UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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JAN 22 2009

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Ref: 8P-AR

Steven M. Pirner, P.E. Secretary
Department of Environment & Natural Resources
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3182

Dear Mr. Pirner:

By this letter and enclosure, the U.S. Environmental Protection Agency (EPA) objects to the proposed Title V operating permit renewal for the Big Stone power plant (permit #28.0801-29, dated November 20, 2008), located in Big Stone City, South Dakota. The plant is owned and operated jointly by Montana-Dakota Utilities Company, Northwestern Energy, and Otter Tail Power Company. This permit is proposed by South Dakota's Board of Minerals and the Environment to be issued by the South Dakota Department of Environment and Natural Resources (DENR). Our office received the proposed permit package for review on December 8, 2008. The 45-day period for EPA review expires on January 22, 2009. This formal objection, based on our review of the proposed permit and supporting information, is issued under the authority of Title V of the Clean Air Act (Act), specifically under section 505(b) of the Act, 42 U.S.C. § 7661d(b), and 40 CFR 70.8(c).

Pursuant to 40 CFR 70.8(c)(1), the EPA will object to the issuance of any proposed Title V operating permit that EPA determines does not comply with applicable requirements of the Act or the operating permit program requirements of 40 CFR part 70. In accordance with 40 CFR 70.8(c)(1) and (4), and South Dakota rules at ARSD 74:36:05:21, when the EPA objects in writing to the issuance of a permit within 45 days of receipt of the proposed permit and all necessary supporting information, the State shall not issue the permit. If the State fails, within 90 days after the date of an objection by the EPA, to revise and submit a proposed permit in response to the objection, the EPA will issue or deny the permit in accordance with the requirements of the Federal program promulgated under Title V of the Act, 40 CFR part 71.

Pursuant to 40 CFR 70.8(c)(2), any EPA objection to a proposed permit shall include a statement of the EPA's reasons for objection and a description of the terms and conditions that the permit must include to respond to the objection. The EPA is objecting to this proposed permit for the following reasons:

Objection #1: Failure to include applicable requirements from PSD and NSPS: The proposed Title V renewal permit fails to comply with requirements of 40 CFR 70.6(a)(1) to include emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of permit issuance, specifically:

- Applicable requirements of the final PSD permit for the Big Stone II project, issued on November 20, 2008.

- The PSD permit, in addition to setting BACT emission limits, also incorporates requirements from 40 CFR part 60, subpart Da, Clean Air Act Section 111. The proposed Title V renewal permit does not adequately incorporate these part 60 requirements (New Source Performance Standards).

Objection #2: Lack of proper PSD applicability analysis for SO_2 and NO_x: The proposed Title V renewal permit fails to comply with applicable Prevention of Significant Deterioration (PSD) State Implementation Plan requirements, specifically with regard to avoidance of PSD major modification review for sulfur dioxide (SO_2) and nitrogen oxide (NO_x) emissions associated with the Big Stone II project (Units #13, #14, #15, #25 and #33).

Objection #3: Inadequate compliance provisions: The proposed Title V renewal permit fails to comply with 40 CFR 70.6(c)(1), which requires Title V permits to include compliance certification, testing, monitoring, reporting and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit. (Clean Air Act, Section 504(c)). The proposed Title V renewal permit also fails to comply with 40 CFR 70.6(a)(3)(i)(B), which requires Title V permits to include periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit.

Specific permit conditions that fail to comply with §70.6(c)(1) are the following:

- Conditions 9.2 and 9.4, specifying plantwide emission limits for SO_2 and NO_x respectively, identified in the permit as a "PSD exemption," to enable the Big Stone II project to avoid PSD major modification review for SO_2 and NO_x. The conditions fail to specify adequate emission monitoring (e.g., monitoring locations and emission calculation methodologies) to assure compliance with these limits.

- Conditions 11.3, 11.4 and 11.5, specifying hazardous air pollutant (HAP) emission limits, identified in the permit as a "case-by-case MACT exemption," to enable the Big Stone II project to avoid MACT requirements of 40 CFR 63.40-63.44 for new major sources of HAPs. The conditions fail to specify test methods and test frequency to assure ongoing compliance.

  Additionally, as explained in the enclosure, Condition 11.5 overall fails to specify how the permittee must demonstrate compliance with the emission limit for any single HAP and compliance with the emission limit for total HAPs. Therefore, as proposed, Condition 11.5 fails to have monitoring to assure compliance with the terms and conditions of the permit.

