



**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 52**

**[EPA-R05-OAR-2010-0954 and EPA-R05-OAR-2010-0037; FRL-9772-8]**

**Approval and Promulgation of Air Quality Implementation Plans;**

**States of Michigan and Minnesota; Regional Haze**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule; supplemental.

**SUMMARY:** In this supplemental notice of proposed rulemaking, EPA is soliciting additional comments on its proposal to disapprove in part the Michigan and Minnesota regional haze State Implementation Plans (SIPs) for failure to mandate best available retrofit technology (BART) for taconite facilities within these states. This proposal supplements an August 15, 2012, action that proposed to disapprove these elements of these SIPs and to establish Federal emission limits representing BART.

**DATES:** Comments must be received on or before [INSERT DATE 30 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** Submit your comments, identified by Docket IDs No. EPA-R05-OAR-2010-0954 and EPA-R05-OAR-2010-0037, by one of the following methods:

1. [www.regulations.gov](http://www.regulations.gov): Follow the on-line instructions for submitting comments.
2. E-mail: [aburano.douglas@epa.gov](mailto:aburano.douglas@epa.gov).

3. Fax: (312)692-2450.
4. Mail: Douglas Aburano, Chief, Attainment Planning and Maintenance Section, Air Programs Branch (AR-18J), U.S. Environmental Protection Agency, 77 West Jackson Boulevard, Chicago, Illinois 60604.
5. Hand Delivery: Douglas Aburano, Chief, Attainment Planning and Maintenance Section, Air Programs Branch (AR-18J), U.S. Environmental Protection Agency, 77 West Jackson Boulevard, Chicago, Illinois 60604. Such deliveries are only accepted during the Regional Office normal hours of operation, and special arrangements should be made for deliveries of boxed information. The Regional Office official hours of business are Monday through Friday, 8:30 AM to 4:30 PM, excluding Federal holidays.

*Instructions:* Direct your comments to Docket IDs No. EPA-R05-OAR-2010-0954 and EPA-R05-OAR-2010-0037. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at [www.regulations.gov](http://www.regulations.gov), including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected

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*Docket:* All documents in the docket are listed in the [www.regulations.gov](http://www.regulations.gov) index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket

materials are available either electronically in [www.regulations.gov](http://www.regulations.gov) or in hard copy at the Environmental Protection Agency, Region 5, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604. This facility is open from 8:30 AM to 4:30 PM, Monday through Friday, excluding Federal holidays. We recommend that you telephone John Summerhays at (312) 886-6067 before visiting the Region 5 office.

**FOR FURTHER INFORMATION CONTACT:** John Summerhays, Environmental Scientist, Attainment Planning and Maintenance Section, Air Programs Branch (AR-18J), Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, (312) 886-6067, [summerhays.john@epa.gov](mailto:summerhays.john@epa.gov).

**SUPPLEMENTARY INFORMATION:** This supplementary information section is arranged as follows:

- I. What Should I Consider as I Prepare My Comments for EPA?
- II. What is the Background for This Action?
- III. What is EPA's Review of Minnesota and Michigan's BART Determinations for Taconite Facilities?
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  - B. Michigan
- IV. How Does This Action Relate to the Action to Promulgate Federal Requirements for Taconite Plants?

V. Statutory and Executive Order Reviews.

**I. What Should I Consider as I Prepare My Comments for EPA?**

When submitting comments, remember to:

1. Identify the rulemaking by docket number and other identifying information (subject heading, Federal Register date and page number).
2. Follow directions - EPA may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.
3. Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.
4. Describe any assumptions and provide any technical information and/or data that you used.
5. If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.
6. Provide specific examples to illustrate your concerns, and suggest alternatives.
7. Explain your views as clearly as possible, avoiding the use of profanity or personal threats.
8. Make sure to submit your comments by the comment period deadline identified.

**II. What is the Background for This Action?**

Minnesota submitted its regional haze plan on December 30, 2009, and further submitted a proposed supplemental submission on January 5, 2012, and a final supplemental submission on May 8, 2012. EPA proposed approval of the Minnesota plan on January 25, 2012 (77 FR 3681). Among other actions, this proposed rule proposed to approve Minnesota's plan as requiring BART for the State's several taconite plants, provided Minnesota submitted its proposed taconite plant BART limits prior to final EPA action. However, comments on Minnesota's and EPA's proposals provided evidence that better, cost-effective technology for control of taconite plant emissions was available. Therefore, EPA published a final rule approving other aspects of the Minnesota regional haze plan on June 12, 2012 (77 FR 34801), but deferred action on BART for Minnesota's taconite facilities.

