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November 20, 2006

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**BY CERTIFIED MAIL: RETURN RECEIPT REQUESTED**

**RE: Notice of Intent to Sue for Violations of the Clean Air Act at the Big Stone I Power Plant.**

To the Owners and Operators of the Big Stone Power Plant:

I am writing on behalf of Sierra Club to notify you of its intent to file suit on behalf of itself and its members for significant and ongoing violations of the Clean Air Act at the Big Stone I<sup>1</sup> coal-fired power plant in South Dakota. The Big Stone I Plant is located in Big Stone City, South Dakota.

Pursuant to the Clean Air Act, 42 U.S.C. § 7604(a)(1), citizens are entitled to bring suit to enjoin violations of an emission standard or limitation, and to seek civil penalties for such violations. Citizens are also entitled to bring suit against any person who has modified a major emitting facility without first obtaining a PSD permit required under Part C of Subchapter I of the Act, and to seek penalties for those violations as well. See Clean Air Act § 304(a)(3), 42 U.S.C § 7604(a)(3). To the extent required by Section 304(a)(1) of the Clean Air Act, we therefore are writing to notify you that unless this matter is otherwise fully resolved, we intend to file suit in the applicable federal district courts anytime 60 days after the postmark date of this letter to enjoin and penalize the violations described below.

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<sup>1</sup> Although currently, there is only one coal-fired unit operating at the Big Stone plant, because a second unit is planned, throughout this letter, we refer to the existing unit (the unit where the violations occurred), as Big Stone I.

## ***I. VIOLATIONS***

### **A. Background**

Pursuant to the Clean Air Act, EPA has issued national ambient air quality standards (“NAAQS”) for six “criteria” air pollutants, including nitrogen dioxide (“NO<sub>2</sub>”), sulfur dioxide (“SO<sub>2</sub>”), and ozone, and particulate matter (“PM”). See 42 U.S.C. § 7409; 40 C.F.R. § 50.1 *et seq.* The Act also requires each state to classify areas within its boundaries based on whether the air quality in these areas meets these standards. An area which meets the national ambient air quality standards for a particular criteria pollutant is considered an “attainment” area for that pollutant. An area that does not meet the national ambient air quality standard for a pollutant is considered a “nonattainment” area for that pollutant. Areas for which insufficient information is available to determine whether the NAAQS are being met are termed “unclassifiable.”

The purpose of Part C of the Clean Air Act (42 U.S.C. §§ 7470-7492) is to prevent any significant deterioration of air quality in areas designated as in attainment or unclassifiable. This purpose is achieved by requiring a Prevention of Significant Deterioration (“PSD”) permit before any new major source of air pollutants is constructed, and before any existing source makes a “major modification” that will cause an increase in emissions of air pollutants. A major modification is a physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act. A “significant” net emissions increase of sulfur dioxide (SO<sub>2</sub>) or nitrogen oxides (NO<sub>x</sub>) is 40 tons or more per year; a “significant” net emissions increase of particulate matter (“PM”) is 25 tons or more per year. Before a PSD permit may be issued, plant’s owner or operator must demonstrate that the facility, as modified, will not adversely impact an air quality standard, a PSD increment, or an air quality related value. Furthermore, a modified source must obtain and operate under emission limits that are reflective of best available control technology.

The Big Stone I coal-fired power plant is an existing source of air pollution at which you have undertaken major modifications without first obtaining PSD permits and thereafter installing and operating BACT. Thus, you have violated Part C of the Act and the regulations used to implement this program in South Dakota, found at 40 C.F.R. § 52.21.

Another provision of the Clean Air Act relevant in this matter is Title V of the Act, in which Congress sought to create a nationally uniform program issuing operating permits to major stationary sources of regulated air pollutants. Title V requires that certain specified categories of stationary sources apply for, and obtain, an operating permit. 42 U.S.C. § 7661a(a). Among the sources required to obtain an operating permit is any source required to have a PSD permit. *Id.* (listing the sources required to have a Title V permit as including “any other source required to have a permit under parts C or D of subchapter I” of the Act.) Title V generally does not impose new substantive air quality requirements, but requires that the operating permit assures compliance with applicable requirements of the Act, applicable regulations, and terms or conditions of preconstruction permits. 42 U.S.C. § 7661c(a), and 40 C.F.R. § 70.1(b). Each state was required, under Section 502(d)(1) of the Clean Air Act, to develop and submit to the Administrator of EPA an operating permit program that meets the requirements of Title V of the Act. 42 U.S.C. § 7661a(d)(1). South Dakota’s Title V operating permit program was submitted to EPA and subsequently fully approved on January 29, 1996. 61 Fed. Reg. 2720.