Specific permit conditions that fail to comply with §70.6(a)(3)(i)(B) are the following:

- Condition 7.12 only proposes an initial performance test at Unit #13 for HF and HCl, within 180 days after initial startup of Unit #13. The condition fails to propose a test frequency or any other form of periodic monitoring for demonstrating ongoing compliance with the hydrogen fluoride (HF) and hydrogen chloride (HCl) emission limits in the permit.

- Condition 11.5 fails to propose a monitoring frequency, or any other form of periodic monitoring, for emissions of any HAPs or HAP surrogates (other than mercury, for which the condition specifies a Continuous Emission Monitoring System), for demonstrating ongoing compliance with the HAP emission limits in the permit condition.

The enclosure provides a detailed explanation of the reasons for each objection, followed by a description of the terms and conditions that the permit must include to respond to each objection. Please note that under 40 CFR 70.7(g), *Reopenings for cause by EPA*, after final issuance this permit shall be re-opened by the EPA, if the EPA determines that cause exists to terminate, modify, or revoke and reissue a permit pursuant to §70.7(f)(1)(iv), to assure compliance with applicable requirements. This objection letter does not constitute a waiver of authority provided by §70.7(g). Furthermore, under the Clean Air Act, our opportunity for review and comment on this permit does not prevent the EPA from taking enforcement action for any non-compliance, including non-compliance related to issues that have not been specifically raised in those comments.

We regret that we are unable resolve these issues with your office prior to expiration of our 45-day review period. We are committed to working with you to resolve these objections and are fully confident that South Dakota will act to respond in a timely manner.

Please let us know if we can provide assistance to you and your staff. If you have any questions, please feel free to contact me, or your staff may contact Callie Videtich at (303) 312-6434, Carl Daly at (303) 312-6416 or Christopher Ajayi at (303) 312-6320.

Sincerely,

Carol Rushin
Acting Regional Administrator

Enclosure

cc (w/enclosure, via certified mail):

Otter Tail Power Company
215 S. Cascade St., P.O. Box 496
Fergus Falls, MN 56538-0496

Montana-Dakota Utilities Company
400 North 4th Street
Bismarck, ND 58501

Northwestern Energy
600 Market St.
Huron, SD 57350

Terry Grauman, Manager, Environmental Services
Otter Tail Power Company
215 S. Cascade St., P.O. Box 496
Fergus Falls, MN 56538-0496

Enclosure
EPA Region 8 Objections to Proposed Title V Renewal Operating Permit for Big Stone Power Plant in South Dakota (Permit #28.0801-29, dated November 20, 2008)

Objection #1 -- Failure to include applicable requirements from PSD and NSPS

The State issued a final PSD permit to five owners of the Big Stone plant, including Otter Tail Power Company as the plant operator, on November 20, 2008, to allow construction of the Big Stone II project (permit #28.0803-PSD). Condition 1.1 of the permit allows construction and operation of the project and references permit applications dated July 20, 2005 and June 20, 2006.

On the same date, the State issued the proposed Title V renewal permit for the Big Stone plant for EPA's review. The proposed Title V renewal permit does not include all applicable requirements from the PSD permit. Condition 1.1 of the proposed Title V permit includes the language from Condition 1.1 of the PSD permit and lists the main boiler for the Big Stone II project (Unit #13), along with most, but not all, of the emitting units listed in the PSD permit for that project. Table 1-1 in Condition 1.1 of the proposed Title V permit says Unit #13 and four other emitting units associated with the Big Stone II project (Units #14, #15, #25 and #33) may be installed and operated during the term of the Title V permit.

The proposed Title V permit does not include the PSD BACT emission limits from the PSD permit for the Big Stone II project, nor the detailed NSPS requirements from the PSD permit, nor numerous other requirements from the PSD permit. 40 CFR 70.6(a)(1) requires Title V permits to include "Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of permit issuance." The definition of "applicable requirement" at §70.2 includes "Any term or condition of any preconstruction permits issued pursuant to regulations approved or promulgated through rulemaking under title I, including parts C or D, of the Act." Title I, part C of the Act pertains to PSD permitting. Therefore, according to the Part 70 rules, the terms and conditions in the November 20, 2008 PSD permit for the Big Stone II project are applicable requirements for the Big Stone plant and must be included in the Title V permit.

