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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Office of Air Quality Planning and Standards  
Research Triangle Park, North Carolina 27711

JUL 5 1988

MEMORANDUM

Subject: Air Quality Analysis for Prevention of Significant Deterioration  
(PSD)

From: Gerald A. Emison, Director  
Office of Air Quality Planning and Standards (MD-10)

TO: Thomas J. Maslany, Director  
Air Management Division (3AM00)

Your memorandum of May 9, 1988, pointed out that two different procedures are currently being used by the Regional Offices in certain PSD permit analyses. The inconsistency involves the question of how to interpret dispersion modeling results to determine whether a source will cause or contribute to a new or existing violation of a national ambient air quality standard (NAAQS) or PSD increment. This memorandum serves to resolve the inconsistency by reaffirming previous Office of Air Quality Planning and Standards guidance provided in a December 1980 policy memorandum (attached).

As you know, the regulations for PSD stipulate that approval to construct cannot be granted to a proposed new major source or major modification if it would cause or contribute to a NAAQS or increment violation. Historically, the Environmental Protection Agency's (EPA's) position has been that a PSD source will not be considered to cause or contribute to a predicted NAAQS or increment violation if the source's estimated air quality impact is insignificant (i.e., at or below defined de minimis levels). In recent years, two approaches have been used to determine if a source would "significantly" (40 CFR 51.165(b) defines significant) cause or contribute to a violation. The first is where a proposed source would automatically be considered to cause or contribute to any modeled violation that would occur within its impact area. In this approach, the source's impact is modeled and a closed circle is drawn around the source, with a radius equal to the farthest distance from the source at which a significant impact is projected. If, upon consideration of both proposed and existing emissions contributions, modeling predicts a violation of either a NAAQS or an increment anywhere within this impact area, the source (as proposed) would not be granted a permit. The permit would be denied, even if the source's impact was not significant at the predicted site of the violation during the violation period. You have indicated that this is the approach you currently use.

The second approach similarly projects air quality concentrations throughout the proposed source's impact area, but does not automatically assume that the proposed source would cause or contribute to a predicted NAAQS or increment violation. Instead, the analysis is carried one step further in the event that a modeled violation is predicted. The additional step determines whether the emissions from the proposed source will have a significant ambient impact at the point of the modeled NAAQS or increment violation when the violation is predicted to occur. If it can be demonstrated that the proposed source's impact is not "significant" in a spatial and temporal sense, then the source may receive a PSD permit. This approach is currently being used by Region V and several other Regional Offices, and is the approach that you recommend as the standard approach for completing the PSD air quality analysis.

In discussing this matter with members of my staff from the Source Receptor Analysis Branch (SRAB) and the Noncriteria Pollutant Programs Branch (NPPB), it appears that different guidance has been provided, resulting in the two separate approaches just summarized. We have examined the history and precedents which have been set concerning this issue. I also understand that this issue was discussed extensively at the May 17-20, 1988 Regional Office/State Modelers Workshop, and that a consensus favored the approach being used by Region V and several other Regions. Based on this input, as well as your own recommendation, I believe the most appropriate course of action to follow is the second approach which considers the significant impact of the source in a way that is spatially and temporally consistent with the predicted violations.

By following the second approach, three possible outcomes could occur:

(a) First, dispersion modeling may show that no violation of a NAAQS or PSD increment will occur in the impact area of the proposed source. In this case, a permit may be issued and no further action is required.

(b) Second, a modeled violation of a NAAQS or PSD increment may be predicted within the impact area, but, upon further analysis, it is determined that the proposed source will not have a significant impact (i.e., will not be above de minimis levels) at the point and time of the modeled violation. When this occurs, the proposed source may be issued a permit (even when a new violation would result from its insignificant impact), but the State must also take the appropriate steps to substantiate the NAAQS or increment violation and begin to correct it through the State implementation plan (SIP). The EPA Regional Offices' role in this process should be to establish with the State agency a timetable for further analysis and/or corrective action leading to a SIP revision, where necessary. Additionally, the Regional Office should seriously consider a notice of SIP deficiency, especially if the State does not provide a schedule in a timely manner.

(c) Finally, the analysis may predict that a NAAQS or increment violation will occur in the impact area and that the proposed source will have a significant impact on the violation. Accordingly, the proposed source is considered to cause, or contribute to, the violation and cannot be issued a permit without further control or offsets. For a new or existing NAAQS

violation, offsets sufficient to compensate for the source's significant impact must be obtained pursuant to an approved State offset program consistent with SIP requirements under 40 CFR 51.165(b). Where the source is contributing to an existing violation, the required offsets may not correct the violation. Such existing violations must be addressed in the same manner as described in (b) above. However, for any increment violation (new or existing) for which the proposed source has a significant impact, the permit should not be approved unless the increment violation is corrected prior to operation of the proposed source (see 43 FR p. 26401, June 19, 1978; and 45 FR p. 52678, August 7, 1980).