Michigan submitted its regional haze plan on November 5, 2010. EPA proposed action on the Michigan regional haze plan on August 6, 2012 (77 FR 46912). This proposed rule proposed to approve several aspects of Michigan's regional haze plan, and proposed to disapprove Michigan's BART determinations for a Portland cement plant and a paper mill and proposed Federal limits for those two facilities. However, in this proposed rule, EPA deferred action on BART for the Tilden Mining taconite facility in Michigan. EPA published final action pursuant to

this proposal on December 3, 2012 (77 FR 71533), again deferring action on BART for the Tilden Mining taconite plant in Michigan.

Michigan has a second taconite plant, known as Empire Mining. While Empire Mining began operation during the statutory timeframe such that the facility is BART-eligible, Michigan's plan demonstrates satisfactorily that the impact of this facility is sufficiently small, as a result of the enforceable shutdown of one line, that the facility may justifiably be exempted from the BART requirement. On the other hand, Michigan's plan identifies Tilden Mining as meeting the criteria for being subject to BART. Thus, references in this action to taconite plants in Minnesota and Michigan are meant to refer only to taconite plants in Minnesota and Michigan that are subject to BART, which includes all of the taconite plants in Minnesota and Tilden Mining in Michigan but does not include the Empire Mining plant.

On August 15, 2012 (77 FR 49308), EPA published proposed action on BART for taconite plants in Minnesota and Michigan. In that action, EPA reviewed relevant information regarding the feasibility of various options for the control of emissions from taconite plants and reviewed other information relevant to determining BART for these plants.

Based on this review and the availability of cost-effective controls, EPA proposed Federal emission limits requiring more stringent control of emissions of nitrogen oxides (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>) than had been required by Minnesota or Michigan. The notice of proposed rulemaking proposing these limits provided a full discussion of why EPA proposed to conclude that proper consideration of the BART criteria resulted in more stringent control than was required by the States, thus implicitly concluding that the state submittals did not require controls representing BART. Furthermore, the action proposed regulatory text stating that the state submittals failed to require BART for the taconite plants.

Nevertheless, EPA is publishing this supplemental notice of proposed rulemaking to provide additional information regarding the agency's views on Minnesota's and Michigan's plans and to solicit additional comment regarding the proposal to disapprove in part the plans for failing to require BART at the applicable taconite plants. EPA is not soliciting further comment on its proposed Federal limits; this action only addresses whether the state plans must be disapproved for failing to provide proper analysis and require BART for applicable taconite plants. Further discussion regarding the relationship between this

action and the action published August 15, 2012 is provided below.

Previous notices of proposed rulemaking addressing the States' plans, i.e., the actions published January 25, 2012, and August 6, 2012, for Minnesota and Michigan, respectively, include substantial discussion of the requirements under sections 169A and 169B of the Clean Air Act and subpart P of 40 CFR 50 for regional haze plans. Most pertinent to today's action are the requirements for BART in Clean Air Act section 169A and 40 CFR 51.308(e). In making BART determinations, section 169A(g)(2) of the Clean Air Act requires the state to consider the following factors: (1) the costs of compliance; (2) the energy and non-air quality environmental impacts of compliance; (3) any existing pollution control technology in use at the source; (4) the remaining useful life of the source; and (5) the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology.

### **III. What is EPA's Review of Minnesota and Michigan's BART Determinations for Taconite Facilities?**

#### **A. Minnesota**

In its December 30, 2009, regional haze SIP submittal, Minnesota identified the types of controls that it determined to represent BART for its taconite plants. In all cases, good

combustion practice was determined to represent BART with respect to the control of NO<sub>x</sub>, existing controls were determined to represent BART for the control of SO<sub>2</sub>, and the maximum achievable control technology limits in 40 CFR 63 subpart RRRRR were determined to represent BART for the control of particulate matter. However, this submittal included no enforceable emission limits to require emissions control at these facilities.

To remedy this deficiency, Minnesota proposed emission limits nominally representing good combustion practice for these facilities on December 19, 2011. EPA provided comments on this proposal, stating that more stringent limits were warranted and necessary because "information supporting low NO<sub>x</sub> main burners as BART is well documented and has been available for some time." See letter dated February 10, 2012, signed by Douglas Aburano. These comments provided a timetable showing that an analysis in January 2009 of measures for reducing NO<sub>x</sub> emissions at U.S. Steel's Minntac Iron Ore Pelletizing Plant recommended pursuing use of low NO<sub>x</sub> main burners. Initial tests were sufficiently successful that a report on these efforts, issued on April 13, 2010, recommended further testing. Then, U.S. Steel submitted a report to Minnesota on October 22, 2010, with test results from Minntac's Line 7 that indicated that a 70

percent reduction in NOx emissions was achievable via a low NOx main burner. U.S. Steel reported similar results for Minntac Line 6 to Minnesota on December 1, 2011.