The Part 70 requirement to include terms and conditions of PSD permits in Title V permits was explained in detail in a letter dated May 20, 1999, from John Seitz, Director, EPA Office of Air Quality Planning & Standards, to Robert Hodanbosi and Charles Lagges of STAPPA/ALAPCO. Enclosure A to the letter explains that all terms and conditions in SIP-approved permit are applicable requirements that must be incorporated into Title V permits and that if a condition in a SIP-approved permit is not carried over to the Title V permit, then that permit would be subject to an objection by EPA. The letter is available on EPA website at:

http://www.epa.gov/ttn/caaa/t5/memoranda/hodan7.pdf

The definition of "applicable requirement" in Part 70, as well as the explanation in the EPA's 1999 letter for including PSD permit conditions in Title V permits, are not contingent on whether or not a PSD-permitted unit has already been constructed and is operating, nor on whether a final PSD permit for a modification to a major stationary source was issued prior to issuance of a proposed Title V permit for the same major stationary source.

We have not previously mentioned the failure to include the PSD permit conditions in the Title V permit because the PSD permit had not yet been issued as a final permit when we reviewed the draft Title V permit. We are objecting now because the following terms and conditions of the final PSD permit have not been carried over to the proposed Title V permit and must be included in the Title V permit as they are applicable requirements:

- Section 4.0, Best Available Control Technology (BACT) Limits: PSD permit conditions 4.1 through 4.8.

- Section 5.0, Other Applicable Limits (including NSPS and operational limits): PSD permit conditions 5.1, 5.4, 5.5, 5.6, 5.7 and 5.8.

- Section 6.0, Performance Tests: PSD permit conditions 6.7, 6.8 and 6.9.

- Section 7.0, Fugitive Dust Controls: PSD permit conditions 7.1 through 7.5

Additionally, we are concerned that the Title V permit does not ensure that BACT applies at all times. BACT is an applicable requirement of PSD rules and has not been incorporated into the final PSD permit, nor into the proposed Title V permit, in such a manner as to ensure that it applies at all times. In our February 29, 2008 comments on the draft PSD permit, we noted that condition 4.8 of the PSD permit, in conjunction with other conditions in section 4.0 of the permit, would allow for good work and maintenance practices, along with manufacturer's recommendations for minimizing emissions, to serve in lieu of BACT emission limits during startup, shutdown, and malfunction (SSM) events. We recommended that the State follow EPA's long held policy that BACT emission limitations apply at all times. Under this policy, BACT limits may not be waived during SSM periods. We said that if the State can demonstrate, in its statement of basis for the PSD permit, that compliance with the primary BACT emission limitations is not feasible during SSM periods, the State may establish secondary BACT emission limitations or work practices for those periods, but that such secondary BACT emission limitations or work practices must be justified as BACT.

In its April 15, 2008 response to comments on the draft PSD permit, the State responded (on pages 51-52) by agreeing that BACT emission limits should apply at all times, including during periods of SSM, but "disagrees that a work practice standard may not be used as a BACT limit to cover startup, shutdowns, and malfunctions." (Note: The State misunderstood our comments. We did not say that work practice standards could not be used. We only said that a work practice standard must be justified in order to be used as BACT.) The State removed the exception from PSD BACT for periods of SSM and reworded PSD permit conditions 4.1 through 4.5 to say that compliance with the PSD BACT emission limits in the permit, during periods of

SSM, shall be based on permit condition 4.8 (which requires good work and maintenance practices and a SSM plan).

The State's response to our February 29, 2008 comments does not satisfy the PSD requirements for BACT during periods of SSM. The State's response has not justified work and maintenance practices and an SSM plan as BACT, nor justified work and maintenance practices and an SSM plan as a reasonable means to assure compliance with BACT emission limitations. The State should present such justification, or else impose secondary BACT emission limitations during periods of SSM, and revise the PSD and Title V permit conditions accordingly.

Objection #2 -- Lack of proper PSD applicability analysis for SO_2 and NO_x

Section 9 of the proposed Title V renewal permit, titled "PSD Exemption," includes a plantwide SO_2 emission limit at condition 9.2 and a plantwide NO_x emission limit at condition 9.4. These conditions state that these limits allow the Big Stone II project (comprised of new units #13, #14, #15, #25 and #33) to "forgo" PSD review for these two pollutants. These conditions fail to comply with applicable PSD requirements in 40 CFR 52.21, specifically with regard to avoidance of PSD major modification review for SO_2 and NO_x emissions associated with the Big Stone II project. Furthermore, as discussed below, these proposed conditions fail to satisfy all regulatory provisions for establishing a "Plantwide Applicability Limit" (PAL) under 40 CFR 52.21(aa), ARSD 74:36:09. (We are aware that the State has not attempted to present its proposed SO_2 and NO_x plantwide limits as a PAL.)