Your memorandum also states that other air quality analysis issues exist within the NSR program which need consistent national guidance. You recommend a more coordinated effort between SRAB and NPPB to review outstanding NSR issues. We agree; however, rather than establishing a formal work group as you propose, we are optimistic that the formal participation of representatives of the NSR program in the Modeling Clearinghouse will help resolve coordination problems. Earlier in the year, the Modeling Clearinghouse was officially expanded to include representation from the NPPB to coordinate PSD/NSR issues which have a modeling component.

I trust that this is responsive to the concerns which you have raised. By copy of this memorandum, we are also responding to a Region V request for clarification on the same issue (memorandum from Steve Rothblatt to Joe Tikvart/Ed Lillis, dated February 18, 1988).

Should you have any further questions concerning this response, please feel free to contact Gary McCutchen, Chief, New Source Review Section, at FTS 629-5592.

Attachment

cc: Air Division Directors, Regions I-X  
Air Branch Chiefs, Regions I-X  
D. Clay  
J. Calcagni  
J. Tikvart  
E. Lillis  
G. McCutchen  
D. deRoeck

Attachment

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September 10, 1991

MEMORANDUM

SUBJECT: Class I Area Significant Impact Levels

FROM: John Calcagni, Director  
Air Quality Management Division (MD-15)

TO: Thomas J. Maslany, Director  
Air, Radiation & Toxics Division (3AT00)

This is in response to the January 7, 1991 memorandum from Marcia Spink to Ed Lillis requesting guidance to address issues raised by Mr. John Daniel, Assistant Executive Director of the Virginia Department of Air Pollution Control (VDAPC), concerning Class I area significant impact levels for Class I increments. Specifically, Mr. Daniel requested that the Environmental Protection Agency (EPA) develop a national policy for determining whether a source will have a significant impact on the increments applicable to Class I areas. As part of his request, Mr. Daniel also asked that EPA define these significant impact levels.

It is EPA's longstanding policy under the prevention of significant deterioration (PSD) program to allow the use of significant impact levels to determine whether a proposed new or modified stationary source will cause or contribute to a violation of the national ambient air quality standards (NAAQS) or PSD increments. However, the significant impact levels originally set forth by EPA, and still in general use for such purpose, were never intended to be used for evaluating impacts on the Class I increments (43 FR 26380, June 19, 1978). Mr. Daniel is correct, therefore, in stating that EPA does not have a national policy defining air quality significant impact levels for Class I increments.<sup>1</sup> I see no reason, however, why the concept of significant impact should not also be applied to Class I increments provided the significant impact levels are determined in a reasonable manner.<sup>2</sup>

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<sup>1</sup>However, the PSD regulations do require that a proposed emissions increase (not otherwise considered significant based on prescribed significant emissions rates) from a source located within 10 kilometers of a Class I area be considered significant (and therefore subject to PSD review) if such increase will have an air quality impact equal to or greater than  $1 \mu\text{g}/\text{m}^3$  (24-hour average) in the Class I area [see 40 CFR 52.21(b)(23)(iii)]. The purpose of this provision is to establish the need to subject a relatively small emissions increase to PSD review if such increase occurs near a Class I area--not to define a significant impact on a NAAQS or increment violation.

<sup>2</sup>In the EPA guideline document entitled "Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)," (EPA-450/4-80-012, November 1980) a note to the table providing significant ambient air quality impacts stated that the table did not apply to Class I areas, but that a source impact of  $1 \mu\text{g}/\text{m}^3$  (24-hour average) in a Class I area constitutes a significant ambient impact for particulate matter and  $\text{SO}_2$ . However, this appears to have been an erroneous extension of EPA's PSD policy on significant emissions increases and does not constitute current EPA policy for Class I area impacts.

The Office of Air Quality Planning and Standards recently initiated action that will lead to rulemaking to address the general need for Class I significant impact levels. The action is part of EPA's efforts to implement the new PSD/new source review provisions in the 1990 Clean Air Act Amendments. However, because the process of developing the implementing regulations will be a lengthy one, more immediate guidance concerning Class I significant impact levels is appropriate in order to assist the VDAPC in implementing its PSD permit program.

