DEPARTMENT OF

ATTORNEY GENERAL

FAX

August 5, 2008

то: Eurika Durr (202) 233-0121

FROM: Anna Yott, (517) 373-4044

RE: Northern Michigan University Brief Appeal Number: PSD 08-02

-As per our conversation, attached is the Brief itself, 28 pages. Thank you.

PROPERTY APPEALS BOAR

BEFORE THE ENVIRONMENTAL APPEALS BOARD UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C.

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In the Matter of Northern Michigan University) Permit Number: 60-07
) Appeal Number: PSD 08-02

RESPONSE OF THE MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

NOW COMES respondent the Michigan Department of Environmental Quality (MDEQ), by and through its attorneys, Michael A. Cox, Attorney General of the State of Michigan, and Neil D. Gordon, Assistant Attorney General, and files this response to the petition filed by the Sierra Club (Petitioner). As discussed below, Petitioner fails to show that the MDEQ's permitting decision is based on a clearly erroneous finding of fact or conclusion law or involves an important matter of policy or exercise of discretion that warrants review. The petition should therefore be denied.

Background

On May 12, 2008, the MDEQ, pursuant to a delegation from the U.S. Environmental Protection Agency, issued a federal Clean Air Act prevention of significant deterioration (PSD) permit to Northern Michigan University (NMU). The PSD permit, identified as Permit to Install 60-07 (Permit), concerns the construction of a new circulating fluidized bed (CFB) boiler at NMU's Ripley Heating Plant in Marquette, Michigan. The proposed boiler is designed to operate on wood chips for its heat input. It can also burn coal and natural gas.²

¹ Permit, attached as Exhibit 1.

² Permit application, cover letter, attached as Exhibit 2.

The boiler is capable of producing 120,000 pounds of steam per hour.³ Steam from the boiler is used to feed a steam turbine to produce up to 10 megawatts of electricity and to supply steam for use on the campus of NMU.4

The Riley Heating Plant includes three existing boilers that operate pursuant to Permit to Install 126-05 that the MDEQ issued on July 21, 2005. Two of those boilers were installed between July 2005 and February 5, 2007, when the MDEQ received NMU's application for the Permit. The heat input from the three existing boilers is 255 million British thermal units per hour (MMBtu/hr). The potential to emit any regulated pollutant from the three existing boilers was limited to less than 100 tons per year pursuant to Permit to Install 126-05.5

The new CFB boiler has the potential to emit sulfur dioxide (SO₂) and carbon monoxide (CO) in amounts greater than 100 tons per year for each of those pollutants. The new boiler is therefore a "major stationary source" under the PSD regulations promulgated pursuant to the Clean Air Act. In addition to the emissions of SO₂ and CO, the new boiler will result in a significant net emissions increase of particulate matter and oxides of nitrogen (NO_x).⁶

In its permit application, NMU explained that the wood fuel "will be supplied from independent wood suppliers" while the coal "will come from either the Marquette Board of Light & Power, or the nearby WE Energy Presque Isle Power Plant." Due to the small size of the entire facility and the limited space available for fuel storage, "NMU will receive a shipment every day of solid fuels" by truck, except on weekends.8 Wood and coal will be stored in silos that have the capacity to store up to a three-day supply of each fuel.9

³ MDEQ Fact Sheet, attached as Exhibit 3, at 1.
⁴ Exhibit 2, at 4.

⁵ Id., at 1, 14.

Id., at 3.

Id., at 4.

The MDEO performed an analysis to ensure that the boiler would be subject to the best available control technology (BACT) for SO₂, CO, NO₂, and particulate matter. With regard to particulate matter, the MDEQ performed its analysis for particulate matter of 10 microns or less in diameter (PM-10). 10 Based on guidance issued by the Environmental Protection Act (EPA), the MDEQ (as discussed in more detail below) also performed a BACT analysis for particulate matter with a diameter of less than 2.5 microns (PM-2.5) using PM-10 as a surrogate for PM- $2.5.^{11}$

The Permit requires that NMU operate a fabric filter (baghouse) and includes emission limits for PM-10 and PM-2.5. The Permit also includes emission limits for SO₂, CO and NO_x. ¹² Petitioner identifies various purported errors in the Permit in its rambling, 58-page

Argument

petition. None of Petitioner's arguments have merit and its petition should be denied.