In our comment letter of February 29, 2008 on the draft Title V permit, we expressed concern about whether compliance could be demonstrated with these plantwide limits and whether creditable emission decreases from Big Stone I would be achieved before startup of Big Stone II, and maintained on a continuous basis, sufficient to avoid PSD major modification review for SO_2 and NO_x for the Big Stone II project. We said there should be a more detailed discussion and analysis. Although the State provided some followup discussion in sections IV through VI of its April 15, 2008 responses to public comments on the draft Title V permit, the majority of our concerns remain.

The State's SIP-approved PSD rules at ARSD 74:36:09 incorporate 40 CFR 52.21 by reference. §52.21(a)(2)(i) says the requirements of this section (§52.21) apply to any project at an existing major stationary source in an area designated as attainment or unclassifiable. The Big Stone plant is such a source. The State is therefore required under §52.21(a)(2) to conduct a PSD applicability analysis for the Big Stone II project for all regulated NSR pollutants.

The State has already determined the project to be a PSD major modification, and has imposed BACT emission limits in the final PSD permit issued on November 20, 2008, for the following regulated NSR pollutants: PM_{10}, carbon monoxide, volatile organic compounds, and sulfuric acid mist. The fact that the State has proposed plantwide limits for SO_2 and NO_x does not relieve the State from the requirement in §52.21(a)(2) to evaluate PSD applicability for SO_2 and NO_x in accordance with the step-by-step procedure laid out in §52.21(a)(2)(iv), or, alternatively, to establish a PAL as provided for in §52.21(a)(2)(v).

Under §52.21(b)(2), "major modification" means any physical change or change in method of operation of a major stationary source that would result in a significant emission increase of a regulated NSR pollutant, and a significant net emission increase of that pollutant from the major stationary source. The PSD significance thresholds for SO_2 and NO_x are 40 tons per year. It has already been documented in the permit record that the Big Stone II project itself will result in significant emission increases for SO_2 and NO_x. Therefore, to avoid PSD major modification review for SO_2 and NO_x, there must be a demonstration that there will not be a significant net emission increase at the source (i.e., the overall Big Stone plant), based on the definitions in the PSD rules and the step-by-step process laid out in §52.21(a)(2)(iv) for determining if there will be such an increase.

The following definitions are key to this determination: "Net emission increase" is defined at §52.21(b)(3)(i) as the increase in actual emissions from a particular physical change or change in method of operation (in this case, the Big Stone II project), summed with any other increases and decreases in actual emissions at the major stationary source that are contemporaneous with the particular change and are otherwise creditable. "Actual emissions" is defined at §52.21(b)(21) as the actual rate of emissions of a regulated NSR pollutant from an emissions unit. As stated in §52.21(b)(3)(ii), an increase or decrease in actual emissions is "contemporaneous" with the increase from the particular change only if it occurs between:

(a) The date five years before construction on the particular change commences, and

(b) The date that the increase from the particular change occurs.

§52.21(b)(3)(vi) specifies the following three requirements for a decrease in actual emissions to be "creditable:"

(a) The old level of actual emissions or the old level of allowable emissions, whichever is lower, exceeds the new level of actual emissions.

(b) It is enforceable as a practical matter, at and after the time that actual construction of the particular change begins. ("Begin actual construction" is defined at §52.21(b)(11) as the initiation of physical on-site construction activities on an emissions unit which are permanent in nature.)

(c) It has approximately the same qualitative significance for public health and welfare as that attributed to the increase from the particular change.

So under these provisions of PSD rules, to establish creditable emission decreases from Big Stone I for SO_2 and NO_x, emission decreases from Big Stone I must meet the above criteria. Under the plantwide SO_2 and NO_x emission limits in the proposed Title V renewal permit, there would be no enforceable decreases in actual emissions at the time that actual construction of the particular change begins, to prevent a significant net emission increase at the source.

§52.21(aa) allows an alternative to unit-specific limits, for crediting emission decreases and thereby avoiding PSD major modification review for a project. The alternative is called "Plantwide Applicability Limits" (PALs). In section V of its April 15, 2008 responses to public comments, the State acknowledged that its proposed plantwide SO_2 and NO_x limits do not incorporate all the requirements for establishing a PAL.

We are objecting because the proposed Title V permit fails to comply with the above-cited PSD requirements for ensuring that the Big Stone II project will not result in significant net emission increases for SO_2 and NO_x at the Big Stone plant. The proposed plantwide SO_2 and NO_x limits do not ensure that emission decreases specific to Big Stone I are enforceable as a practical matter at the time that actual construction of the Big Stone II project begins, nor does the proposed Title V renewal permit establish a PAL as an alternative. Our concerns about practical enforceability of the proposed plantwide SO_2 and NO_x limits are presented separately below, under Objection 3.