In his January 7, 1991 letter, Mr. Daniel proposed to establish significant impact levels for the Class I increments based on a ratio derived from the current significant impact levels and the Class II PSD increments. Given the status of EPA's regulatory efforts, as well as the fact that the VDAPC is the delegated PSD permitting agency, I concur in the methodology proposed by Mr. Daniel as a reasonable interpretation of the relevant statutory and regulatory requirements in this instance. The VDAPC's methodology and the resulting significant impact levels for sulfur dioxide (SO<sub>2</sub>), particulate matter, and nitrogen dioxide (NO<sub>2</sub>) are included as an attachment to this memorandum.

It should be understood, however, that VDAPC's position and this concurrence are not binding on other States. Moreover, this concurrence in the use of such significant impact levels for the purpose of Class I increment analyses does not include their use for determining whether a source should conduct an adverse impact analysis for any air quality-related value (AQRV) in a Class I area, or whether a source would have an adverse impact on an AQRV.

A determination concerning the need for a full assessment of an AQRV is made by the Federal Land Manager based on an analysis of the proposed source's (and other cumulative) potential impacts on an AQRV for that particular Class I area. This analysis is independent of the inquiry into whether a proposed source would have a significant impact on any applicable Class I increment.

I trust that this response will assist the VDAPC in proceeding with its PSD permitting in an expeditious and reasonable manner. Further questions can be directed to either Gary McCutchen or Dan deRoeck of my staff at FTS 629-5592 and 629-5593, respectively.

Attachment

## ATTACHMENT

CLASS II AREAS

POLLUTANT	AVERAGE TIME PERIOD	PSD CLASS II INCREMENT	MINIMUM SIGNIFICANCE LEVEL	RATIO MSL/INCREMENT
Sulfur dioxide	Annual	20	1	0.05
	24-hour	91	5	0.055
	3-hour	512	25	0.049
Partic- ulates (TSP)	Annual	19	1	0.053
	24-hour	37	5	0.135
Nitrogen dioxide	Annual	25	1	0.04

CLASS I AREAS

POLLUTANT	AVERAGE TIME PERIOD	PSD CLASS I INCREMENT	RATIO MSL/INCREMENT	MINIMUM SIGNIFICANCE LEVEL
Sulfur dioxide	Annual	2	0.05	0.1
	24-hour	5	0.055	0.275
	3-hour	25	0.049	1.23
Partic- ulates (TSP)	Annual	5	0.053	0.27
	24-hour	10	0.135	1.35
Nitrogen dioxide	Annual	2.5	0.04	0.1



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BEFORE THE ENVIRONMENTAL QUALITY COUNCIL  
OF THE STATE OF WYOMING

IN THE MATTER OF: )  
BASIN ELECTRIC POWER COOPERATIVE ) Docket No. 07-2801  
DRY FORK STATION, ) Presiding Officer, F. David Searle  
AIR PERMIT CT-4631 )  
)

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EXPERT REPORT OF KHANH TRAN  
ON BEHALF OF PROTESTANTS

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A. Background

1. Pursuant to the Wyoming Department of Environmental Quality's prevention of significant deterioration regulations at WAQSR Chapter 6, § 4, large sources of air pollution in Wyoming are only allowed to deteriorate the downwind ambient air by specified "increments." Once an ambient increment is "consumed," no additional deterioration of the ambient air is allowed.
2. In the case of Basin Electric's proposed Dry Fork power plant, which will discharge into the air approximately 1,331 tons of sulfur dioxide (SO<sub>2</sub>) per year, before Basin Electric is allowed to construct or operate the Dry Fork facility pollution dispersion modeling must show that (1) none of Dry Fork's SO<sub>2</sub> emissions will travel to an area where the SO<sub>2</sub> increment has already been consumed, and (2) the impact of Dry Fork's SO<sub>2</sub> emissions, combined with all other SO<sub>2</sub> emissions from sources that commenced construction after January 6, 1975 (Wyoming's SO<sub>2</sub> baseline), is not greater than any applicable SO<sub>2</sub> increment.
3. As described in WAQSR Chapter 6, §4(b)(i)(A)(I), a permit to construct from the Wyoming Department of Environmental Quality "shall be issued only if . . . the predicted impact (over and above the baseline concentration) of emissions defined above is less than the maximum allowable increment shown in Table 1 . . ."

4. Table 1 in WAQSR Chapter 6, §4 is set forth below.

Table 1  
Maximum Allowable Increments of Deterioration -  $\mu\text{g}/\text{m}^3$

<u>Pollutant</u>	<u>Class I</u>	<u>Class II</u>
Particulate Matter:		
PM <sub>10</sub> , annual arithmetic mean	4	17
PM <sub>10</sub> , 24-hour maximum	8	30
Sulfur Dioxide:		
Annual arithmetic mean	2	20
24-hour maximum*	5	91
3-hour maximum*	25	512
Nitrogen Dioxide		
Annual arithmetic mean	2.5	25

\*Maximum allowable increment may be exceeded once per year at any receptor site.