I. Standard of Review

A PSD permit will ordinarily not be reviewed unless it is based on a clearly erroneous finding of fact or conclusion of law, or involves an important matter of policy or exercise of discretion that warrants review. 13 The preamble to the promulgation of the regulations governing this proceeding states that "this power of review should be only sparingly exercised," and that "most permit conditions should be finally determined at the [permit issuers] level." 14 Accordingly, it is infrequent for the Board to grant review in a PSD permit appeal.¹⁵

¹⁰ Exhibit 3, at 3, 4.
11 Response to Comments, attached as Exhibit 4, at 18
12 Exhibit 1, at 6, 7.

^{13 40} C.F.R. § 124.19.

¹⁴ 45 Fed. Reg. 33,290, 33,412 (May 19, 1980).

¹⁵ In re: Knauf Fiber Glass, GmbH, 9 E.A.D. 1, 7 (EAB 2000).

The regulations governing PSD permitting provide that a petition for review must include "a demonstration that any issues being raised were raised during the public comment period (including any public hearing) to the extent required by these regulations [.]^{nl6} The regulations also contain the following requirement: "All persons, including applicants, who believe any condition of a draft permit is inappropriate . . . must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position by the close of the public comment period (including any public hearing)[.]"17

The burden of demonstrating that review is warranted is on the petitioner. 18 In order to establish that the Board should grant review, the petitioner must "state the objections to the permit that are being raised for review, and ... explain why the permit decision maker's previous response to those objections (i.e., the decision maker's basis for the decision) is clearly erroneous or otherwise warrants review."19

Π. The Permit contains an appropriate BACT limit for PM-2.5

Petitioner claims that the MDEQ erred when the agency used its BACT determination for PM-10 as a surrogate for a PM-2.5 BACT determination. Petitioner does not identify any error in the MDEQ's BACT analysis for PM-10. Instead, it claims that the MDEQ erred by not performing "an independent, top-down (or equivalent) BACT determination for PM -2.5."²⁰ Petitioner's argument ignores both EPA guidance on PM-2.5 and the MDEQ's analysis.

After the EPA promulgated the national ambient air quality standard for PM-2.5 in 1997, the agency issued a guidance document entitled "Interim Implementation of New Source Review

¹⁶ 40 C.F.R. § 124.19(a). ¹⁷ 40 C.F.R. § 124.13.

¹⁸ See 40 C.F.R. § 124.19(a); In re: Commonwealth Chesapeake Corp., 6 E.A.D. 764, 769 (EAB

¹⁹ Commonwealth Chesapeake Corp., 6 E.A.D. at 769.
²⁰ Petition for Review, at 11.

Requirements for PM-2.5" (sometimes referred to herein as the "Seitz Memorandum").²¹ The guidance explains that due to "significant technical difficulties that now exist with respect to PM-2.5 monitoring, emissions estimation, and modeling . . ., EPA believes that PM-10 may properly be used as a surrogate for PM-2.5 in meeting NSR requirements until these difficulties are resolved." The guidance concludes that "it is administratively impracticable at this time to require sources and State permitting authorities to attempt to implement PSD permitting for PM-2.5. . . . Until these deficiencies are corrected, EPA believes that sources should continue to meet PSD and NSR program requirements for controlling PM-10 emissions . . . and for analyzing impacts on PM-10 air quality. Meeting these measures in the interim will serve as a surrogate approach for reducing PM-2.5 emissions and protecting air quality." ²²

The surrogate policy contained in the Seitz Memorandum was re-affirmed by EPA in a memorandum dated April 5, 2005.²³ It was re-affirmed again on September 21, 2007 in EPA's proposed rule regarding the PSD requirements for PM-2.5.²⁴

In this case, the analysis contained in the record and in the MDEQ's response to comments shows that the MDEQ followed the surrogate approach established by EPA to develop a BACT limit for PM-2.5. NMU demonstrated in its permit application that a fabric filter (baghouse) is considered BACT for the proposed boiler for "PM/PM-10/PM-2.5." The MDEQ, based in part on the analysis presented by NMU, determined that a baghouse and an emission

²¹ Seitz Memorandum, attached as Exhibit 5, at 1.

²² Id. at 2.

²³ Memorandum from Stephen D. Page, Director, EPA Office of Air Quality Planning and Standards, dated April 5, 2005, attached as Exhibit 6,

²⁴ PSD for Particulate Matter Less Than 2.5 Micrometers (PM-2.5) - Increments, Significant Impact Levels (SILs) and Significant Monitoring Concentration (SMC); Proposed Rule, 72 Fed. Reg. 54,112, 54,114 ("A State implementing a[sic] NSR program in an EPA-approved State Implementation Plan (SIP) may continue to rely on the interim surrogate policy . . .").