We are also objecting because in section 9.0, "PSD Exemption," the language in proposed permit conditions 9.2 and 9.4, allowing the Units associated with the Big Stone II project to "forgo" a PSD review for SO_2 and NO_x, constitutes an impermissible shield against enforcement of the PSD applicability determination rules described above.

We are aware that in the contested case proceedings on this permit, the State has expressed its opinion that the operational flexibility provisions of 40 CFR 70.6(a)(10) can be used to establish the plantwide SO_2 and NO_x limits and thereby avoid PSD review, outside of the step-by-step procedures for evaluating PSD applicability that are laid out in §52.21(a)(2)(iv). Although we have not discussed this opinion directly with the State, we want the State to be aware that this opinion is incorrect. EPA has made clear to Title V permitting authorities over the years that Title V doesn't allow a facility to use emission trading to avoid an applicable requirement. See "Questions and Answers on the Requirements of Operating Permits Program Regulations," available on EPA website at:

http://www.epa.gov/region07/programs/art/air/title5/t5memos/bbrdq&a1.pdf.

To resolve our objection, the State must select and implement, in accordance with the PSD rules, one of the following three options:

Option 1 – Appropriate PSD netting: Establish SO_2 and NO_x emission limits in an appropriate permit, in conformance with the above cited PSD rules. The limits for establishing creditable emission decreases at Big Stone I must:

(i) be specific to Big Stone I,

(ii) ensure actual emission decreases at least as great as the emission increases expected from the Big Stone II project, and

(iii) ensure that the decreases in actual emissions are enforceable as a practical matter, at and after the date that actual construction of the Big Stone II project begins.

To ensure that no significant net emission increase will occur at the source (i.e., the overall Big Stone plant) for SO_2 or NO_x, the permit must also establish SO_2 and NO_x emission limits that are specific to the emissions units associated with the Big Stone II project and that, when summed together, are no greater than the amount of actual emission decreases required from Big Stone I plus the PSD significance threshold.

The permit must also specify how CEMS measurements will be used and how emissions will be calculated, to show compliance with the unit-specific emission limits mentioned above:

(a) For NO_x: Since all of the NO_x emission decrease below the PSD "baseline" emission rate at Big Stone I is proposed to be achieved within Big Stone I itself and not downstream, the amount of that decrease can be measured by use of a NO_x CEMS and flue gas flow monitor immediately downstream of Big Stone I, before its gas stream is combined with Big Stone II. Similarly, a NO_x CEMS and flue gas flow monitor immediately downstream of SCR controls for Big Stone II can be used to measure the amount of controlled NO_x from Big Stone II, before its gas stream is combined with Big Stone I.

(b) For SO_2: With regard to determining the amount of creditable SO_2 emission decrease from Big Stone I, as well as the amount of controlled SO_2 from Big Stone II, we consider it possible to impose and effectively enforce unit-specific emission limits at both Units. During the contested case hearings on the draft Big Stone PSD and Title V permits, Otter Tail Power Company explained how SO_2 can be measured from each Unit. (Contested Case Hearing Transcript (Transcript), pages 620-635.) Similarly, the State made it clear that it is feasible to measure SO_2 from each Unit individually (Transcript, pages 64-65.) We have independently looked into this matter and, consistent with the State's and Company's explanations during the hearings, consider it possible to establish a required amount of SO_2 emission decrease below the PSD "baseline" emission rate that is specific to Big Stone I, and to specify a workable methodology for demonstrating compliance through use of properly located CEMS. We also consider it possible to specify a workable methodology for demonstrating compliance with an SO_2 emission limit specific to Big Stone II.

OR

Option 2 – Establish Plantwide Applicability Limit: Establish plantwide SO_2 and NO_x emission limits that satisfy all applicable provisions in §52.21(aa) for establishing a PAL in an appropriate permit. Below are some regulatory provisions that have not been satisfied by the currently proposed plantwide SO_2 and NO_x limits for the Big Stone plant, but must be satisfied, if those limits are to serve as PALs. This is not necessarily an exhaustive list of provisions that have not been satisfied.

(i) PALs must be based on baseline actual emissions and other amounts specified. (§52.21(aa)(2)(i) and §52.21(aa)(6)(i)) The regulations also specify how emissions from newly constructed units are calculated. (§52.21(aa)(6)(ii)). The proposed plantwide SO_2 and NO_x limits for Big Stone are not set at the emission level specified in §52.21(aa)(6)(i).

