is, I was reading a South Dakota newspaper. (Exhibit II) Our fine Iron Range employers are already going to a low wage non-union state for employees. How many more projects can we build before our employers go to the next logical step and bring in illegal immigrants?

If you look at the numbers, this project is going to produce exorbitantly priced electricity in our back yard. It's a liability for Northern Minnesota.

122-01

## Responses

### Commenter 122 – Bob Tammen

*Exhibit 1*

#### NOTICE TO ALL RETIREES RECEIVING A NORMAL OR EARLY RETIREMENT PENSION BENEFIT CONCERNING A *TEMPORARY* RETURN TO WORK AMENDMENT TO THE PLAN OF BENEFITS FOR THE NEBF

The Trustees of the National Electrical Benefit Fund (NEBF) and the National Employees Benefit Board have approved a temporary Return to Work Amendment to the Plan of Benefits for the NEBF that **permits certain eligible retirees to return to covered and contributory employment for a period of time without a loss of pension benefits from the NEBF.** Please read the following notice carefully, as this amendment does not apply to all retirees or to all electrical employment.

As you are aware, the rules of the Plan generally provide for a suspension of benefits for a retiree who returns to employment in the electrical industry for forty (40) or more hours per month. This temporary Return to Work Amendment changes the suspension rules for certain eligible retirees. Following are the features of the amendment:

1. The temporary amendment is effective from **September 1, 2007 through December 31, 2007.**
2. All normal and early retirees with a pension effective date of August 2007 or earlier will be permitted to return to covered and contributory employment only and will be permitted to work for up to 600 hours during the above period without a loss of NEBF benefits (in order to receive benefits from other funds it will depend on the rules of those funds).
3. Once an individual has worked for 600 hours in covered and contributory employment during the term of the temporary amendment, the individual will no longer be able to take advantage of this amendment and the normal rules (permitting work in the electrical industry for less than forty (40) hours per month without a suspension of benefits) will apply.
4. Disability pensioners are not eligible (the existing rules applicable to disabled pensioners remain in effect).
5. Only retirees who return to NEBF covered and contributory employment will be able to take advantage of this amendment – this amendment will not apply to persons who work for covered employers where no NEBF contributions are required or to persons who work for non-covered employers in the electrical industry.

September 1, 2007



## Commenter 122 – Bob Tammen

*December 24, 2006*  
*Exh. B. I II*



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## Responses

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