5. According to Table 1, the maximum allowable increment of SO<sub>2</sub> deterioration in any 24-hour period in a Class I area is 5 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ).

B. Findings

1. The Northern Cheyenne Indian Reservation (NCIR) is approximately 135 kilometers northwest of the site of Basin Electric's Dry Fork power plant. The NCIR is a Class I airshed, meant to preserve the pristine air quality of the reservation and to provide the greatest protection from new sources of pollution. 42 Fed.Reg. 40695 (August 5, 1977).
2. The Wyoming DEQ, in its October 15, 2007 Response to Comments and Decision, pp. 16-17, states that, "the applicant [Basin Electric] modeled SO<sub>2</sub> emission sources located within a 300 km radius of the NCIR, which is considered as the practical limit for CALPUFF in the current EPA guidance document, Guideline on Air Quality Models." Exhibit A.
3. According to DEQ, "[t]he emissions inventory modeled included sources located in southern Montana, northern Wyoming, and southwest North Dakota. The only source in North Dakota located within 300 km of the NCIR was included in the analysis: the Gascoyne Generating Station, a coal-fired power plant. Sources in Montana include Colstrip Units 3 and 4, Rocky Mountain Power (Hardin), Rocky Mountain Ethanol, Colstrip Energy Limited Partnership, and Roundup Power Project Units 1 and 2. Wyoming sources include WYGEN Units 1,2, and 3, Neil

Simpson Units 1 and 2, Two Elk Unit 1, and the proposed KFX Ft Union plant. One Wyoming source was not included in the cumulative SO<sub>2</sub> increment consumption analysis at the NCIR; the Neil Simpson Unit 1 source, a coal-fired power plant in Wyoming that was constructed in 1969, prior to the major source baseline date for SO<sub>2</sub> of January 6, 1975. Additionally, four small sources of SO<sub>2</sub> were identified in South Dakota. However, because these sources have low SO<sub>2</sub> emissions and the large distance between these sources and the NCIR, these sources of SO<sub>2</sub> were not included in the cumulative Class I area increment consumption analysis." Id.

4. Further, DEQ states, "Initially, Basin Electric modeled all SO<sub>2</sub> sources using allowable short-term SO<sub>2</sub> emission rates, except for Units 3 and 4 at the Colstrip power plant in Montana, which were modeled at the 90<sup>th</sup> percentile of actual emissions, based on actual emissions data from 2003 and 2004. The Division required Basin Electric to model all sources at the respective short-term SO<sub>2</sub> permitted emission rates, and the revised SO<sub>2</sub> increment analyses submitted have included the two sources at the Colstrip facility modeled at the permitted 3-hour and 24-hour emission rates. Modeling the short-term permitted SO<sub>2</sub> emission rates for Colstrip Units 3 and 4, as submitted in the permit application, and subsequent revisions, does yield predicted SO<sub>2</sub> concentrations that are greater than the 24-hour Class I SO<sub>2</sub> increment of 5 µg/m<sup>3</sup>, for both 2002 and 2003." Id.
5. DEQ's requirement that Basin Electric model short-term permitted SO<sub>2</sub> emission rates is consistent with the NSR Workshop Manual at C.49.
6. The results of Basin Electric's 24-hour SO<sub>2</sub> modeling, set forth in DEQ's February 5, 2007 Permit Application Analysis, p. 40, are shown below,

<u>Year</u>	<u>Modeled 2<sup>nd</sup> highest SO<sub>2</sub> ambient level</u>	<u>Dry Fork's impact</u>
2002	7.0 µg/m <sup>3</sup>	0.11 µg/m <sup>3</sup>
2003	5.8 µg/m <sup>3</sup>	0.2 µg/m <sup>3</sup>

7. Basin Electric's modeling, accepted by DEQ, therefore shows that the 5.0 µg/m<sup>3</sup> 24-hour SO<sub>2</sub> increment in the Northern Cheyenne Class I area has been consumed and is presently being exceeded. Basin Electric's modeling also shows that the predicted impact of 24-hour SO<sub>2</sub> emissions from Dry Fork and other increment-consuming sources (over and above the baseline concentration) is not less than 5.0 µg/m<sup>3</sup> in the Northern Cheyenne Class I area.
8. Basin Electric only reported the second highest predicted SO<sub>2</sub> increment impacts for each year in the Northern Cheyenne Class I area, not all predicted impacts for each year.

