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

practicable alternative, rather it documented the process and criteria used by the applicant to indentify 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

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

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).

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.

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 .

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.

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.

6. Page S-34. Please update the ESA discussion.

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.

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.

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.

10. Page 2-7 second paragraph. The Corps does not concur with the reasons given for the applicant's stated preferred alternative.

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.

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.

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.

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.

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.

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."

17. Page 3.7-1 last paragraph. The last paragraph is also not entirely accurate. We recommend removing the entire paragraph.

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.

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

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

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?

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.

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.

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.

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.

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.

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.

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.

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.

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."

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?

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.

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

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

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_2 capture – Please explain why CO_2 is not included in the project as a reasonable measure to reduce impacts.

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

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

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

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

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

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 permittable, the applicant would need to demonstrate that it is the least environmentally damaging practicable alternative.

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

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

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?

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

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

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

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?"

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_2 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_2. Please edit for consistency.

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?

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_2 sequestration plan indicate whether it would be practicable to sequester CO_2 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.

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.

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.

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.

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.

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.

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.

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)

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.

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

residences but has a public park and recreational beach. Is it possible the discharge might have an adverse impact, including water quality degradation?

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?

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.

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)?

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.)

89. 4.5-35, line 7. This points out that the ZLD system is practicable.

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?

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.

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)

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

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

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

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

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

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

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

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

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

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

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

Biological Resources (3.8/4.8)

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

(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.

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.

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

REPLY TO
ATTENTION OF

JUL 18 2006

Operations
Regulatory (2005-5527-WAB)

Richard Hargis
NEPA Document Manager
National Energy and Technology Laboratory
U.S. Department of Energy
626 Cochrans Mill Road – PO Box 10940
Pittsburgh PA 15236-0940

Dear Mr. Hargis:

The U.S. Army Corps of Engineers (Corps) offers the following comments in response to the DOE/NETL proposed cumulative impact analysis approach for the Environmental Impact Statement being developed for the Mesaba Energy Project. The proposed approach was submitted to the Corps in an email message dated June 19, 2006.

General

The Corps' role as a cooperating agency is limited to wetlands and other waters that are subject to CWA Section 404 jurisdiction. We do not have the resources to provide technical input or guidance in other resource areas. The DOE should consult with other resource agencies (including local, State and Federal agencies) to obtain the necessary expertise or guidance appropriate to other environmental topics.

We suggest that the DOE follow the CEQ guidance, "Considering Cumulative Effects," and establish the temporal and spatial boundaries for cumulative impacts during scoping. DOE should identify the past and future time frames for the assessment (such as 1980 to 2020). Normally, an appropriately sized watershed or sub-watershed is the physical boundary for assessing cumulative wetland impacts.

The DOE cumulative impact analysis should evaluate Mesaba Energy's contribution to overall impacts on resources in the potentially affected area. The EIS should thoroughly describe potential secondary and indirect impacts from the addition of a new power plant, including whether the presence of a new power plant will attract or support additional industry and development, and whether this development will further impact local or regional resources.

The Corps has concerns regarding the statement, "...if not otherwise required..." which is found in several sections of the document. In each case, the information should be included in the EIS; it should not be deferred to the permitting phase. Please verify that

the information will be included in the EIS regardless of whether it is required by DOE or required in subsequent permitting.

Section 1.3 – Reasonably foreseeable future actions.
This section is currently limited to similar industrial activities in the area. The section needs to also include other types of activities that may also impact wetlands, such as planned or ongoing roadway improvements or commercial/residential development that has been identified in any comprehensive planning documents, or that have been approved by the county or city.

Section 1.4 Potentially Affected Resources
The Corps recommends adding water supply, water quantity, and water quality (from impacts other than airborne pollutants) to the list of potentially affected resources.

Section 1.6.2 Water Quality Impacts on Class I areas
Although the EPA has declined formal cooperating agency status, the Corps urges DOE to obtain input from EPA on this issue. The EPA has the responsibility and the expertise to address water quality impacts from airborne pollutants, as well as downstream water quality impacts from point and non-point sources.

Section 1.6.5 Loss of wetlands
Regarding the statement, "...if not otherwise required..." As stated previously, this information should be included in the EIS and should not be deferred to the permitting phase. Please verify that the information will be provided for inclusion in the EIS, regardless of whether it is required by DOE or required in subsequent permitting.