Nevertheless, Minnesota's submittal did not demonstrate requisite consideration of this evidence regarding the availability and feasibility of this more effective control technology. In 2008, the owners of each taconite facility asserted that a low NOx main burner was infeasible. Minnesota, in its December 2009 SIP submittal summarily concurred with the facilities, and the State in its May 2012 submittal did not reconsider the feasibility of this control option.

EPA's BART Guidelines identify a five-step process for conducting a BART analysis, step two of which is to determine whether the available options identified in step one are technically feasible. The state "should document a demonstration of technical infeasibility and should explain, based on physical, chemical, or engineering principles, why technical difficulties would preclude the successful use of the control option on the emissions unit under review." See Section IV Step 2 of the BART Guidelines, also at 70 FR 39163. Minnesota provided no such demonstration and included no explanation why this control option should be considered infeasible. Beyond lacking any discussion of relevant

principles bearing on whether the feasibility of low NOx burners in other industries suggests that low NOx main burners are feasible for taconite facilities, Minnesota's submittals do not discuss the successful demonstration of this control option at U.S. Steel's facilities or explain why this control option should not be considered feasible at these plants and at the other Minnesota taconite plants. Since Minnesota improperly considered low NOx main burners to be infeasible, the State's plan lacked the necessary analysis of the costs, emission reductions, visibility benefits, and other relevant information to determine whether these controls represent BART. Instead, in its May 2012 submittal, Minnesota stated "The [Minnesota Pollution Control Agency (MPCA)] understood the purpose of the Supplemental SIP was to establish emission limits that correspond to the previously determined BART technology. The MPCA does not believe that completing the emission limits is a vehicle for completely re-evaluating the BART determinations for the taconite facilities." Minnesota conceded that the tests at Minntac "indicate a potential to reach a 70 percent reduction in NOx emissions at the subject lines [under certain conditions]," but Minnesota characterized the tests as "pilot tests" that could not be used without substantial additional effort to establish appropriate BART limits. See the 279<sup>th</sup> page of the

Minnesota document entitled "Regional Haze State Implementation Plan Supplement April 2012."

EPA has several objections to Minnesota's rationale for failing to require low NOx burners as BART for its taconite plants. When EPA proposes an action but then receives significant evidence favoring an alternate action, EPA must consider that evidence and take the alternate action if warranted. See *Sierra Club v. EPA*, 671 F.3d 955 (9<sup>th</sup> Cir. 2012). Although EPA initially proposed to approve Minnesota's taconite limits, EPA then received evidence that disapproval was warranted because more effective controls were available. EPA's consideration of this evidence resulted in EPA's August 15, 2012, proposal to disapprove in part Minnesota's regional haze plan with respect to BART for taconite plants and in EPA's action today to publish this supplemental notice of proposed rulemaking.

EPA believes that Minnesota is under similar obligation to reconsider its taconite plant BART limits. The State solicited comments regarding the limits it proposed to establish for its taconite plants, the State received comments demonstrating that significantly tighter limits were warranted, and the State did not give due consideration to those comments. The failure to promulgate limits reflecting low NOx main burners is especially

problematic for Minntac, where the benefits of this technology had been physically demonstrated. Minnesota also did not give due consideration to the evidence that similar technology could be expected to achieve similar emission reductions and benefits at other Minnesota taconite plants.

Furthermore, even at the time Minnesota submitted its original regional haze SIP (December 2009), information was available that low NOx main burners, which had been successfully demonstrated in several other industries, were likely to be a successful technology for reducing NOx emissions from taconite facilities as well. Although EPA did not have the relevant information when it published its January 2012 proposed rulemaking, the above chronology suggests that Minnesota had information even in 2009 that warranted considering low NOx main burners to be a feasible technology.

The requirements in Minnesota's final submittal also reflect significant modifications from the control technology that the State determined in 2009 to reflect BART. Minnesota determined in 2009 that good combustion practice represented BART. However, aside from requiring continuation of the heat recuperation project at the Hibbing Taconite Plant, Minnesota's final submittal provided no evidence that good combustion practice is actually required. Minnesota did not explain what

specific measures constitute good combustion practice, stating only that good combustion practice varies from plant to plant. However, Minnesota did not define good combustion practice either in general or on a plant-by-plant basis.

Minnesota determined emission limits by conducting statistical analyses of full sets of recent emissions data measured at the taconite plants. While existing emissions may in some cases reflect some good combustion practices, Minnesota did not differentiate whether any particular data did or did not represent application of good combustion practice. Thus, Minnesota's limits must be considered to represent simply the existing combustion practice in effect during the testing, without regard to whether these limits reflect application of good combustion practices. Because the companies were required to collect these data for purposes of determining these limits, with instructions to operate under worst case conditions, it is reasonable to conclude that the companies would not have employed good combustion practices, as those would not have created "worst case conditions."