(ii) Each PAL shall have a PAL effective period of ten years. (§52.21(aa)(4)(i)(f)). The proposed plantwide SO_2 and NO_x limits for Big Stone do not have any specified effective period.

(iii) The PAL permit must contain the calculation procedures that the major stationary source owner or operator shall use to convert the monitoring system data to monthly emissions and annual emissions based on a 12-month rolling total as required by §52.21(aa)(13)(i). (§52.21(aa)(7)(vi)) The proposed Title V permit for Big Stone does not specify any such calculation procedures for demonstrating compliance with the proposed plantwide SO_2 and NO_x limits.

(iv) A source owner or operator must record and report maximum potential emissions without considering enforceable emission limitations or operational restrictions for an emissions unit during any period of time that there is no monitoring data, unless another method for determining emissions during such periods is specified in the PAL permit. (§52.21(aa)(12)(vii)) The proposed Title V permit for Big Stone does not include this requirement in regard to the proposed plantwide SO_2 and NO_x limits.

(v) All data used to validate the PAL must be re-validated through performance testing or other scientifically valid means approved by the Administrator. Such testing must occur at least once every 5 years after issuance of the PAL. (§52.21(aa)(12)(ix)) The proposed Title V permit for Big Stone does not specify any such re-validation in regard to the proposed plantwide SO_2 and NO_x limits.

(vi) The PAL permit shall require an owner or operator to retain annual certifications of compliance pursuant to title V, and the data relied on in certifying compliance, for the duration of the PAL effective period plus five years. (§52.21(aa)(13)(ii)(b)) The proposed Title V permit for Big Stone does not include this requirement in regard to the proposed plantwide SO_2 and NO_x limits.

(vii) The PAL shall be established in a PAL permit that meets the public participation requirements in §52.21(aa)(5). (§52.21(aa)(4)(i)(b) The Administrator shall provide the public with notice of the proposed approval of a PAL permit and at least a 30-day period for submittal of public comment. (§52.21(aa)(5)) The proposed Title V permit for Big Stone has not been identified to the public as a proposed PAL permit.

(viii) As part of a permit application requesting a PAL, the owner or operator is required to submit certain specific information described in §52.21(aa)(3)(i) through (iii). (§52.21(aa)(3)) The Company has not submitted a permit application requesting a PAL.

(ix) *PAL permit* means the major NSR permit, the minor NSR permit, or the State operating permit under a program that is approved into the State Implementation Plan, or the title V permit issued by the Administrator that establishes a PAL for a major stationary source. (§52.21(aa)(2)(ix)) The proposed Title V permit for Big Stone does not establish a PAL and therefore is not a PAL permit.

OR

Option 3 – Conduct PSD major modification review and revise PSD permit: Conduct a PSD major modification review for SO_2 and NO_x from the Big Stone II project and revise the PSD permit and statement of basis accordingly. In mentioning this option, we do not want to discourage the State from requiring a scrubber that would control the SO_2 emissions from both the existing Big Stone I unit and the proposed Big Stone II unit. We recognize such an arrangement would likely yield the greatest SO_2 emission decrease source-wide and would likely be the most cost-effective approach for controlling source-wide SO_2.

To resolve our objection mentioned above on the impermissible enforcement shield language in conditions 9.2 and 9.4, the State must remove that language from the permit.

Objection #3 -- Inadequate compliance provisions

Section 9 of the proposed Title V renewal permit, titled "PSD Exemption," includes, among other things, a plantwide SO_2 emission limit at condition 9.2 and a plantwide NO_x emission limit at condition 9.4. Section 11, titled "Hazardous Air Pollutant Emission Limits," includes, among other things, emission limits for various HAPs at conditions 11.3 through 11.5, and a requirement for coal analysis for fluoride content and chloride content at condition 11.7. Related permit condition 7.12 includes requirements to measure HF and HCl.

This is the EPA's first opportunity to review Section 11 of the proposed permit. Section 11 was not in the draft Title V permit and is being created for the first time in the proposed Title V renewal permit. No public notice or public comment period was provided for the addition of Section 11 to the permit.

The State's January 2008 draft Title V renewal permit included permit provisions that provided for mercury allowances and contained no other provisions for HAPs. (Draft Title V permit, Section 6.6.) In sharp contrast, Section 11 of the proposed Title V permit contains a fundamentally different approach, which is to limit the source's potential to emit (PTE) for HAPs. Section 11, adopted by South Dakota's Board of Minerals and the Environment, contains proposed PTE provisions that are intended to enable the source to avoid "major source" status for

HAPs and thereby avoid case-by-case MACT review which would otherwise be required by 40 CFR 63.40-63.44.

