

Minnesota Department of Natural Resources

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January 9, 2008

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

RE: 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.



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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.

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.)

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.

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.

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.

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.

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.