Further, Minnesota's submittal did not determine whether good combustion practices beyond those currently being implemented are feasible, either in general or on a plant-specific basis. Minnesota's December 2009 submittal determined

that BART would be good combustion practice, suggesting that BART would reflect identification, evaluation, and implementation of improvements in combustion practice. However, Minnesota's final submittal lacks any such identification, evaluation, or requirement for any such improvement in combustion practice. Moreover, the submittal does not evaluate whether current combustion practice (or, more precisely, the combustion practice in place during collection of the pertinent emissions data) represents good combustion practice. In these respects, while Minnesota's December 2009 submittal determined BART for NO<sub>x</sub> to be good combustion practice, Minnesota's final submittal contained no provisions ensuring that good combustion practice will actually be followed.

Minnesota's final submittal also deviates in other significant respects from its December 2009 submittal. Minnesota's final submittal relies on the Cross-State Air Pollution Rule to satisfy the BART requirement for most of the State's electric generating units, whereas its December 2009 plan determines BART on a plant-by-plant basis. The long-term strategy in Minnesota's final plan provides for taconite plants to conduct modeling and to recommend emission limits that would provide for attainment of the nitrogen dioxide (NO<sub>2</sub>) and SO<sub>2</sub> air quality standards, whereas the December 2009 plan provides for

the companies to conduct pilot testing of emission control technology. EPA is not conducting rulemaking here on these features of Minnesota's regional haze plan, but these changes demonstrate that Minnesota recognized its latitude to update portions of its December 2009 submittal significantly in light of more recent information. Similarly, Minnesota cannot argue that it was obligated to set limits based on its December 2009 BART determination, in the face of evidence that more effective control is available.

EPA is also concerned that Minnesota rejected flue gas desulfurization as a feasible option for control of SO<sub>2</sub> emissions at United Taconite (UTac). At this facility, Minnesota made its initial BART determination at a time when UTac's Line 1 fired only natural gas or fuel oil and when UTac's Line 2 fired a variety of fuels including coal and petroleum coke. Minnesota determined at that time that BART for SO<sub>2</sub> for UTac reflected the existing particulate matter scrubbers on both lines (without further optimization to control SO<sub>2</sub> emissions) and fuel blending to reduce SO<sub>2</sub> emissions on Line 2. Minnesota concluded that flue gas desulfurization for these lines was not cost effective.

UTac subsequently obtained a permit to burn solid fuels on Line 1. Best available control technology (BACT) was not required in this permit because Minnesota concluded that the

fuel blending measures that it had determined to be BART for Line 2, which it incorporated into the permit, would yield a net SO<sub>2</sub> emission reduction. Consequently, the fuel change did not constitute a major modification requiring BACT. Minnesota also chose not to conduct a revised BART analysis, determining limits reflecting existing controls with the original fuels and then adopting an alternate set of limits that it found equivalent.

EPA believes that Minnesota improperly rejected the use of flue gas desulfurization as a cost effective technology for reducing SO<sub>2</sub> emissions from UTac's two lines. As discussed in the August 15, 2012, notice of proposed rulemaking, EPA believes that flue gas scrubbing, particularly in combination with proper fuel blending, is considerably more cost effective than the cost effectiveness estimates in Minnesota's plan. Furthermore, the significant change in operation at the plant warranted reanalysis of BART at this plant. The higher sulfur content of the new fuels made more aggressive emission control more cost effective, so that a proper reanalysis of BART could have concluded that BART for the new configuration reflected more control and lower emissions than the original configuration. Minnesota's analysis of the plant using its previous fuel mix

does not adequately evaluate the appropriateness of controls for the plant as it is currently operated.<sup>1</sup>

EPA also has a variety of concerns about the enforceability of Minnesota's chosen limits. Minnesota's limits are expressed as 30-day rolling averages, but Minnesota in many cases does not require continuous emission monitoring systems (CEMS) to provide data for evaluating compliance. In the absence of CEMS, Minnesota requires "stack testing . . . for 30 hourly data points." Even if the average of the 30 data points exceeds the emission limit, the data can be contested as not necessarily representative of the 720 hours that are in a 30-day average. Minnesota has not addressed whether 720 consecutive hours of stack testing is even practicable, though none of the data used to develop emission limits appears to have been collected in this manner.

EPA has special concerns about the enforceability of the CEMS requirement for Hibbing Taconite. Minnesota requires that the company submit a plan for installing a NO<sub>x</sub> CEMS, but it is not clear from the administrative order that Minnesota or EPA could take enforcement action if Hibbing Taconite failed to install, certify, and properly operate a CEMS at this facility.

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<sup>1</sup> While this rulemaking does not address Federal limits that EPA is promulgating elsewhere, it is relevant to note that EPA is promulgating final limits based on the source burning low sulfur fuels.