Section 11 contains provisions that are not a logical outgrowth of what the State proposed in the draft Title V permit. EPA and the public were deprived of notice and opportunity to comment on the provisions. PTE is a critical factor in determining the applicability of major source permit requirements. As indicated in Section 11, the State's reason for including the proposed provisions is to limit the PTE of this source for HAPs, such that it will not be a "major source" of air emissions for MACT purposes, as the case-by-case MACT provisions of section 112 of the Clean Air Act apply only to major HAP sources.

The permit record for the draft Title V renewal permit gave no indication that such an approach might ultimately be included in the proposed permit. It is for these reasons that we are expressing concern about the lack of a new public review period for any new PTE limits. We recommend re-noticing. The re-notice should clearly state that the permitting action includes PTE limits to avoid the application of the section 112 case-by-case MACT requirements, and the statement of basis should fully discuss the bases for any proposed limits. (40 CFR 70.7(a) and (h)). The State's process should include a new 30-day comment period for the public. This notice is necessary to finally determine whether the conditions proposed in Section 11 are appropriate to apply to this facility and whether the permit does so in an appropriate manner.

We are also objecting because permit conditions 9.2, 9.4, 11.3, 11.4 and 11.5 fail to comply with 40 CFR 70.6(c)(1), and the corresponding State rule at ARSD 74:36:05:16.01(14), which requires Title V permits to include compliance certification, testing, monitoring, reporting and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit. Furthermore, we are objecting because permit conditions 7.12, 11.3, 11.4 and 11.5 fail to comply with 40 CFR 70.6(a)(3)(i)(B), and the corresponding State rule at ARSD 74:36:05:16.01(9)(b), which requires Title V permits to include periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit. Below is a detailed explanation for our objection and discussion.

Note: If the State decides to resolve our objection #1 above by replacing permit conditions 9.2 and 9.4 with unit-specific emission limits for SO_2 and NO_x, or by establishing PALs for SO_2 and NO_x, then our objection below on those permit conditions would become moot.

Condition 9.2 (Plantwide sulfur dioxide limit): This condition specifies a plantwide SO_2 limit of 13,278 tons per rolling 12-month period. The condition does not say where the CEMSs are to be located for measuring the emissions, nor the calculation methodology for adding up the CEMS measurements from multiple locations and converting the measurements into tons of emissions per rolling 12-month period. Condition 8.4 requires CEMSs for SO_2 and flue gas flow "on Unit #1" and "on Unit #13," but does not say where the CEMSs and flue gas flow monitors are to be located. The permit therefore does not comply with §70.6(c)(1) because it cannot assure compliance with the plantwide SO_2 limit.

To resolve our objection, the permit must make it clear where each CEMS for SO_2 is to be located. This must include a CEMS to measure the uncontrolled SO_2 emissions from Big Stone I at all times when those emissions are not being routed to the common scrubber for Big Stone I and II. If any partial bypassing of the scrubber is planned to be allowed for Big Stone I, through any separate bypass stack, the permit must also make it clear that all SO_2 emissions from Big Stone I must still be measured at all times by a CEMS. The permit must also include a specific calculation methodology for adding up the CEMS measurements from multiple locations and converting the measurements into tons of emissions per rolling 12-month period.

Condition 9.4 (Plantwide nitrogen oxide limit): This condition specifies a plantwide NO_x limit of 16,448 tons per rolling 12-month period. The condition does not say where the CEMSs are to be located for measuring the emissions, nor the calculation methodology for adding up the CEMS measurements from multiple locations and converting the measurements into tons of emissions per rolling 12-month period. Condition 8.4 requires CEMSs for NO_x "on Unit #1" and "on Unit #13," but does not say where the CEMSs are to be located. The permit therefore does not comply with §70.6(c)(1) because it cannot assure compliance with the plantwide NO_x limit.

To resolve our objection, the permit must make it clear where each CEMS for NO_x is to be located. The permit must also include a specific calculation methodology for adding up the CEMS measurements from multiple locations and converting the measurements into tons of emissions per rolling 12-month period.

Conditions 11.3 and 11.4 (Unit #13 emission limits for HF and HCl): These conditions specify emission limits of 2.17 pounds per hour (lb/hr) for HF and 2.17 lb/hr for HCl. These conditions fail to specify a test method and test frequency. The conditions cross-reference section 7.0 of the permit for stack testing requirements, but section 7.0 (at condition 7.12) does not specify a test method or test frequency for HF or HCl. Condition 7.12 only requires an initial performance test within 180 days after initial startup of Unit #13. (See discussion below on Condition 7.12.) The required monitoring in conditions 11.3 and 11.4 therefore fails to comply with 40 CFR 70.6(c)(1) because it fails to assure compliance with these emission limits.