²⁵ Exhibit 2. at 33-40.

limit of 0.030 lb/MMBtu satisfied BACT for PM-10.²⁶ Pursuant to the surrogate approach contained in the EPA guidance, the MDEQ also concluded that a 0.30 lb/MMBtu met BACT for PM-2.5.²⁷

In addition, the MDEQ went beyond the surrogate approach and provided additional. reasons why the baghouse satisfied BACT. In its response to comments, the MDEQ explained that it performed a search of EPA's "RACT, BACT, LAER Clearinghouse" (RBLC) database and identified "12 facilities and 14 processes for which a PM-2.5 limit has been proposed or included in a permit." The MDEQ stated:

For seven of the processes, PM-10 and PM-2.5 are both listed with identical emission limits. The processes include diesel electric generators, gas-fueled electric generation, metallurgy processes, chemical processes, a cement process and slag processing. Of these, ten have no controls listed as BACT. One, the slag process, uses a water spray. Three have add-on control equipment that are either a baghouse (for two metallurgy furnaces) based on the Lowest Achievable Emission Rate (a more stringent standard than BACT) or a bag filter (on a chemical process) based on a case-by-evaluation other than federal regulations. The particulate matter control equipment required for the circulating fluidized bed boiler at Northern Michigan University is a fabric filter (baghouse) system. Per the RBLC, fabric filters are the method installed for control of PM-2.5 from two metallurgy furnaces based on LAER, a more stringent standard than BACT[.]²⁸

In other words, the MDEQ's determination – that a baghouse and an emission limit of 0.30 lb/MMBtu satisfies BACT for PM-10 and, pursuant to EPA's surrogate policy, for PM-2.5 as well – is reinforced by its RBLC review which showed that a baghouse is add-on control equipment that satisfies LAER for PM-2.5 for other processes.

In addition to ignoring EPA's guidance regarding the surrogate policy, Petitioner maintains that the MDEQ was required to follow EPA's regulations to implement the PSD program for PM-2.5.²⁹ Petitioner inaccurately asserts that the Permit was issued after EPA

²⁶ Id; Exhibit 3, at 3-4; Exhibit 1, at 6.

²⁷ Exhibit 4, at 3; Exhibit 1, at 6.

²⁸ Exhibit 4, at 18.

²⁹ Petition, at 9; 73 Fed. Reg. 28, 321 (May 16, 2008).

promulgated its PM-2.5 implementation regulations on May 16, 2008. In fact, the Permit was issued on May 12, 2008.30 To confuse matters further, Petitioner also claims that the MDEQ cannot follow the portion of the regulations that instruct permitting authorities to use a PM-10 BACT analysis as a surrogate for a PM-2.5 BACT analysis because such provisions may be vacated by a challenge that may be filed in U.S. Court of Appeals for the District of Columbia Circuit.

There is no dispute that the Permit was issued on May 12, 2008, before EPA promulgated the PM-2.5 implementation rule on May 16, 2008. The MDEO's analysis underlying the Permit addressed both PM-10 and PM-2.5 and is entirely consistent with the relevant EPA guidance.

Moreover, assuming for the sake of argument that the MDEQ was required to follow the PM-2.5 implementation rule in making its permitting decision, Petitioner fails to identify any legal requirement that would demonstrate clear error by the MDEQ. The PM-2.5 implementation rule became effective on July 15, 2008. EPA explained that when the rule is in effect, "the PM-2.5 PSD program will no longer use a PM-10 program as a surrogate, as has been the practice under our existing guidance."³¹ The rule specifically provides that the surrogate policy set forth in the Seitz Memorandum applies to permit applications submitted before July 15, 2008 that are complete with respect to the PM-2.5 requirements then in effect pursuant to that memorandum.32

Here, there is no claim that the permit application was not complete with respect to PM-2.5 pursuant to the surrogate policy set forth in the Seitz Memorandum. Instead, Petitioner speculates that "it is expected that this provision will soon be challenged" in the U.S. Court of

³⁰ Exhibit 1, at 1. ³¹ 73 Fed. Reg. at 28324. ³² *Id.*, at 28349-350.

Appeals for the D.C. Circuit, and that it may be vacated. 33 In fact, the rule has not been vacated, and the surrogate policy applies. Petitioner's speculation that rule may be vacated ignores the undisputed fact that the implementation rule remains in effect and that the MDEQ cannot disregard it. Consequently, even if the rule was applicable to the Permit, the MDEQ correctly followed the rule by applying the surrogate policy.

More importantly, the PM-2.5 implementation rule is not applicable in this case because the Permit was issued before the rule was promulgated. The MDEQ correctly followed the surrogate policy which was in effect at the time the MDEQ issued the Permit. Petitioner has failed to sustain its burden of demonstrating clear error.