The SO<sub>2</sub> emission limits in Minnesota's administrative orders are expressed in terms of pounds of SO<sub>2</sub> emissions per long ton of pellets produced. Pellet production is not routinely measured at the end of an indurating furnace. Further, the administrative orders do not specify methods for determining pellet production by indurating furnaces and do not specify any requirement for the companies to keep records of pellet production. Therefore, the enforceability of these limits is also unclear.

The administrative order for Hibbing Taconite also provides that the company may determine that its limits are not feasible to meet. In that case, the order identifies information that the company must submit to Minnesota so that the State can consider revised emission limits. These provisions raise questions about whether EPA could enforce the terms of the administrative order if the company has declared the limits to be infeasible.

EPA also has concerns about the methods for computing emission limits. For Arcelor/Mittal and Hibbing Taconite, Minnesota appears to have set the limit using the upper predictive limit approach. The equation for calculating the upper predictive limit for normally distributed data is:

$$UPL = \bar{X} + t_{p,df} s \sqrt{\frac{1}{m} + \frac{1}{n}}$$

where

UPL = Upper predictive limit

$n$  = number of data points

$m$  = number of future data points

$df = n - 1$

$\bar{X}$  is the mean,

$t_{p,df}$  represents the critical t-value with a  $p$ -value of  $p$  and  $df$  degrees of freedom, and

$s$  is the standard deviation

The available emissions data for these facilities appear not to be normally distributed, and so the upper predictive limit equation that Minnesota used is not appropriate for this application. In addition, the analyses contained in the Minnesota submittal do not appropriately apply the upper predictive limit approach for normally distributed data. Most notable is the use of inappropriate values for  $t_{p,df}$  and  $m$ . A normal distribution has a lower tail of the distribution with the same frequency as the upper tail of the distribution. In seeking, for example, to establish the 95<sup>th</sup> percentile value in a normal distribution, a one tailed test must be applied, such

that the upper tail contains five percent of the distribution and the lower tail is simply part of the 95 percent of the distribution at or below the 95<sup>th</sup> percentile value. However, Minnesota selected its values for  $t_{p,df}$  based on statistics for two tailed tests, which derive, for example, a 95 percent confidence interval that reflects a 2.5 percent upper tail and a 2.5 percent lower tail, which would yield a 97.5<sup>th</sup> percentile value. (Because normal distributions are symmetric, this error can be addressed by using a value of  $t_{p,df}$  for twice as much frequency outside the confidence interval, e.g., using a two-tailed value of  $t_{p,df}$  for a confidence interval of 90 percent in order to derive the 95<sup>th</sup> percentile value, but Minnesota did not make this adjustment.) Thus, Minnesota selected values of  $t_{p,df}$  that were unduly high, and higher in the emissions distribution than Minnesota was purporting to choose.

In the above formula,  $m$  represents the number of future runs, i.e., the number of future data points. Given that the data sets being used in the analyses are one-hour averages, with CEMS, the value of  $m$  should be 720 (30 days times 24 hours). At a minimum, under administrative orders that in the absence of CEMS apparently determine compliance on the basis of 30 hourly data points (presumably intended to represent 30-day average emissions), the appropriate value of  $m$  would be 30.

For ArcelorMittal, Minnesota appears to have set the limit based on a  $p$ -value of 0.01 (which in a normal distribution would yield an upper tail of 0.5 percent and thus a 99.5 percentile value) and  $m = 3$ . These values do not represent appropriate values for  $p$  or  $m$ .

Furthermore, Minnesota did not base its limits for this facility directly on the original data set, but instead used the 157 original data points to create multiple artificial data sets, each including 2000 sets of 30 values randomly selected from the original 157 values. Minnesota then performed statistical analysis of these data sets, using the mean of the original 157 data points plus an adjustment based on the highest standard deviation among the various artificial data sets that was intended to provide a 99<sup>th</sup> percent upper predictive limit value. Minnesota does not justify use of these artificial data sets as providing a better representation of emissions or being a better basis for determining an appropriate emission limit than direct use of the original data set, nor does Minnesota justify using this particular combination of statistics.

Also of note is the fact that the average of the 157 data points is significantly higher than the results of stack tests conducted between June 2000 and April 2009; specifically, the average is 17 percent higher than the highest of these stack

test results and 32 percent higher than the average of these stack test results. This suggests that the data set on which Minnesota used to derive its emission limits reflected poorer combustion practice than was in place during the prior stack tests. This raises further questions as to whether the data sets on which Minnesota bases its limits can even be considered to reflect good combustion practice, much less BART-level emission control.

For Hibbing Taconite, Minnesota appears to have set the limit based on a  $p$ -value of 0.05 (which would represent a 97.5% confidence interval) and  $m = 1$ . Again, these are not appropriate values for  $p$  or  $m$ .