In light of the June 24, 2005 CEQ guidance on past actions, we do not recommend identifying past wetland impacts based on permits issued. Instead, a past wetlands baseline should be established for each watershed affected, and this baseline compared to both the existing wetlands in the watershed and the wetlands predicted to be in the watershed based on the impacts of reasonably foreseeable actions. It is appropriate to include a description of the functions and values of the impacted wetland resources, along with an explanation how those functions will be affected by the impacts. The likelihood of wetland mitigation occurring within the watershed for ongoing/future impacts should be addressed and factored into the assessment. Some watersheds have numerous mitigation opportunities while other watersheds have very few opportunities.

Although the EPA has declined formal cooperating agency status, we recommend that you submit materials such as the cumulative impact approach document to the EPA and request their comments. Obtaining EPA input in advance of their review of the Draft EIS is preferred for a smoother process.

Section 1.6.6
A wildlife cumulative impact assessment has been enclosed for your reference. The Corps recommends the scope of work for this study be used by DOE as a model for the wildlife cumulative impacts analysis.

If you have any questions, please contact Bill Baer in our Bemidji Regulatory field office at (218) 444-6381. In any correspondence or inquiries, please refer to the Regulatory number shown above.

Sincerely,

Robert J. Whiting
Chief, Regulatory Branch

Enclosure

Cf: Ken Westlake, USEPA Region 5
Allan Bier, USDA, Forest Service

DEPARTMENT OF THE ARMY
ST. PAUL DISTRICT, CORPS OF ENGINEERS
ARMY CORPS OF ENGINEERS CENTRE
190 FIFTH STREET EAST
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REPLY TO
ATTENTION

December 27, 2006

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:

In October 2004, four projects were selected by the U.S. Department of Energy (DOE) under Round 2 of the Clean Coal Power Initiative (CCPI). One of those selected projects is the Mesaba Energy Project, a proposed coal-feedstock power plant utilizing Integrated Gasification Combined Cycle (IGCC) technology, to be located in northern Minnesota. The power plant would be constructed in two phases, with each phase capable of producing 606 MW of baseload power.

In accordance with the National Environmental Policy Act (NEPA), NEPA implementation procedures for the Corps Regulatory Program (33 CFR Part 325) and policy guidance under CEQ Regulations 40 CFR 1500-1508, the St. Paul District, Corps of Engineers (Corps) has reviewed the advanced copy of the Draft Environmental Impact Statement (DEIS), for the above referenced project, dated November 2006. This letter is in response to the advanced copy of the DEIS. Information contained in this letter outlines our concerns regarding Sections 1 and 2 of the DEIS and **our position that the DEIS does not adequately document a consideration of a range of alternatives under both NEPA and the Section 404(b)(1) Guidelines** (Guidelines). We have deferred our comments on other aspects or sections of the DEIS, as we feel it is critical to resolve these issues.

On December 13, 2006, the Corps sent a letter to Excelsior Energy, the project proponent, regarding our preliminary review of Section 1 of the DEIS (Purpose and Need) and Section 1.13, "Siting Process and Description of Sites" Pages I-377 through I-384 in the Mesaba Energy Project Environmental Supplement: Section One. Information contained in that letter, specifically our discussion of the project purpose and need and range of alternatives, is also pertinent here, therefore, we have attached a copy for your reference.

As a participating agency in the preparation of the Mesaba Energy Project EIS, it is our expectation that this process will result in a final product that identifies and analyzes a range of project alternatives in sufficient detail to satisfy all of the participating agency's regulatory requirements. The Corps' evaluation involves multiple analyses, including (1) evaluating the proposal's impacts in accordance with NEPA (33 CFR part 325), (2) determining whether the proposal is contrary to the public interest (33 CFR § 320.4), and (3) in the case of a Section 404 permit, determining whether the proposal complies with the Section 404(b)(1) Guidelines (Guidelines) (40 CFR part 230).

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)). Under the 404(b)(1) guidelines, an applicant must overcome the presumption that a practicable, less environmentally damaging alternative site outside wetlands exists. In those cases where no practicable upland sites are available, the site with the least adverse impact to wetlands would be considered the least damaging practicable alternative.