BACT limits for carbon dioxide and N₂O are not required pursuant to section 165(a)(4) because they are not subject to regulation under the Clean Air Act Ш.

The PSD requirements in the Clean Air Act provide that a proposed facility is subject to BACT "for each pollutant subject to regulation under [the Act] emitted from, or which results from, such facility."34 Petitioner asserts that the MDEQ erred by not including a BACT emission limit for carbon dioxide in the Permit. According to Petitioner, Congress intended to make carbon dioxide "subject to regulation" under the Clean Air Act, and thus subject to BACT, when it enacted section 821 of Public Law No. 101-549, 1014 Stat. 2399, 2699 (1990).

Although Public Law No. 101-549 included amendments to the Clean Air Act, it also enacted several provisions that are not part of the Act, including Section 821.35 Section 821 requires EPA to promulgate regulations requiring the monitoring of carbon dioxide emissions by affected sources under Title IV of the Act.

Petition, at 9.
 42 U.S.C. § 7475(a)(4).
 Section 821 of Pub. L. No. 101-549 is set forth in the notes to Section 412 of the Act, 42 U.S.C. § 7651k (notes).

The fundamental flaw in Petitioner's argument is that Section 821 is unambiguously not part of the Clean Air Act. The provisions in Public Law No. 101-549 that amend the Clean Air Act do so in clear, unmistakable terms. For example, section 801 of Public Law. No. 101-549 states "Title III of the Clean Air Act is amended by adding the following new section after section 327: ... "36 Similarly, Section 401 of the public law, which amended the Act by adding Title IV, prefaces the provisions of Title IV with the following statement: "The Clean Air Act is amended by adding the following new title after Title III: ... "37

By contrast, nothing in section 821 of the public law indicates that Congress intended section 821 provision to be included in the Clean Air Act itself. The absence of any amending language in section 821 clearly demonstrates that it is not a section of the Act. Therefore, section 821 cannot make carbon dioxide "subject to regulation under the Act."

Petitioner also contends (in a one-sentence statement in its petition) that carbon dioxide is subject to regulation under the Act due to New Source Performance Standard (NSPS) for Municipal Solid Waste (MSW) landfills that EPA has promulgated under section 11 of the Act. 38 The NSPS, however, regulate only "MSW landfill emissions," not the individual components of the landfill gases.

The NSPS for MSW landfills contains emission guidelines for "certain designated pollutants" and specifies that the pollutants to be controlled are "MSW landfill emissions."39 "MSW landfill emissions" are defined as "gas generated by the decomposition of organic waste deposited in an MSW landfill or derived from the evolution or organic compounds in the

³⁶ Pub. L. No. 101-549, § 801. ³⁷ Id., § 401. ³⁸ See Petition, at 16. ³⁹ 40 C.F.R. §§ 60.30c, 60.33c(a)

waste."⁴⁰ In other words, the regulated pollutant is the collection of gases that are emitted from an MSW landfill. The NSPS does not regulate the individual components of the landfill gases.

The record for the NSPS demonstrates that it controls only the collection of emissions that constitute the "composite pollutant" called "MSW landfill emissions." In the preamble to the proposed rule, EPA stated:

The pollutant to be regulated under the proposed standards and guidelines is "MSW landfill emissions." Municipal solid waste landfill emissions, also commonly referred to as "landfill gas," is a collection of air pollutants, including methane and NMOC's [non-methane organic compounds], some of which are toxic. The composite pollutant is proposed to be regulated under section 111(b), for new facilities, and is proposed to be the designated pollutant under section 111(d), for existing facilities.⁴¹

The EPA provided additional explanation in announcing the proposed NSPS for MSW landfills:

The EPA views these emissions as a complex aggregate of pollutants which together pose a threat to public health and welfare based on the combined adverse effects of the various components. As previously stated, these components are methane and NMOC's, including various toxic substances. . . . [T]he exact composition of MSW landfill emissions can vary significantly from landfill to landfill and over time. Although the types of compounds are typically the same, the complex mixture cannot be characterized quantitatively in terms of single pollutants. The EPA thus views the complex air emission mixture from landfills to constitute a single designated pollutant. 42

Petitioner's assertion – that the components of landfill gases are regulated individually under the NSPS – is wrong and is contrary to the text of the NSPS and the record of its promulgation.

Petitioner also claims that carbon dioxide is "subject to regulation under the Act" because of two Wisconsin regulations contained in its state implementation plan ("SIP"). The first regulation requires certain facilities to submit to the Wisconsin Department of Natural Resources

42 Id., at 24,474.

⁴⁰ 40 C.F.R. § 60.751.