For Northshore Mining, Minnesota appears to have had very little emissions data available as a basis for setting a limit. The hood exhaust portion of the limit appears to be based on one test data point multiplied by a "compliance margin" of 1.73. The state provided inadequate justification for the 1.73 multiplier. The waste gas portion of the limit appears to be based on a 95 percent upper confidence limit (one-tailed test) and three data points.

For the U.S. Steel-Minntac and -Keetac facilities, Minnesota set facility-wide limits in terms of tons of  $\text{SO}_2$  per day. Minnesota has not demonstrated that limiting the sum of

emissions across multiple lines requires control and visibility benefits that are better than those that would be obtained by requiring BART on each line.

In summary, the BART determinations for taconite facilities in Minnesota's plan reflect several deficiencies. Most notably, Minnesota inappropriately rejects significant emission control options as being infeasible. Minnesota summarily states that low NOx main burners are infeasible, without providing the necessary explanation as to why this technology could not be applied and without properly considering evidence at U.S. Steel's Minntac plant demonstrating successful operation of this control. Similarly, Minnesota inappropriately rejected control options requiring significant reductions in SO<sub>2</sub> emissions. Minnesota determined that good combustion practice represents BART for NOx control for these plants, but the State did not define the measures that constitute good combustion practice, the State did not evaluate what good combustion practices might be implemented either in general or at specific plants, and the State provided no basis to believe that its adopted limits in fact reflect good combustion practice. Finally, EPA has concerns about the enforceability and the derivation of several of the limits in Minnesota's plan.

#### **B. Michigan**

As with Minnesota's plan, EPA's primary concern with Michigan's plan for the Tilden Mining facility is the failure of the plan to require emission control that fully represents BART. The Michigan plan provides no limits on NOx emissions, and Michigan relies on a state permit to provide a limit on SO<sub>2</sub> emissions that is over four times higher than current emissions. Thus, rather than require implementation of BART, Michigan's plan allows Tilden Mining to increase emissions to levels substantially higher than the levels that are occurring now.

For NOx, Michigan nominally is defining BART to reflect "good combustion practices," but in fact neither Michigan nor Tilden Mining provide any analysis of what these practices might be and whether any such measures that are not currently being implemented might be required to be instituted. Michigan's plan thus might be considered to define BART to reflect existing combustion practices, except that Michigan's plan provides no limits that would require even the existing combustion practices to be maintained. Instead, Michigan's plan states that Michigan "accepts Tilden's proposal to set a BART NOx emission limit in a manner similar to the Minnesota Regional Haze SIP. The new NOx limits will be set after testing to determine appropriate limits based on 'good combustion practices' before December 31, 2012." See page 36 of the document entitled, "State Implementation Plan

Submittal for Regional Haze" dated October 2010. The plan anticipates that the company will perform stack testing to develop information on which to base such limits. However, Michigan has provided no information to EPA that it has taken any of the steps that it would need to take to establish these limits. In response to a request under authority of Clean Air Act section 114, Tilden Mining provided EPA the results of three stack tests at each of the two furnace stacks. However, Michigan has submitted no information providing any analysis of emission limits to indicate what limit it might find appropriate, and Michigan has evidently not adopted and has not submitted any emission limit that would make any definition of NOx BART at this facility enforceable.

Appendix 9H of Michigan's submittal, a document labeled Tilden BART Technical Analysis that was apparently prepared by Tilden Mining, states that "[l]ow NOx burners have been installed in the preheating section of a straight-grate furnace at another taconite plant; however, the [Tilden] indurating furnace does not contain a pre-heat burner section. If [low NOx burners] were to be applied in the indurating zone of the furnace, the reduced flame temperatures associated with [low NOx burners] were to be applied in the indurating zone of the furnace, the reduced flame temperatures associated with [low NOx

burners] would adversely affect taconite pellet product quality. [Low NOx burners have] not been applied to the indurating or preheat zones of any grate-kiln taconite furnace. Therefore, this option is not technically feasible." Michigan's plan accepts Tilden Mining's conclusion that low NOx burners are not technically feasible at this facility.

As noted above, low NOx burners now have been applied to a taconite furnace, in particular to the indurating zones of two grate-kiln furnaces. These applications were found not to have adverse effects on product quality. Thus, low NOx burners must be considered technically feasible for Tilden Mining's indurating furnace. Michigan was aware of the testing of low NOx main burners at U.S. Steel's Minntac plant and received comments on the subject before the end of the public comment period on its SIP. Insofar as Michigan has not conducted an adequate review of the costs, benefits and other consequences of implementing this technology, and since this control would provide substantially better control compared to current practice at the plant and compared to the unlimited NOx emissions that Michigan allows, Michigan's plan cannot be considered to require BART for NOx at Tilden Mining.

