

**FLM Comments on
Draft BART Assessments
Milton R. Young Station
and Leland Olds Station**

Comment No.: 8

Commentor: FLMs

Affected Source: Leland Olds 2

Comment Summary: A 5 factor analysis is required even though the most efficient control technology is used.

Response: The BART Guideline Step 1, Paragraph 9, states "... if a source commits to a BART determination that consists of the most stringent controls available, then there is no need to complete the remaining analyses in this section." Basin had proposed the highest available control efficiency and lowest possible emission rate. Therefore, the other steps of a BART analysis were not required. The Department has now determined that SCR w/reheat is technically feasible. A visibility analysis of SCR vs SNCR has been included.

Comment No.: 22

Commentor: FLMs

Affected Source: Leland Olds Unit 1 & 2

Comment Summary: Recommend that the limit be written as 0.15 lb/10⁶ Btu and 95% reduction.

Response: The BART Guideline lists the presumptive levels as 0.15 lb/10⁶ Btu or 95% reduction. We believe applying both limits would be inappropriate. Basin Electric has justified a limit of 0.19 lb/10⁶ Btu. The Department was able to reduce this limit to 0.15 lb/10⁶ Btu by allowing Basin to comply with the 95% reduction requirement when higher sulfur coal is encountered.

Comment No.: 23

Commentor: FLMs

Affected Source: Leland Olds 1 & 2

Comment Summary: The FLMs believe SCR is technically feasible based on EPA's opinion.

Response: The Department believes high dust SCR is not technically feasible due to catalyst poisoning by sodium and potassium. A detailed examination of this issue is found in Appendix B.5. The Department now believes low dust and tail end SCR are technically feasible for North Dakota lignite-fired power plants.

Comment No.: 25

Commentor: FLMs

Affected Source: General

Comment Summary: The FLMs think the benefits of burning "low cost" lignite should be considered in determining BART.

Response: The BART Guideline establishes the costs that are to be considered when determining BART. In general, the cost of fuel is not one of them and fuel switching is not required.

Comment No.: 26

Commentor: FLMs

Affected Source: General

Comment Summary: There is a fundamental problem with setting only a percent-reduction limit for SO₂. As the sulfur content rises, SO₂ emissions will rise.

Response: EPA recognized that as the sulfur content rose the presumptive limit of 0.15 lb/10⁶ Btu could not be met at some sources. Therefore, EPA allowed a presumptive level of 95% control. If BART had to be set based on a lb/MMBtu basis only, then this lb/MMBtu limit must be based on the higher sulfur coal. There would be no difference when higher sulfur coal is burned but higher emissions could occur if only a lb/MMBtu is set and lower sulfur coal is burned.

Comment No.: 27

Commentor: FLMs

Affected Source: General

Comment Summary: Upgrading of the ESPs for particulate control should be evaluated.

Response: Each source has evaluated replacing the ESP with a new ESP or new baghouse. In every case, the replacement of the ESP provides an insignificant amount of visibility improvement. Upgrading the ESPs would provide less visibility improvement. Therefore, there is no reason to evaluate the upgrade.

Comment No.: 28

Commentor: FLMs

Affected Source: General

Comment Summary: The allowable PM emission rates should be reduced.

Response: Each source has justified 0.10 lb/10⁶ Btu as BART using the 5 factors analysis. The Department has reduced the emission limit to 0.07 lb/10⁶ Btu because it is the lowest limit that can be met on a continuous basis and represents better than BART after consideration of the 5 factors.

Comment No.: 29

Commentor: FLMs

Affected Source: General

Comment Summary: It appears the Department is making its BART determinations based primarily on the incremental cost.

Response: The BART determinations were made based on the 5 factors in the BART Guideline. The Guideline gives the Department discretion on the weight assigned to each factor. The Department has always used the incremental cost when determining BACT. For BART, incremental costs were considered also. The BART Guideline states "Also, the greater number of possible control options that exist, the more weight should be given to the incremental costs vs. average cost." As suggested by the BART Guideline, the incremental cost was weighted most heavily in the economic evaluation; however, all 5 statutory factors were considered.

Comment No.: 30

Commentor: FLMs

Affected Source: General

Comment Summary: Cumulative effects on multiple Class I areas should be considered instead of the "average" effects.

Response: The BART guideline does not establish or require a cumulative type analysis. This would be a difficult analysis (results must be paired in time) and does not represent actual visibility improvement since the analysis only addresses the individual source and not all sources that affect visibility in the Class I area. The Department did review maximum impacts from BART alternatives as well as average results. Since the BART Guideline does not require a cumulative analysis, we believe it is unnecessary and of little value. We have also determined that the BART single source modeling grossly overpredicts the amount of visibility improvement. Any combining of Class I areas using a cumulative effect would make the results even worse.

Comment No.: 31

Commentor: FLMs

Affected Source: M.R. Young 1

Comment Summary: Both a 0.15 lb/10⁶ Btu and 95% reduction BART limit is appropriate.

Response: Based on future coal sulfur contents, Minnkota may not be able to comply with the 0.15 lb/10⁶ Btu emission limit. Therefore, the 95% reduction only is appropriate and consistent with the BART Guideline.

Comment No.: 32

Commentor: FLMs

Affected Source: M.R. Young 1

Comment Summary: The SO₂ analysis does not address the 5 factors.

Response: Since Minnkota has selected the most efficient technology operating at the highest continuous efficiency, a 5 factor analysis is not required per the BART Guideline. Visibility modeling results which show the improvement have been provided.

Comment No.: 33

Commentor: FLMs

Affected Source: M.R. Young 1

Comment Summary: A lower emission limit for PM should be established.

Response: The BART analysis submitted by Minnkota justified 0.10 lb/10⁶ Btu as BART based on the 5 statutory factors. Since the Consent Decree requires a limit of 0.03 lb/10⁶ Btu, this rate was established as BART.

Comment No.: 34

Commentor: FLMs

Affected Source: M.R. Young 1

Comment Summary: Believe SCR is technically feasible.

Response: See response to Comment No. 23.

Comment No.: 35

Commentor: FLMs

Affected Source: M.R. Young 2

Comment Summary: Recommend SO₂ limit be 95% reductions and 0.15 lb/10⁶ Btu.

Response: The Department determined that the 0.15 lb/10⁶ Btu limit could not be met when higher sulfur coal is burned. Therefore, requiring both limits would be inappropriate.

Comment No.: 36

Commentor: FLMs

Affected Source: M.R. Young 2

Comment Summary: Recommend upgrading ESP to meet a 0.015 lb/10⁶ Btu PM limit.

Response: Minnkota has justified a BART limit of 0.10 lb/10⁶ Btu based on the 5 statutory factors. The limit of 0.03 lb/10⁶ Btu is based on the Consent Decree.

Comment No.: 37

Commentor: FLMs

Affected Source: M.R. Young 2

Comment Summary: Believe SCR is technically feasible.

Response: See response to Comment No. 23.