^{41 56} Fed. Reg. 24,468, 24,470 (May 30, 1991).

an annual inventory of various emissions, including carbon dioxide. 43 The second regulation requires that some "phase I and phase II acid rain units . . . shall be monitored for . . . carbon dioxide[.]"44

Petitioner makes the same argument with regard to emissions of nitrous oxide. It identifies regulations promulgated by Wisconsin, one of which requires some facilities to submit an annual inventory of emissions of nitrous oxide (the same regulation discussed above with regard to carbon dioxide). According to Petitioner, EPA's approval of Wisconsin's SIP (which contains these regulations) means that carbon dioxide and nitrous oxide are subject to regulation under the Act itself.

Petitioner ignores the fact that SIPs must include a minimum set of "emissions limitations and other control measures, means, or techniques . . . to meet the minimum requirements [of the Act]" and that SIPs may include additional "standard[s] or limitation[s] respecting emissions of air pollutants" provided they are not less stringent than the requirements in the Act. 45 The fact that Wisconsin may have promulgated rules that require, for example, monitoring and reporting of carbon dioxide and nitrous oxide emissions in no way makes such rules a part of the Act. Nor do the rules somehow make carbon dioxide or nitrous oxide "subject to regulation under the Act" pursuant to section 165(a)(4).

In fact, Petitioner's argument (if accepted) would magically result in a sweeping new federal program regulating carbon dioxide and nitrous oxide emissions based not on any legislative enactment by Congress, but, instead, based on the promulgation of an administrative rule by Wisconsin. Under Petitioner's novel theory, thousands of operations that have never been subject to PSD requirements would now have to go through the PSD permitting process by

⁴³ Wis. Admin. Code § NR 438.03(1)(a)(2008). ⁴⁴ Wis. Admin. Code § NR 439.095(1)(f)(2008). ⁴⁵ 42 U.S.C. §§ 7410(a)(2)(A), 7416.

virtue of a rule promulgated by Wisconsin. Nothing in the Act shows that Congress intended such a result.

As the MDEQ emphasized, "there are no federal... rules requiring limits on carbon dioxide or nitrous oxide emissions from electric generating units," and the MDEQ "cannot suspend the processing of permits until such rules are promulgated." Petitioner's argument should be rejected.

IV. The MDEO correctly considered fuel availability in establishing the SO₂ limits

Petitioner asserts that the MDEQ should have developed the SO₂ emission limits based on NMU burning 100% wood waste, rather than a mix of wood and coal.

The SO₂ limits take into account the availability of wood waste to be burned by NMU in the proposed boiler. Snowstorms occur regularly in the Marquette area during the late fall, winter and early spring and will prevent the delivery of wood by logging trucks from NMU's independent wood suppliers. Consequently, NMU sought authorization burn coal that would be supplied by the two nearby electric utilities. The MDEQ explained that it was appropriate that the SO₂ limits should be based on burning wood and coal:

Northern Michigan University planned for fuel flexibility at the proposed solid fuel fired circulating fluidized bed boiler to assure continued operation during severe winter weather. At any time during the winter or into the spring, heavy snows can severely limit the ability to travel. In the first week of April in both 2007 and 2008, snowfalls measured in feet of snow occurred, severely limiting travel. Similar conditions occur on a regular basis throughout the winter, and weather events affecting the availability of fuel are a fact of life in the Upper Peninsula of Michigan. It is foreseeable that fuel suppliers will not have access to the available wood supply or the means to transport wood fuel to the Ripley plant site for an extended period of time. The site is relatively small, with solid fuel storage capacity equivalent to about three days of operation. To keep the heat and power boiler operating, a fuel use plan that allows the use of a choice of available fuel is necessary, including coal from the nearby power plants.⁴⁷

⁴⁶ Exhibit 4, at 8, 29.

⁴⁷ Id., at 19; see also id., at 12 (wood delivery would occur approximately once per day during the week on routes used by logging trucks).

The MDEQ's conclusion that wood waste will not be available is not based on a "largely theoretical possibility" as Petitioner claims.⁴⁸ It is based on publicly available information regarding the frequent, severe snowstorms that disrupt travel and wood delivery to NMU in the Marquette area.⁴⁹ In light of the fact wood waste will not be available at all times, the Permit's SO₂ limits are based on a fuel mix of wood and coal.⁵⁰

Moreover, the comments Petitioner submitted on the draft permit further demonstrate the unavailability of wood as fuel. In its comments, Petitioner stated: "There remain significant questions about the amount of waste wood available in the Upper Peninsula according to a 2000 Northern Initiatives study. This study indicates that waste wood from primary and secondary manufacturing operations is not available in large quantities in the UP." Those comments support the MDEQ's conclusion that wood is not always available and reinforce the agency's determination that the SO₂ limits cannot be based on burning 100% wood waste.