9. Using the same model and the same inputs as Basin Electric used, I found that Basin Electric's model predicted 48 SO<sub>2</sub> 24-hour increment violations in the representative years 2002 and 2003 in the Northern Cheyenne Class I area. (I have excluded the highest exceedence at each receptor each year.)
10. Basin Electric and DEQ followed standard PSD modeling procedures by using significant impact levels (SILs) as a screening tool to determine whether to perform cumulative increment modeling. However, Basin Electric and DEQ did not follow standard PSD modeling procedures by using SILs to find the impact of Dry Fork's predicted 24-hour SO<sub>2</sub> increment violations were not significant.
11. My findings are based on the documents and computer files provided to me by the Wyoming DEQ and Basin Electric, on the modeling and statements made by Basin Electric and DEQ, and my expertise as an air pollution dispersion modeler.

C. Qualifications and Compensation

1. My current resume, including a list of publications, is attached as **Attachment 1**.
2. My fee as an expert witness is \$150 per hour.
3. In the last four years I have testified as an expert at trial or in a deposition in the following proceedings:

Montana Highwood Generating Station before the Montana DEQ.  
Georgia Longleaf Energy Station before an administrative law judge.

I declare under the penalty of perjury that the statements in this report are true and accurate to the best of my knowledge.

April 28, 2008  
Dated

Khanh Tran  
Khanh Tran

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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

REGION 8  
898 15<sup>TH</sup> STREET - SUITE 300  
DENVER, CO 80202-2468  
Phone 800-237-8917  
<http://www.epa.gov/region08>

APR 12 2002

Ref: SP-AR

Terry L. O'Clair, Director  
Division of Air Quality  
Environmental Health Section  
North Dakota Department of Health  
P.O. Box 5520  
Bismarck, ND 58506-5520

Dear Terry:

EPA has reviewed the draft North Dakota revisions to the State Implementation Plan (SIP) and Air Pollution Control Rules, as submitted by you with a letter dated February 14, 2002. Our comments for the April 19, 2002 public hearing are detailed in the attachment to this letter. In particular, please note our comment #17 regarding approvability concerns with the proposed addition of Class I significant impact levels to Chapter 33-15-15, Prevention of Significant Deterioration of Air Quality. As a reminder, a written response to EPA's comments, and all other comments received, is required to meet the completeness criteria outlined in 40 CFR Part 51 Appendix V and must be included in the formal Governor's submittal of these revisions to the SIP once they are finalized.

As you are aware, there are several proposed revisions that are not appropriate for incorporation into the North Dakota SIP for various reasons. These reasons are listed below along with the proposed North Dakota provisions that fall into each category.

1. Programs for which EPA should delegate authority to the State: Chapter 33-15-12 Standards for Performance for New Stationary Sources (New Source Performance Standards - NSPS) and any related emission guideline plans, Chapter 33-15-13 Emission Standards for Hazardous Air Pollutants (40 CFR Part 61 National Emission Standards for Hazardous Air Pollutants - Part 61 NESHAPs), and Chapter 33-15-22 Emission Standards for Hazardous Air Pollutants for Source Categories (40 CFR Part 63 National Emission Standards for Hazardous Air Pollutants - Part 63 NESHAPs);
2. Programs which EPA has already approved at the State level: Chapter 33-15-14-06 Title V Permit to Operate (8/16/99) and 33-15-21 Acid Rain Program (10/11/95); and
3. Rules that are not generally related to attainment or maintenance of the National Ambient Air Quality Standards (NAAQS): Chapter 33-15-24 Standards for Lead Based Paint

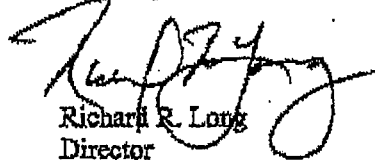


Activities.

Any necessary follow-up on the above proposed revisions will be handled separately, with the exception of our comments on Chapters 33-15-12 Standards of Performance for New Stationary Sources and 33-15-14-06 Title V Permit to Operate, which are included below.

We appreciate the opportunity to provide comments for your public hearing. If you have any questions on EPA's comments, please call me at 303-312-6005, or have your staff call Amy Platt at 303-312-6449.