The Title V operating permit must include conditions necessary to assure compliance with “applicable requirements” under Title V. 42 U.S.C. § 7661c(a). *See* 40 C.F.R. § 70.3(c) (all “applicable requirements” shall be included in the Title V permit). *See also* ARSD 74:36:05:16.01(19) (“Each permit issued for the operation of a Part 70 source must contain..... [a]ll applicable requirements of the Clean Air Act.”). For those sources required to have a permit under the PSD provisions of the Act, the “applicable requirements” include the PSD requirements. *See* 40 C.F.R. § 70.2 (“applicable requirements” include “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]”). In accordance with Section 504(a) of the Act, 42 U.S.C. § 7661c(a), Title V permits must include, among other things, enforceable emission limits and standards. *See also* ARSD 74:36:05:16.0(8) (“Each permit issued for the operation of a Part 70 source must contain..... [e]mission limits and standards, including operational requirements and limits for all regulated emission units, necessary to assure compliance with applicable requirements of the Clean Air Act....”).

**B. The PSD Violations**

*Project 1: You Violated the PSD Requirements of the Clean Air Act by Making a Major Modification Without Obtaining a Permit and Without Installing BACT When You Switched From Burning Lignite to Subbituminous Coal and Made Changes to Accommodate that Change.*

In 1995, you began a multi-year major modification of the Big Stone I facility stemming from your decision to switch from firing mostly lignite to mostly subbituminous coal at Big Stone I. The change in fuel by itself constituted a change in the method of operations at the plant, causing significant net emissions increases in NO<sub>x</sub> and PM. This change in fuel was a change in the method of operation of the plant that the facility was not capable of accommodating for two reasons.

First, although the PSD regulations do include an exemption for a change in fuel use, that exemption would not apply in this case. Specifically, the definition of “major modification” provides that the following is *not* considered a physical change or change in the method of operation:

Use of an alternative fuel or raw material by a stationary source which:

(I) the source was capable of accommodating *before* January 6, 1975. . . .

40 C.F.R. §52.21(b)(2)(iii)(e)(I) [emphasis added].

You did not receive a permit to operate from South Dakota until January 14, 1975. Furthermore, you did not begin commercial operation of Big Stone I until May 1, 1975. Thus, Big Stone I was not capable of accommodating any type of fuel prior to January 6, 1975 because the facility was not yet legally allowed to operate. Further, the facility did not begin commercial operations until five months after the January 6, 1975 cutoff for this alternative fuel exemption. Consequently, the alternative fuel exemption at 40 C.F.R. §52.21(b)(2)(iii)(e)(I) would not apply to your switch to subbituminous coal in 1995 at Big Stone I.

Second, the fuel switch from lignite to subbituminous coal was a physical modification because the plant was physically incapable of accommodating that change in fuels. Big Stone I was initially incapable of complying with the opacity standard once it began burning

subbituminous coal, and so you had to embark on a number of changes to Big Stone's particulate matter control system to accommodate the change. Furthermore, additional equipment had to be modified to accommodate the different characteristics of subbituminous coal versus lignite. The moisture content of the subbituminous coal is much lower than the lignite, even after the lignite coal is dried. Therefore, Big Stone I's predry system was removed in December 1996. Second, the burning of subbituminous coal resulted in thermal imbalances and lower steam temperatures that affected overall steam production from the boiler, which necessitated significant modifications to the boiler in order to avoid a derating due to the use of subbituminous coal. This reduction in steam temperatures in the boiler resulted in a 5 MW performance penalty. Your solution to this problem was to add surface area to the primary superheater in 1998. Furthermore, the loss of the protective slag layer that formed from the burning of lignite also damaged the cyclones. Indeed, in the fall of 1998, seven of the 12 cyclones were restudded and refractory was installed.

The fuel switch itself resulted a significant net emissions increase of particulate matter and NO<sub>x</sub> resulting from the higher combustion temperatures associated with burning sub-bituminous coal and the inability of the particulate control system to adequately capture the fly-ash resulting from combustion of the sub-bituminous coal. With the completion of the superheater project, NO<sub>x</sub> emissions had another significant net emissions increase, and SO<sub>2</sub> increased as well associated with the 5 MW of additional generating capacity. Indeed, by itself, the superheater project alone constituted a major modification triggering significant net emissions increases of NO<sub>x</sub> and SO<sub>2</sub>.

You performed such changes without first obtaining a PSD permit. Furthermore, since 1995 you have operated these units without a PSD permit. Accordingly, you violated and remain in violation of the federal PSD rules at 40 C.F.R. § 52.21.

*Project 2: Your Alteration of Big Stone I to Provide Steam to a Co-located Ethanol Plant Constituted a Major Modification.*

On August 8, 2001, South Dakota Department of Environmental and Natural Resources (SDDENR) issued a minor permit amendment to the Big Stone Title V permit. Although the accompanying Statement of Basis found that no permit modification was necessary for you to provide steam to the ethanol plant, SDDENR nonetheless revised the Big Stone permit to make clear that the steam generator used at Big Stone was not just to produce electricity but also to provide steam to an ethanol plant. By changing the permit language to document this fact, SDDENR acknowledged that a change in method of operation had occurred at Big Stone. Big Stone I had changed from a utility generator boiler to a cogeneration facility. SDDENR also increased the permitted maximum heat input capacity to the boiler from 4,509 MMBtu/hr to 5,609 MMBtu/hr. Moreover, SDDENR replaced the existing 1,226 pound per hour PM limit with a 0.26 lb/MMBtu PM limit.