With respect to SO<sub>2</sub>, Michigan found several emission control options to be feasible, but the State ultimately concurred with

Tilden Mining's view that none of the options were cost-effective, based on costs per ton of SO<sub>2</sub> removal ranging from \$6,557 per ton to \$22,407 per ton. Michigan rejected use of alternative fuels such as natural gas as not required by the BART Guidelines.

In its August 15, 2012 proposed rulemaking, EPA reviewed the cost effectiveness of SO<sub>2</sub> emission controls and concluded that flue gas desulfurization would be more cost effective than the Michigan plan indicated. EPA has received comments on the cost effectiveness of this control, and EPA has also received comments from Cliffs Natural Resources indicating that limits reflecting the firing of natural gas would also be an appropriate basis for setting SO<sub>2</sub> emission limits for Tilden. EPA will evaluate these comments and any additional comments that EPA receives in response to today's notice of proposed rulemaking, in order to determine whether it considers these findings in Michigan's plan to be problematic. In any case, EPA believes that the SO<sub>2</sub> emission limit for this facility set by Michigan, allowing more than four times more emissions than the facility currently emits, cannot be considered to represent BART.

Michigan's plan also states that "modeling results showed SO<sub>2</sub> emissions [from Tilden Mining] do not cause visibility

impairment to the Class I areas." However, Michigan's plan does not include the information that would be necessary to support a statement that is so at odds with the results of other modeling provided in the plan. In any case, the furnace and other parts of the facility have sufficient impact to be subject to the requirement for BART, and the impact of the emissions of one pollutant can be considered as part of a five factor analysis of BART but does not justify failing to perform the necessary BART analysis, nor can such an analysis justify a conclusion that BART reflects substantially greater emissions than the facility currently emits.

#### **IV. How Does This Action Relate to the Action to Promulgate Federal Requirements for Taconite Plants?**

As noted above, in an action published August 15, 2012, EPA proposed both to promulgate Federal limits representing BART for taconite plants in Minnesota and Michigan and to disapprove Minnesota and Michigan's plans with respect to BART for these plants. In response, EPA received comments objecting that the agency had not adequately explained its rationale for proposing to disapprove the state submittals. EPA notes that it expressly proposed revisions to 40 CFR 52.1183 and 52.1235 to disapprove Michigan and Minnesota's plans with respect to taconite plant BART and provided extensive discussion of the limits needed to

satisfy the taconite plant BART requirement, which implicitly demonstrated the inadequacy of the states' plans. Nonetheless, EPA agrees that further explanation of the basis for its proposal to disapprove the state plans is warranted. Therefore, EPA is providing this further explanation in this action and is soliciting further comments on this topic.

In these circumstances, EPA views the promulgation of a Federal implementation plan (FIP) and the disapproval of the relevant elements of the state plans as separable actions. A mandate for promulgating Federal limits applies in cases where EPA "finds that a State has failed to make a required submission." EPA "shall promulgate [a FIP] within two years" of such a finding, "unless the State corrects the deficiency, and [EPA] approves the plan or plan revision, before [EPA] promulgates such Federal implementation plan." See Clean Air Act section 110(c)(1)(A). Here, EPA made findings, published on January 14, 2009, at 74 FR 2392, that Minnesota and Michigan had failed to make complete submittals addressing regional haze requirements. Minnesota and Michigan subsequently made complete submittals, but because of the deficiencies discussed in detail in this notice, EPA has not approved these submittals with respect to BART for taconite plants. Therefore, the mandate remains for EPA to promulgate a FIP with respect to taconite

plant BART. EPA notes that the agency's mandate to promulgate such a FIP applies without regard to whether EPA has disapproved a state submittal. While EPA has proposed to disapprove Michigan and Minnesota's regional haze SIPs in this instance, publication of final disapproval of the states' submittals is not a prerequisite for promulgating a FIP, and EPA must promulgate a FIP in these circumstances irrespective of whether it has disapproved the state submittals.

As a result, EPA today is publishing a separate action to promulgate a FIP addressing BART for taconite plants in Minnesota and Michigan. That action does not address the approvability of the state submittals, a subject that will be addressed only after EPA considers any additional comments it receives in response to this supplemental notice of proposed rulemaking. Conversely, this action only addresses the deficiencies in the states' submittals without addressing the limits that EPA would find necessary, through Federal promulgation or state adoption, to satisfy the BART requirement for these sources. Similarly, this action is soliciting further comments on the approvability of the state plans with respect to BART for taconite plants, but EPA is not soliciting further comments on the FIP that EPA proposed to promulgate. In addition, commenters that submitted comments on the August 15,

2012, action that addressed the approvability of the state submittals need not resubmit those comments; EPA will consider those comments as well as any comments it receives in response to today's proposal as it prepares final action on the elements of Minnesota and Michigan's plans addressing BART for their taconite plants.

