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JAN 2 2 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
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Montana-Dakota Utilities Company
400 North 4th Street
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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
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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.