Sincerely,



Richard R. Long  
Director  
Air and Radiation Program

Enclosure

cc: Tom Bachman, ND Department of Health  
Chris Shaver, NPS  
Sandra Silva, USFWS



bcc: Kathleen Paser, SP-AR  
Megan Williams, SP-AR  
Sara Laumann, SRC



ATTACHMENT

COMMENTS FOR NORTH DAKOTA'S APRIL 19, 2002 PUBLIC HEARING

Chapter 33-15-01, General Provisions

1. Although 33-15-01-07, Variances, is not the subject of the current revisions, please be advised that this provision should be removed from the Federally approved SIP. Section 110(i) of the Federal Clean Air Act, as amended, prohibits the suspension of any requirement of an applicable SIP from being taken with respect to a stationary source by a State or the Administrator of EPA, except by SIP revision under section 110(a) (and a few other exceptions). When you make your formal Governor's submittal of the final revisions, please request that EPA remove this provision from the SIP.
2. In addition to the federally enforceable monitoring or testing methods in 40 CFR parts 50, 51, 60, 61, and 75 listed as presumptively credible evidence in 33-15-01-17.2.b(1), North Dakota should add federally enforceable monitoring or testing methods from 40 CFR part 63. However, since EPA does not approve the "presumptively credible evidence" language in any newly approved credible evidence rules, we suggest that North Dakota instead revise the language in Chapter 33-15-01-17.2.a and b. to simplify it and make it more consistent with other states by replacing the current language with the following: "For the purpose of submitting compliance certifications or establishing whether or not any person has violated or is in violation of any standard in the North Dakota state implementation plan, nothing in the North Dakota state implementation plan shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed."

Chapter 33-15-05, Emissions of Particulate Matter Restricted

3. It is not clear whether the exemption language proposed in 33-15-05-02.1.c. would result in an increase in emissions. Please define "gaseous fuels" and "other gaseous fuels." To be approvable, the State will need to demonstrate that this proposed provision will not interfere with the NAAQS, Prevention of Significant Deterioration (PSD) increments, or any other Clean Air Act requirements.
4. The proposed language in 33-15-05-03.3.1. removes standards for salvage incinerators. Please explain what the State considers a "salvage incinerator" so we can determine whether removing standards for them is acceptable. To be approvable, the State needs to demonstrate how it will ensure that these facilities are not interfering with the NAAQS, PSD increments, or any other Clean Air Act requirements.
5. It is not clear why the proposed language in 33-15-05-03.3.4.c. to change the temperature requirement from 1600 to 1400 degrees Fahrenheit in a secondary chamber of a

crematorium is acceptable. EPA recommends minimum secondary chamber temperatures of 1600-1800 °F based on design types as follows: 1600 °F for units 500 lb/hr and under, in-line and retort types; 1800 °F for units greater than 500 lb/hr, multi-chamber type (see page 47 of the enclosed Regulatory Alternatives Paper, prepared by The Incinerator Work Group of EPA's Industrial Combustion Coordinated Rulemaking (ICCR) Coordinating Committee, September 8, 1998). To be approvable, the State needs to demonstrate that this proposed change will not interfere with the NAAQS, PSD increments, or any other Clean Air Act requirements.

6. The proposed last sentence in 33-15-05-03.4.e., regarding deviations from charging procedures for crematoriums, should be revised to read ".....approved by the department and EPA."
7. The proposed first sentence in 33-15-05-04.1., regarding alternative methods of measurement, should be revised to read ".....as approved by the department and EPA...." In addition, we note that 33-15-05-04, Methods of measurement, outlines methods used to determine compliance with sections 33-15-05-01 and 33-15-05-02. What will be the method for determining compliance with sections 33-15-05-03.2. and 33-15-05-03.3.?

#### **Chapter 33-15-06, Emissions of Sulfur Compounds Restricted**

8. We have several concerns with the proposed language in 33-15-06-01.1.e. This subsection provides that Chapter 33-15-06, Emissions of Sulfur Compounds Restricted, does not apply to installations that burn pipeline quality natural gas or commercial-grade propane alone or in combination with each other.
  - a. Before we could approve this proposed provision, the State will need to submit a demonstration showing that installations that burn pipeline quality natural gas or commercial-grade propane could not exceed the existing SO<sub>2</sub> emission limits in the SIF.
  - b. We are assuming that you are proposing to add this provision because sources that burn pipeline quality natural gas or commercial-grade propane usually have low SO<sub>2</sub> emissions. However, we are concerned that if a large number of sources burning pipeline quality natural gas or commercial-grade propane are located near each other there could be a problem with meeting the NAAQS or PSD increments. Therefore, before we could approve this proposed provision, additional language should be added that indicates that the department shall impose additional requirements on installations burning pipeline quality natural gas or commercial-grade propane if it is determined that these installations may cause or contribute to exceedances of the NAAQS or PSD increments.
  - c. Elsewhere the State has included a definition for pipeline quality natural gas. However, a definition for commercial-grade propane has not been included. Before we could approve this proposed provision a definition for commercial-grade propane needs to be adopted. We are assuming that the department intends for commercial-grade propane to be roughly equivalent to, in terms of sulfur content and pounds of



sulfur/nitrogen, pipeline quality natural gas. If that is not the case, we may have additional concerns with this proposed provision.

d. We are assuming that this proposed provision does not obviate installations from meeting other requirements under the State's regulations, e.g., permitting requirements. If this assumption is incorrect, we may have additional concerns with this proposed provision.

e. Finally, the proposed provision indicates that installations that burn pipeline quality natural gas or commercial-grade propane are not subject to the chapter. However, the chapter contains, among other things, methods of measurement and continuous emission monitoring requirements. We do not believe that installations burning pipeline quality natural gas or commercial-grade propane should be excluded from meeting such requirements, as required in those subsections.