In summary, on August 15, 2012, EPA proposed to partially disapprove Minnesota and Michigan's plans as failing to satisfy the requirements for BART for their taconite plants. Today's supplemental notice of proposed rulemaking provides further explanation of EPA's rationale for proposing that action and solicits further comment on that proposed action.

#### **V. Statutory and Executive Order Reviews.**

##### **Executive Order 12866: Regulatory Planning and Review**

Under Executive Order 12866 (58 FR 51735, October 4, 1993), this action is not a "significant regulatory action" and, therefore, is not subject to review by the Office of Management and Budget.

##### **Paperwork Reduction Act**

This rule does not impose an information collection burden under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*).

##### **Regulatory Flexibility Act**

This action merely solicits comment on a proposal to disapprove

state law as not meeting Federal requirements and imposes no additional requirements beyond those imposed by state law. Accordingly, the Administrator certifies that this rule will not have a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*).

#### **Unfunded Mandates Reform Act**

Because this rule solicits comment on a proposal to disapprove pre-existing requirements under state law and does not impose any additional enforceable duty beyond that required by state law, it does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4).

#### **Executive Order 13132: Federalism**

This action also does not have Federalism implications because it does not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132 (64 FR 43255, August 10, 1999). This action merely solicits comment on a proposal to disapprove a state plan, and does not alter the relationship or the distribution of power and responsibilities established in the Clean Air Act.

**Executive Order 13175: Consultation and Coordination With Indian Tribal Governments**

Subject to Executive Order 13175 (65 FR 67249, November 9, 2000), EPA may not issue a regulation that has tribal implication, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by tribal governments, or EPA consults with tribal officials early in the process of developing the proposed regulation and develops a tribal summary impact statement.

EPA has concluded that this action, in conjunction with the FIP promulgation, may have tribal implications. For example, although the FIP does not apply to sources in Indian country, controls and emission reductions arising from the program may affect Indian country or other tribal interests. However, the regulations arising under that action, and the SIP disapproval being addressed here, will neither impose substantial direct compliance costs on tribal governments, nor preempt Tribal law.

EPA initiated consultation with Tribal officials early in the process of developing this regulation to permit them to have meaningful and timely input into its development. EPA sent an invitation to consult to each Region 5 Tribe on August 15, 2012,

along with a copy of the proposed taconite FIP Federal Register notice. Conference calls were held on the taconite FIP proposal on August 22, 2012 and September 12, 2012 to provide all Region 5 Tribes with more information on the proposed rulemaking and an opportunity to ask questions of EPA technical staff and request formal individual consultation if desired. Four Region 5 Tribes participated in the August 22, 2012 call. Two Region 5 Tribes participated in the September 12, 2012 discussion. One Region 5 Tribe provided verbal testimony at the public hearing held on the proposed taconite FIP rulemaking on August 29, 2012. One Region 5 Tribal Chair expressed appreciation for the consultation discussions held with the Tribes and gratitude for EPA's careful consideration of the regional haze situation in northeast Minnesota.

**Executive Order 13045: Protection of Children From Environmental Health and Safety Risks**

This rule also is not subject to Executive Order 13045

"Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997), because it solicits comment on a proposal to disapprove a state rule.

**Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use**

Because it is not a "significant regulatory action" under

Executive Order 12866 or a "significant energy action," this action is also not subject to Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use" (66 FR 28355, May 22, 2001).

#### **National Technology Transfer Advancement Act**

In reviewing state submissions, EPA's role is to approve state choices, provided that they meet the criteria of the Clean Air Act. In this context, in the absence of a prior existing requirement for the state to use voluntary consensus standards (VCS), EPA has no authority to disapprove a state submission for failure to use VCS. It would thus be inconsistent with applicable law for EPA, when it reviews a state submission, to use VCS in place of a state submission that otherwise satisfies the provisions of the Clean Air Act. Thus, the requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) do not apply.

#### **Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations**

Executive Order 12898 (59 FR 7629 (Feb. 16, 1994)) establishes Federal executive policy on environmental justice. Its main provision directs Federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as

appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

EPA lacks the discretionary authority to address environmental justice in this proposed action. In reviewing SIP submissions, EPA's role is to approve or disapprove state choices, based on the criteria of the Clean Air Act. Accordingly, this action merely proposes to disapprove certain state requirements for inclusion into the SIP under section 110 and subchapter I, part D of the Clean Air Act and will not in-and-of itself create any new requirements. Accordingly, it does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898.

**List of Subjects in 40 CFR Part 52**

Environmental protection, Air pollution control,  
Incorporation by reference, Intergovernmental relations,  
Nitrogen dioxide, Particulate matter, Reporting and  
recordkeeping requirements, Sulfur oxides.

Dated: January 11, 2013.

Susan Hedman,  
Regional Administrator, Region 5.

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