The physical changes necessary to bring steam from the boiler to the ethanol plant constituted a physical change or change in the method of operation to the Big Stone plant, constituting a major modification under the PSD regulations for SO<sub>2</sub> and PM. You improperly portrayed this change as an increase in production that was achievable under existing limitations. Contrary to your claim, the exemption from the definition of "major modification" for increases in production does not apply here. First, that exemption only applies when there is no other

physical change or change in the method of operation accompanying the increase in production. Here, there *was* a physical change to the facility by the physical addition of lines to provide steam from the Big Stone facility to the new ethanol facility, brought from the both the high pressure steam line and the cold reheat line. Second, SDDENR documented a change in method of operation at Big Stone by changing the permit language to establish the change from a utility generator boiler to a cogeneration facility.

Accordingly, you violated and remain in violation of the federal PSD rules at 40 C.F.R. § 52.21.

*Project 3: Your 2005 HP-IP Turbine Efficiency Improvement Project  
Constituted a Major Modification for PSD Purposes.*

You also illegally modified Big Stone I without obtaining the proper PSD permit when you installed a redesigned high pressure and intermediate pressure (HP/IP) steam turbine during its 2005 maintenance outage. You described this modification in a May 4, 2004 letter to SDDENR. You claimed this modification was routine maintenance and was exempt under the EPA's Equipment Replacement Rule (68 Fed. Reg. 80186-80289, October 27, 2003). However, that rule has since been struck down by the D.C. Circuit Appeals Court as inconsistent with the Clean Air Act. (*See State of New York, et al., v. Environmental Protection Agency*, No. 03-1380, U.S. Court of Appeals, D.C. Circuit, Decided March 17, 2006). Therefore, any physical change at Big Stone I that could increase emissions must be reviewed as a modification.

The HP/IP turbine efficiency improvement project is a physical change that could increase emissions at the Big Stone I source. Thus, this modification should have been subject to PSD as a major modification for these pollutants. These changes created the potential for, and/or resulted in a significant net emissions increase of particulate matter, SO<sub>2</sub>, and NO<sub>x</sub>. You performed such work without first obtaining PSD and NSR permits. Furthermore, since 2005 you have operated these units without PSD or NSR permits.

Accordingly, you violated and remain in violation of the federal PSD rules at 40 C.F.R. § 52.21.

#### **C. South Dakota SIP Violations**

Because, as discussed above, you are operating without emission limitations known as Best Available Control Technology, you are violating 40 C.F.R. § 52.21, as that provision has been incorporated by operation of law, into the South Dakota SIP.

#### **D. NSPS Violations**

Project 2 caused an increase in the maximum hourly emissions rate for SO<sub>2</sub> and PM achievable by the unit and therefore constituted a "modification" as that term is defined at 40 C.F.R. §§ 60.2 and 60.14(a). Accordingly, beginning in 2001 you were required to meet all of the requirements of Subpart Da for these pollutants. However, every day that you have operated since then, you have failed to meet the emission reduction requirement for sulfur dioxide contained 40 C.F.R. § 60.43Da.

#### **E. Violation of Title V of the Act**

As provided under the Title V provisions set forth above, you were required to obtain operating permits incorporating all applicable requirements as a result of the above described projects. By not complying with the PSD and NSPS requirements when the Big Stone I facilities

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were either modified or reconstructed, Big Stone I is operating without a Title V operating permit that includes emission limitations reflecting BACT and NSPS requirements and/or a compliance schedule to bring your facility into compliance with the applicable BACT and NSPS requirements.

**II. OUR CONTACT INFORMATION**

Sierra Club is a conservation organization with approximately 800,000 members, including members in the states of South Dakota and Minnesota, dedicated to protecting natural resources, including clean air and water. On behalf of its members, Sierra Club works to protect and enhance the quality of air throughout the country. The address of Sierra Club is 85 Second Street, Second Floor, San Francisco, California, 94105. Sierra Club is being represented in this matter by George Hays. The address for Mr. Hays can be found on the letterhead.

**III. OFFER TO NEGOTIATE**

During the sixty (60) day notice period, we would be willing to discuss a resolution of this matter. If you wish to pursue such discussions in the absence of litigation, we suggest that you initiate them within the next ten (10) days so that they may be completed before the end of the sixty (60) day notice period. We do not intend to delay the filing of a complaint in federal court if the discussions fail to resolve these matters within the sixty (60) day notice period, and we intend to seek all appropriate relief, including injunctive relief and all costs of litigation, including, but not limited to, attorneys' fees, expert witness fees, and other costs.

We believe this notice provides information sufficient for you to determine the nature of your violations. If, however, you have any questions, please feel free to contact us for clarification. We look forward to hearing from you.

Yours Sincerely,

George E. Hays

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cc:

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