9. The language in the opening paragraph of 33-15-06-03 should be revised to indicate that replacement or applicable alternative methods to NSPS reference methods can be used as "approved by the department and EPA."

10. Although the State is not revising 33-15-06-03.5.a. at this time, we have the following comment. This rule provides equations to determine the pollutant emission rate if Method 6 is used. We question why this equation is provided. The purpose of Method 6 is to determine SO<sub>2</sub> concentration from stationary sources. It is not intended to determine a pollutant emission rate. The equations provided in 33-15-06-03.5.a. are the same equations provided in Method 20 - a method to determine, among other things, SO<sub>2</sub> emissions from gas turbines. We do not understand why you would use a gas turbine equation for potentially any source that calculates an SO<sub>2</sub> concentration with Method 6.

11. If you intend to keep the equations in 33-15-06-03.5.a., then we would make the following comment. On page 6-4, the state is proposing to replace the table in 33-15-06-03.5.a(5) with F Factors from Method 19. For the most part, the Fc factors in Method 19 are lower than in the State's current table. Using method 19 Fc factors will result in lower pollutant emission rates being calculated. Since this appears to be a SIP relaxation, the State will need to demonstrate that there will be no adverse impacts to the NAAQS, PSD increments, or any other Clean Air Act requirement. As part of your demonstration, please explain why the higher F factors were used originally. Also, the equations in 33-15-06-03.5.a. indicate that a "Fc" and a "F" factor are needed to calculate a pollutant emissions rate. The F factors in Method 19 are "Fd," "Fw" and "Fc." There is no plain "F" factor. Either the equation in 33-15-06-03.5.a. will need to be revised to replace "F" with "Fd" or "Fw" or the state will need to leave its plain "F" factor found in the current table in 33-15-06-03.5.a(5).

#### Chapter 33-15-12, Standards of Performance for New Stationary Sources

12. The emission guidelines at 40 CFR, part 60, subpart DDDD - Emission guidelines and



compliance times for commercial and industrial solid waste incinerator (CISWI) units that commenced construction on or before November 30, 1999, require that nine items be included in the State's CISWI Plan.

- 1) Inventory of affected CISWI units, including those that have ceased operation but have not been dismantled.
- 2) Inventory of emissions from affected CISWI units in the State.
- 3) Compliance Schedules for each affected CISWI unit.
- 4) Emission limitation, operator training and qualification requirements, a waste management plan, and operating limits for affected CISWI units that are at least as protective as the emission guidelines contained in Subpart DDDD.
- 5) Performance testing, recordkeeping, and reporting requirements.
- 6) Certification that the hearing on the State plan was held, a list of witnesses and their organizational affiliation, if any, appearing at the hearing, and a brief written summary of each presentation or written summary of submission.
- 7) Provision for State progress reports to EPA.
- 8) Identification of enforceable State mechanisms that you selected for implementing the emission guidelines of Subpart DDDD.
- 9) Demonstration of the State's legal authority to carry out the sections 111(d) and 129 State plan.

The State's proposal to incorporate by reference (IBR) the model rule will meet the requirements of items 3, 4, and 5 listed above. In addition to the proposed rule changes to IBR the model CISWI rule, the draft CISWI Plan meets the requirements of items 1, 2, and 8 of the list above.

However, before we can consider the draft plan complete and determine its adequacy, items 6, 7, and 9 from the above list need to be included, as well as a letter from the Attorney General stating that the State will be able to carry out the specific intent of the emission guideline using the State rule as designed with the IBR as indicated in its current version of the proposed rule.