Petitioner now also asserts, for the first time in its petition, that the MDEQ should have revised the 30-day and 12-month SO₂ limits to "maximize the use of clean fuel." Petitioner never presented this issue to the MDEQ during the public comment period. The regulations governing PSD permitting require Petitioner to "raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position by the close of the public comment period (including any public hearing." As this Board explained previously, "The effective, efficient, and predictable administration of the permitting process demands that the

⁴⁸ Petition, at 32.

⁴⁹ See National Climatic Data Center's website for Storm Events at http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwevent-storms, and enter Michigan, Marquette County, Snow & Ice "Event Type", and click on "List Storms." The details of individual storms, including the storms the MDEQ identified, can be viewed by clicking on the link for each storm event.

⁵⁰ Permit Evaluation Form, attached as Exhibit 7, at 3.

Petitioners' comments, attached as Exhibit 8, at 17.

⁵² Petition, at 33.

⁵³ 40 C.F.R. § 124.13.

permit issuer be given the opportunity to address potential problems with draft permits before they become final."⁵⁴ Petitioner failed to preserve its argument for appeal as required by 40 C.F.R. §§ 124.13 and 124.19(a), and review should therefore be denied.

V. The MDEO correctly performed its BACT analysis based on the coal to be delivered by truck from two local power plants

Petitioner claims that the MDEQ's BACT analysis was flawed because it did not require NMU to burn coal from the Powder River Basin (PRB) that has a lower sulfur content than the PRB coal NMU proposes to receive by truck from the two local power plants in Marquette (the WE Presque Isle Power Plant and the Marquette Board of Light and Power). According to Petitioner, the SO₂ limits should have been based on lower sulfur coal from the PRB rather than the PRB coal to be supplied by the two local power plants.

The MDEQ developed the SO₂ limits based on a number of factors. First, the Ripley Heating Plant has an extremely limited storage capacity for fuel. The entire facility (including the operations for the three existing boilers, fuel delivery/storage/handling operations, and the new boiler housing, turbine, and baghouse structure) occupy an area of approximately 200 by 350 feet. Within the extremely small area at the facility for fuel storage, NMU has proposed to construct silos to maximize the storage capacity for the wood and coal that will be delivered to the facility by truck. As the MDEQ explained, "Northern Michigan University proposes to install storage silos for both wood and coal with a storage capacity sufficient for three days operation of the boiler. There is no space available at the site for a stockpile of fuel separate from that used at the local power plants." NMU's ability to burn any fuel is constrained by the extremely limited fuel storage capacity at the facility.

⁵⁶ Exhibit 4, at 20.

⁵⁴ In re Encogen Cogeneration Facility, 8 E.A.D. 244, 250 (EAB 1999).

⁵⁵ Exhibit 2, at Appendix A, drawing entitled Equipment Arrangement.

Second, to burn coal with a sulfur content lower than the coal from the local utilities, NMU would have to arrange for it to be transported from mines in the PRB and would have to make fundamental changes in the design of the facility to receive the coal, stockpile it, and feed it to the boiler. Among other things, coal shipped from the PRB would somehow have to be stockpiled at the facility and equipment to feed the coal to the boiler from the stockpiles would need to be installed. The MDEQ therefore determined that to require NMU to receive, stockpile and burn coal from the PRB instead of from the nearby power plants "would redefine the source as proposed by Northern Michigan University." 57

The MDEQ's determination is supported by the Board's decision in In re Prairie State Generating Co.58 In that case, the permit applicant proposed to construct a "mine-mouth" coalfired power plant to be located at mine in southern Illinois containing a 30-year supply of highsulfur coal. The coal would be brought by a conveyor belt from the mine to the plant. Petitioner argued the BACT required the use of low-sulfur coal from the PRB. The Environmental Appeals Board concluded that to require the permit applicant to receive coal from distant mines rather than the adjacent mine would require it to reconfigure the facility and change its fundamental scope, thereby impermissibly redefining the source.⁵⁹

The same reasoning applies here. There is no space at the proposed facility to receive and stockpile coal from the PRB. As explained above, the facility would have to substantially reconfigured if coal from the PRB was to be received, stockpiled, and fed to the boilers. Any such reconfiguration would fundamentally change the scope of the proposed facility and would redefine the source. Petitioner has failed to demonstrate any error by the MDEQ and its argument should be rejected.

