

## Appendix I Response to Comments

A. **Commentor:** OtterTail Power Co.

**Comment 1:** It was suggested that 1.01% sulfur be used for evaluating a new wet scrubber for the Coyote Station and the cost effectiveness be recalculated.

**Department Response:** Agreed. The Department also believes that a new wet scrubber can achieve 95% removal efficiency. The cost effectiveness was recalculated based an average sulfur content of 1.075% for the baseline period of 2004-2005.

**Comment 2:** OtterTail suggested adding a reference to the concern regarding technical feasibility for high dust SCR.

**Department's Response:** The Department has addressed this issue as part of the BART process. A reference was added to this assessment.

B. **Commentor:** Basin Electric Power Coop.

**Comment 1:** Basin believes that a fifth statutory factor, visibility impairment, should be addressed in the document.

**Department Response:** In determining reasonable progress, Section 169A(g)(1) of the Clean Air Act lists the following factors to be considered:

- a. Cost of compliance.
- b. Time necessary to compliance.
- c. The energy and nonair quality environmental impacts.
- d. The remaining useful life of the source.

Visibility impacts are not one of the four factors. However, EPA guidance for determining reasonable progress allows the cost to be determined on a dollar per deciview of visibility improvement.

**Comment 2:** The text describing the tables in Section 3 does not agree with the labeling of the table.

**Department Response:** Agreed

**Comment 3:** Additional options for improving the existing dry FGD system should be evaluated.

**Department Response:** Such an evaluation was beyond the scope of the general analysis that was prepared.

**Comment 4:** Agreed with the report statement that high dust SCR may not be technically feasible. Also, visibility improvement should be taken into account in the evaluation of the control technology.

**Department Response:** See response to Comment A.2 and B.1.

**Comment 5:** The time to achieve compliance may not be sufficient if the outage schedule for the units (every 3 years) does not fit perfectly into the 5½ - 6½ years for

compliance.

**Department Response:** Agreed

C. **Commentor:** Hess Corp.

**Comment 1:** The SRU has a sulfur recovery efficiency of 98.8% instead of the 97.5% used in the calculation of cost effectiveness.

**Department Response:** The cost effectiveness was recalculated using a 98.55% recovery efficiency which is the value during the baseline period.

**Comment 2:** Expectations are that the amount of sulfur in the inlet gas will drop in the future due to more sweet gas processed from the Bakken formation.

**Department Response:** This fact will be considered in the Department's evaluation of the source under the reasonable progress portion of the SIP.

**Comment 3:** The tail gas cleanup unit cost was extrapolated from a 1982 report which could lead to significant errors.

**Department Response:** The potential inaccuracy in the cost estimate will be considered in determining whether additional controls will be required under the reasonable progress portion of the SIP.

**Comment 4:** Electric motors are not a technically feasible option for the Clark engines since the compressor cylinder connecting rods are an integral part of the engines main crankshaft.

**Department Response:** Agreed

**Comment 5:** Catalytic convertors are not technically feasible for two cycle lean burn engines.

**Department Response:** Agreed. However, the cost in the report was for an ammonia/urea based SCR system with a catalyst.

D. **Commentor:** Dakota Gasification Co.

**Comment 1:** DGC believes the cost of the NO<sub>x</sub> control technology is underestimated and control efficiency is overestimated. In order to achieve the proper temperature for SCR, the heat recovery section of the Riley boilers would have to be modified in order to achieve the proper temperature. The required modifications would reduce the capability of the boilers to make enough steam to operate and thereby reduce the plant capacity. In addition, there is limited space for either SNCR or SCR.

**Department Response:** The Department believes the actual analysis of SCR by DGC has merit. The higher end of cost range will be used to evaluate this alternative.

**Comment 2:** SCR and SNCR may not be technically feasible for application on the Riley boilers. Testing in 1997 indicated rapid accumulation of ammonium sulfate deposits on the heat recovery section of the boilers.

**Department Response:** In 1992, the Department determined that SCR and SNCR were not technically feasible for the Riley boilers because of the high CO<sub>2</sub> and high sulfur content of the flue gas. However, SCR and SNCR technology has advanced significantly

since that time. The Department agreed that a technical analysis would be required, and perhaps pilot testing, before it could be determined whether the technology could be made to work.

**Comment 3:** Visibility improvement needs to be included as a fifth factor in the analysis.

**Department Response:** See response to Comment B.1.