To resolve our objection, the State must revise conditions 11.3 and 11.4 to specify Method 13A or 13B for HF and Method 26 for HCl, unless a technically valid reason is presented in the permit record as to why some other method should be specified instead. These permit conditions must also require periodic emission tests. Alternatively, these conditions may cross-reference Condition 7.12 for test methods and test frequency, in which case Condition 7.12 must specify the test methods and test frequency. A one-time test would not be sufficient. The State must develop periodic monitoring requirements that assure compliance with the permit conditions and explain why the proposed requirements will, in fact, assure compliance. See related discussion on periodic monitoring below.

Condition 11.5 (Unit-wide HAP limit for Unit #13): This condition specifies unit-wide HAP emission limits of 9.5 tons of a single HAP and 23.8 tons of a combination of HAPs, from permitted units and fugitive sources, per 12-month rolling period. The condition requires HAP

emissions (other than mercury) to be based on some unspecified method (the most recent stack performance test, mass balance, emission factors, or other approved method of calculating HAP emissions). Additionally, no test frequency is specified. Related condition 11.8 states that Unit #13 is exempt from a case-by-case MACT determination based on the operational and HAP emission limits in this permit. The permit does not indicate if emissions during periods of startup, shutdown or malfunctions were considered when establishing the proposed limit and, if so, how those emissions were estimated to assure the source would be below major source levels.

The proposed monitoring in condition 11.5 fails to comply with 40 CFR 70.6(c)(1) because it fails to assure compliance with emission limits, in the following respects:

- The condition fails to indicate how the permittee must demonstrate that it is maintaining emissions at a level below the major source thresholds in section 112, both on an individual HAP basis (i.e., <10 tons per year individual HAP) and on a total HAP basis (i.e., <25 tons per year total HAP).

- The condition fails to indicate if emissions during periods of startup, shutdown or malfunctions are to be included in demonstrating compliance.

To resolve our objection, the State must provide in its analysis of the permit application such detail as is necessary to confirm the <10 tpy and <25 tpy status requested by the permittee. The State must explain how it established the potential to emit HAP for Unit #13. The State must then revise condition 11.5 to include the following:

- A requirement specifying how the permittee must demonstrate compliance with the emission limit of 9.5 tons per rolling 12-month period for the identified acid gas HAP.

- A requirement specifying how the permittee must demonstrate compliance with the total HAP limit of 23.8 tons per rolling 12-month period, or, alternatively, the State must include an explanation of why monitoring and reporting of HAP emissions above what is required for acid gas and mercury HAP is not necessary to assure compliance with the limit.

- Where emission measurements are to be required, the required method for measurement and the required frequency of measurement must be specified. A one-time test would not be sufficient. As mentioned above, the State must develop periodic monitoring requirements that assure compliance with the permit conditions and explain why the proposed requirements will, in fact, assure compliance.

- The State must include a discussion of how emissions during periods of startup, shutdown or malfunctions were considered in establishing the potential to emit HAP for Unit #13, and if periods of startup, shutdown or malfunctions were not considered, the State must explain how the source will comply with the potential to emit limitation if such events occur in any 12-month period.

Condition 7.12 (Initial performance tests for HAPs): This condition only requires an initial performance test at Unit #13 for HF and HCl, within 180 days after initial startup of Unit #13. No subsequent tests are required. This condition fails to comply with 40 CFR 70.6(a)(3)(i)(B) because it fails to require periodic testing. To resolve our objection, the State must revise the condition to specify a test frequency and provide a basis for why that frequency will assure compliance.

Condition 11.7 (Unit #13 coal analysis). This condition requires the permittee to determine the fluoride content and the chloride content by weight in the coal, on a weekly basis. The condition does not say what is to be done with the data, nor does it specify any limits on fluoride or chloride content in coal. We do not object to the inclusion of a condition in the permit to require determination of fluoride and chloride content in coal, but if the condition is intended to support the enforceability of the HAP limits, or to otherwise support exempting Unit #13 from case-by-case MACT review, the condition must indicate what is to be done with the coal data. For example, if it is the State's intent that the data be used to develop a correlation between HAP content in the coal and actual HAP emissions, using emission test data, to show compliance with the HAP emission limits in condition 11.5, this should be indicated in condition 11.7, and the condition should be cross-referenced by condition 11.5.