Id., at 19.
 Slip op. (Aug. 24, 2006), aff'd by Sierra Club v. EPA, 499 F.3d 653 (7th Cir. 2007).
 Id., at 18-37.

The MDEQ correctly calculated the SO2 limits based on the coal to be delivered VI. from the local power plants

Petitioner asserts that the SO₂ emission limits are incorrect because the MDEQ based them on the sulfur content of the coal the local power plants are authorized to burn and would supply to NMU. According to Petitioner, the MDEQ should have based the SO₂ limits on the sulfur content of the coal the WE Presque Isle power plant has actually burned (during an undefined period), rather than what it is authorized to burn. Additionally, Petitioner claims that the MDEQ further erred because the agency's response to comments and calculations regarding the SO₂ limits are framed in terms of the percentage of sulfur in coal by weight, rather than the units presented in Petitioners' comments (pounds of SO₂ per MMBtu).

The MDEQ correctly calculated the SO₂ emission limits. The sulfur content of the coal NMU will receive from the local power plants is legally allowed to be as high as 1.5% by weight. In its response to comments, the MDEQ explained that "the coal used at the Presque Isle Power Plant (one of the two local stockpiles from which coal would be obtained) may, by permit, contain up to 1.5% sulfur[.]ⁿ⁶⁰ Similarly, the permit evaluation form prepared by the MDEQ explained that "[c]oal will be obtained from one two local utilities that are "limited by permit to 1.5% sulfur coal . . . and 1.0% sulfur coal."61 The sulfur content the MDEQ relied on for its calculations is less than half the "3.5 percent by weight" requested by NMU in its permit application.62

In light of the fact that the coal to be supplied to NMU can legally contain as much 1.5% sulfur by weight, the MDEQ appropriately calculated the SO2 emission limits based on that sulfur content. The MDEQ satisfactorily explained the basis for its conclusion. The fact that it

Exhibit 4, at 20.
 Exhibit 7, at 4.
 Exhibit 2, at 25.

used different units of measurement than those presented by Petitioner fails to show any error by the agency. Review on these issues should therefore be denied.

VII. <u>Petitioner has failed to demonstrate how the permit condition regarding a startup, shutdown and malfunction plan violates a PSD requirement</u>

Permit special condition 1.5 states that NMU "shall develop, and submit to the [MDEQ's Air Quality Division] for review and approval, a written startup, shutdown and malfunction plan (SSMP)." The SSMP "must describe in detail, procedures for operating and maintaining [the CFB boiler] during periods of startup, shutdown, and malfunction, and include a program of corrective action for malfunctioning process equipment and associated air pollution control and monitoring equipment." The Permit also requires NMU is required to operate the CFB boiler pursuant to the SSMP during periods of startup, shutdown, or malfunction. 64

Petitioner claims that this permit condition is unlawful because the SSMP will not be "available to the public as part of the public review and comment period." In support, it cites this Board's decision in *In re RockGen Energy Center*, 8 E.A.D. 536 (EAB 1999). That case, however, involved a fundamentally different issue. The permit in that matter authorized RockGen to exceed the permit's BACT emission limits if the emissions were temporary and were due to startup or shutdown carried out in accord with a startup and shutdown plan to be submitted to the Wisconsin Department of Natural Resources (WDNR) after permit issuance.

⁶³ Exhibit 1, at 7.

⁶⁴ Id. Since NMU has not yet determined the specific equipment (e.g., manufacturers and models) it will purchase, install and operate, the SSMP cannot be developed at the time of permit issuance. For example, the specific preventative maintenance tasks NMU is to perform to avoid malfunctions cannot be drafted until the equipment on which those tasks will be performed has been identified.

⁶⁵ Petition, at 38.

The Board remanded the case. If WNDR intended to include a provision that would allow exceedances of the BACT limits, the Board ordered it "make an on-the record determination as to whether compliance with existing permit limitations is infeasible during startup and shutdown, and, if so, what design, control, methodological or other changes are appropriate for inclusion in the permit to minimize the excess emissions during these periods."66 The Board also ordered that if WNDR determined that compliance with the BACT limits cannot be achieved during startup and shutdown, it must "specify and carefully circumscribe in the permit the conditions under which RockGen would be permitted to exceed otherwise applicable emissions limits and establish that such conditions are nonetheless in compliance with applicable requirements."⁶⁷ Once those conditions were developed, WDNR was ordered to provide the public with an opportunity to submit comments in accordance with the procedures of 40 C.F.R. part 124.

