



**NORTH DAKOTA**  
DEPARTMENT of HEALTH

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August 22, 2008

Brad Moore, Commissioner  
Minnesota Pollution Control Agency  
520 Lafayette Road North  
St. Paul, MN 55155-4194

**FILE**

Re: Northern Class I Areas Consultation  
Conclusion Memorandum

Dear Mr. Moore:

We have reviewed your memorandum of September 19, 2007 regarding consultation with States that have sources which emit air contaminants which impact visibility (regional haze) in the Voyageurs National Park and Boundary Waters Canoe Area Wilderness. The State of North Dakota is committed to addressing regional haze in accordance with the requirements of the Clean Air Act. This includes an evaluation of appropriate emission limitations under the Best Available Retrofit Technology (BART) requirements [40 CFR 51.308(e)] as well as the other requirements [40 CFR 51.208(d)-(i)]. This will include an assessment of additional emission reductions from electric utility steam generating units and other source categories unaffected by the BART requirements. This assessment will be conducted as prescribed in the Regional Haze rule.

In your memorandum, you requested that North Dakota "evaluate further reductions of SO<sub>2</sub> from electric generating units (EGU) in order to reduce SO<sub>2</sub> emissions by 2018 to a rate that is more comparable to the rate projected in 2018 from Minnesota, approximately 0.25 lbs/MMBTU". You also requested that North Dakota evaluate the potential for reductions of NO<sub>x</sub> from EGUs due to predicted higher NO<sub>x</sub> emission rates compared with Minnesota and other contributing states. We believe that the use of lb/MMBtu as the metric for seeking additional emission reductions is flawed. The North Dakota EGUs are located more than 500 kilometers from Voyageurs National Park and further from the Boundary Waters Canoe Area Wilderness. The EGUs in Minnesota are located much closer and will have a much greater impact on visibility in the Minnesota Class I areas for a given emission rate (e.g. lb/MMBtu or tons/yr). Given the proximity of the sources located in Minnesota and the major contribution those sources have on the Class I areas in

Minnesota, we believe Minnesota should closely examine the impact on visibility of those sources as compared to the impact of sources in neighboring states. Additional reductions from Minnesota sources may provide much greater reduction of visibility impacts. The lb/MMBtu metric, if retained, should be adjusted to take into account the actual visibility impact of the neighboring states sources.

In reviewing your memorandum, the EGU Summary for 2018 (p.12) indicated that the "IPM3.0-will do" scenario predicts a reduction of SO<sub>2</sub> and NO<sub>x</sub> emissions from Minnesota EGUs of 83,757 tons per year (44.7%) while North Dakota EGUs will reduce emissions by 106,859 tons per year (48.2%). Yet, Attachment 1 to your memorandum indicates Minnesota sources contribute 25.4-37.6% of the baseline visibility impairment (depending on the Class I area, the time period, and the group doing the modeling) while North Dakota sources only contribute 4.8-7.1%. We believe the substantial reductions of sulfur dioxide and nitrogen oxides from North Dakota EGUs will assist Minnesota in making reasonable progress toward the national visibility goal.

The lb/MMBtu metric is also flawed because it does not account for the type of fuel burned or the firing configuration of the EGU. The EGUs in North Dakota primarily fire lignite which has a higher sulfur content than subbituminous coal. This requires a higher removal rate of SO<sub>2</sub> to achieve MPCA's 0.25 lb/MMBtu benchmark than it would for Minnesota sources. In addition, four of the EGUs in North Dakota are cyclone fired units which have much higher uncontrolled NO<sub>x</sub> emission rates than other pulverized coal fired units. The constituents of the North Dakota lignite (e.g. soluble sodium in the ash) makes it much more difficult and expensive to control NO<sub>x</sub> emissions. Again, greater reductions would be required for North Dakota sources to achieve the MPCA's benchmark than for Minnesota EGUs.

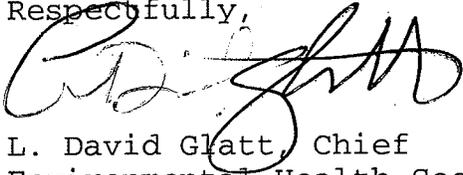
Your memorandum of September 19, 2007 suggests that Minnesota is counting on reductions from the Clean Air Interstate Rule (CAIR) by stating "In addition to on-the-books controls, such as the Clean Air Interstate Rule (CAIR), Minnesota expects....". Given the recent vacature of CAIR, such reliance on reductions may be premature. In addition, your request for additional reductions from other states should be reevaluated.

In summary, we believe the metric (lb/MMBtu) for asking other states to make additional emission reductions is inappropriate. North Dakota will continue to seek appropriate emissions reductions commensurate with the law and available technology. Through the effort of each state significant improvements in air quality will be achieved. As we work through the process, we will afford you

more opportunities to discuss our State Implementation Plan (SIP) and the emission reductions that will be achieved. North Dakota's SIP is expected to be available by the end of this year.

If you have any questions, please feel free to contact me at (701)328-5150.

Respectfully,



L. David Glatt, Chief  
Environmental Health Section

LDG/TB:csc

xc: Terry O'Clair, Air Quality Division  
Amy Platt, EPA Region 8