**Chapter 33-15-14, Designated Air Contaminant Sources, Permit to Construct, Minor Source Permit to Operate, Title V Permit to Operate**

13. Section 33-15-14-02 - Permit to Construct: Please note that we will not be acting on the changes to the State's public participation requirements, 33-14-14-02.6., that were originally submitted to EPA in 1997 (and that also appear in this version of the State's rules) until EPA finalizes revisions to the Federal minor New Source Review (NSR) public participation requirements.
14. Section 33-15-14-02.19 and 33-15-14-03.16 - Amendment of Permits: In light of the State's proposed addition of Class I significant impact levels (33-15-15-01.4.f(3)), we would like an explanation as to why this proposed revision - to change the phrase "have a significant impact" to "be a major modification" - would not be considered a relaxation of



the existing SIP. Since a "major modification" in 33-15-15-01.1.hh(3) is defined as "any emissions rate or any net emissions increase associated with a major stationary source or major modification, which would construct within ten kilometers [6.21 miles] of a class I area, and have an impact on such area equal to or greater than one  $\mu\text{g}/\text{m}^3$  (twenty-four-hour average)" [emphasis added], and since the proposed Class I significant impact levels in 33-15-15-01.4.f(3) are more inclusive than the one  $\mu\text{g}/\text{m}^3$  (24-hr average) specified in the definition of "major modification," we believe this may be a relaxation of the State's rules and would like clarification from the State on this point. If this change does result in a relaxation of the State's rules, we will need a demonstration from the State that these changes will not interfere with the NAAQS, PSD increments, or any other Clean Air Act requirements. Please note our concerns with the State's proposed Class I significant impact levels, discussed under comment #18 below.

15. Section 33-15-14-06 Title V Permit to Operate: Although these proposed revisions will not be incorporated into the SIP in their final form, we did want to note that they are acceptable. Please note one typographical error in 33-15-14-06.1.0 (2)(aa). Only source categories under section 111 or 112 of the Federal Clean Air Act that were regulated as of August 7, 1980 must count fugitive emissions when determining whether the source is major (not August 1, 1980).

#### Chapter 33-15-15, Prevention of Significant Deterioration of Air Quality

16. In the summary of proposed changes, the State indicates that it is revising subsection 33-15-15-01.4.f(1) to incorporate by reference 40 CFR Part 51, Appendix W, Guideline on Air Quality Models. It is not clear how the proposed change accomplishes this. We would like some clarification on the result of this change, which eliminates reference to the "Guidelines on Air Quality Models" and to the "North Dakota Guideline for Air Quality Modeling Analyses" and which eliminates the phrase "incorporated by reference" (i.e., how does the State interpret this proposed version differently than what is currently approved into the SIP?).
17. In 33-15-15-01.4.f(3), the State is proposing to add Class I significant impact levels that define ambient concentrations above which a source will be considered to "cause or contribute to air pollution in a class I area, have an impact on a class I area, or have a significant impact on a class I area."

We have recently consulted with our Headquarters offices and it is EPA's position (as we stated in an August 30, 2001 letter to the North Dakota Department of Health) that it is not appropriate to establish Class I significance levels *when an increment violation already exists*. We believe any impact (not just one that is "significant") on a receptor in a Class I area that shows a violation of the PSD increment would be considered to contribute to that violation. Furthermore, we believe that, even if some of the impacts are relatively small they are still contributing to an existing problem.

Under current EPA policy, the PSD Class II significant impact levels are used primarily



as a threshold in new source permitting to determine the scope of the modeling analysis. For Class I areas, no PSD significant impact levels have ever been codified by EPA for use in the permitting process. Given the higher level of air quality protection that Congress deemed necessary in Class I airsheds, EPA believes that it would be ill-advised to extend the use of Class I significant impact levels in determining if a source causes or contributes to air pollution in a Class I area, has an impact on a Class I area, or has a significant impact on a Class I area where violations of the increment are already occurring. In the 1980 preamble to our PSD regulations, we indicate that:

Each proposed major construction project subject to PSD must first assess the existing air quality for each regulated air pollutant that it emits in the affected area. This analysis requirement does not apply to pollutants for which the new emissions proposed by the applicant would cause insignificant ambient impacts. Today's PSD regulations define pollutant-specific impacts that are typically considered inconsequential and that can be exempted from analysis, *unless existing air quality is poor or adverse impacts to a Class I area are in question.* [emphasis added] (45 FR 52678)

Where there is a Class I increment violation, significant deterioration has occurred, which is what the CAA intended the PSD program to prevent. The use of significant impact levels would enable new sources to avoid doing a cumulative impact analysis to determine the source's potential impact on the increment levels. EPA believes this should not be allowed, until a state submits a SIP revision to correct any increment violations.

Furthermore, we believe adding these Class I significant impact levels is a relaxation of the existing SIP, interferes with Clean Air Act requirements and is inconsistent with section 110(l) of the Clean Air Act. Unless the State adds a provision to ensure that the proposed Class I significant impact levels would not be used where violations of the increment are already occurring, we believe we would likely not approve such a revision.