Based on discussions with the Department of Energy (DOE) and our understanding of the Minnesota Public Utility Commission (PUC) process, it is our understanding that those agencies believe the alternatives and analyses contained in the draft EIS meets their needs. **However, since we are unable to determine what process or criteria were used to select the alternatives carried forward for further study, the DEIS does not satisfy our requirements under the Clean Water Act 404(b)(1) guidelines.**

When the Corps became involved in this project, the alternatives to be carried forward had already been selected even though we had not been provided an opportunity to review, comment, and concur on the development of a project purpose and need statement; the establishment of a reasonable site search area; the identification of potential project sites; the establishment of site selection criteria; or the application of site selection criteria to each site.

At this time, it has not been clearly demonstrated to us that the range of alternatives considered should be limited to the Taconite Tax Relief Area (TTRA). Furthermore, if information can be shown that supports limiting the search area to the TTRA, we have some doubts as to whether either of the alternatives being carried forward for evaluation in the draft EIS are in fact the least damaging practicable alternative.

Although, the project proponent has provided the Corps with supplemental information regarding a site selection process and Section 2.1.2.2 of the DEIS briefly describes a three-tiered siting process, **this information is not sufficient to document the evaluation of alternative sites.** There is no documentation of the site selection criteria and it is not clear how the "site selection criteria" were applied to the candidate sites (11) or the second tier of 6 sites. At an August 2006 meeting, the project proponent discussed project siting and the evaluation of alternative sites. From what was discussed, it appears that several of the sites eliminated earlier in the process may have been located on brown field sites or were sites that may result in less wetland impacts. These sites must be documented to our satisfaction as being "not practicable" before we can eliminate them from consideration, alternatively they should be carried forward in the DEIS for further analysis. The term practicable means available and capable of being done

after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

If a practicable alternative is available that is less damaging than either of the preferred alternatives, we would be required under the 404(b)(1) guidelines to deny the permit application. A denial would result in a substantial delay in the project, including preparing either a new EIS or a supplement to the one underway. **Accordingly, we believe it would be prudent to resolve these issues before going forward with publication of the draft EIS.** If you have any questions, please contact Kelly Urbanek or Bill Baer at 218-444-6381.

Sincerely,

Robert J. Whiting
Chief, Regulatory Branch

Copy furnished:

Mr. Robert Evans
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Minnetonka, MN 55305

Mr. William Storm
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85 7th Place East
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St. Paul, MN 55101-2198

DEPARTMENT OF THE ARMY
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COPY

REPLY TO
ATTENTION
Operations
Regulatory (2005-5527-WAB)

June 5, 2007

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

Dear Mr. Hargis:

On December 27, 2006, the St. Paul District Corps of Engineers (Corps) provided comments on a preliminary version of the draft Environmental Impact Statement (DEIS) for Excelsior Energy's IGCC power plant proposal. In that letter, we raised concerns that the DEIS did not adequately document the consideration of a range of alternatives as required under both NEPA and the Clean Water Act Section 404(b)(1) guidelines.

As requested by the Department of Energy (DOE), we have worked with Excelsior Energy to develop a purpose and need statement that is acceptable to the Corps. Excelsior Energy has also responded to our request and provided us with a narrative of the process and criteria they used to identify and analyze the practicability of various power plant sites. We have reviewed the project purpose and need and the alternatives analysis with Excelsior Energy on several occasions. We understand this information has been forwarded to DOE for inclusion in the DEIS. While we believe the latest version of this narrative describes the process and rationale used by Excelsior Energy to select their preferred alternative, we have not endorsed its conclusions and have some question as to whether Excelsior Energy's preferred alternative is the least damaging practicable alternative as required under the 404(b)(1) guidelines.

However, we believe the purpose and need statement is satisfactory for our purposes; and the alternatives analysis in the DEIS, as supplemented by Excelsior Energy's latest input, provides sufficient documentation for review and comment. Although we have not resolved all of our concerns with the analysis necessary for the CWA Section 404 review process, the Corps is in agreement with DOE's release of the draft EIS for public comment. If you have any questions contact Kelly Urbanek at 218-444-6381.

Sincerely,

Robert J. Whiting
Chief, Regulatory Branch

Copy furnished:
Minnesota Department of Commerce
Minnesota Public Utilities Commission