Unlike the permit in RockGen, the Permit in this case does not allow NMU to exceed any BACT limits during periods of startup or shutdown. Nor does it any way allow NMU to operate in noncompliance with the Act's NAAQS and increment provisions. NMU must operate the CFB boiler in compliance with all of the applicable PSD requirements at all times. Similarly, the submittal of an SSMP to the MDEQ for review and approval will not change any of the PSD requirements contained in the Permit. Petitioner has failed to show how the Permit provision for an SSMP violates the public participation requirements in 40 C.F.R. part 124 and review on this issue should be denied.

⁶⁶ In re RockGen, 8 E.A.D. at 554. ⁶⁷ Id.

VIII. The MDEQ correctly accounted for increases in emissions since the baseline date in conducting its SO₂ increment analysis

Petitioner maintains that the MDEQ, in performing its increment analysis for SO₂, did not accurately calculate the increases in emissions since the PSD major source baseline date of January 6, 1975.⁶⁸ Petitioner asserts that all of the SO₂ that the WE Presque Isle Power Plant emitted in 2006 should be excluded from the baseline concentration and should be considered as increment consuming emissions.

The federal PSD regulations establish which emissions are to be excluded from the baseline concentration:

The following will not be included in the baseline concentration and will affect the applicable maximum allowable increase(s):

(a) Actual emissions, as defined in paragraph (b)(21) of this section, from any major stationary source on which construction commenced after the major source baseline date[.]. [40 C.F.R. § (b)(13)(ii)].

"Construction" is defined as any physical change or change in the method of operation (including modification of an emission unit) that would result in a change in emissions.⁶⁹
"Actual emissions" are defined as "the average rate, in tons per year, at which the unit actually emitted the pollutant during a consecutive 24-month period which precedes the particular date and which is representative of normal source operation[.]" Alternatively, allowable emissions may be presumed to be actual emissions.⁷¹

The PSD major source baseline date for SO₂ emissions is January 6, 1975. See MDEQ's website for Air, Assessment and Planning, Modeling and Meteorology, PSD Baseline Dates, at http://www.michigan.gov/deq/0,1607,7-135-3310 30151 4198-11673http://www.michigan.gov/deq/0,1607,7-135-3310 30151 4198-11673http://www.michigan.gov/deq/0,1607,7-135-3310 30151 4198-11673-

⁶⁹ 40 C.F.R. § 52.21(b)(8).

⁷⁰ 40 C.F.R. § 52.21(b)(21)(ii). ⁷¹ 40 C.F.R. § 52.21(b)(21)(iii).

In this case, the MDEQ was required to exclude from the baseline concentration actual emissions from the WE Presque Isle Power Plant (a major stationary source) on which construction commenced after the major source baseline date of January 1, 1975. That is precisely what occurred. The MDEQ explained in its response to comments that it reviewed emissions for the WE plant before and after the baseline date and excluded the actual emissions from construction that commenced after that date:

The SO₂ major source baseline date was set by the Clean Air Act to be January 6, 1975. Emissions associated with modification at a major stationary source consume increment after this date. A comparison was made between the reported SO₂ emissions from [the WE Presque Isle Power Plant] for 1973 and 2006 which were found to be 15,274 tpy and 16,609 tpy. This increase of 1335 tpy should not be part of the baseline and should be considered in the PSD increment analysis. New modeling was conducted by the [MDEQ] which added the 1335 tpy to the increment analysis and the results indicated that this change had no effect on either the 30-hr or 24-hr PSD maximum (100%) SO₂ PSD increment levels. However, the addition of the 1335 tpy did cause the annual PSD increment concentration to increase to approximately 10 percent which is still well below the State's 80% allowable Class II PSD increment criterion. 72

In other words, the MDEQ accurately determined that the amount of actual SO₂ emissions from the WE Presque Isle power plant on which construction commenced after the major source baseline date was 1335 tpy. Those emissions were correctly excluded from the baseline concentration. Petitioner has failed to demonstrate any error by the MDEQ.

IX. MDEO correctly determined NAAOS impacts and PSD increment consumption for SO₂ based on maximum emissions

Petitioner's next argument is that the MDEQ erred in its analysis of NAAQS impacts and PSD increment consumption for SO₂. Petitioner asserts that the MDEQ used the SO₂ emission limits in the Permit for its analysis, that those limits do not apply during startup and shutdown, and that the MDEQ should have used "maximum theoretical emissions" in its analysis.⁷³

⁷² Exhibit 4, at 14.

⁷³ Petition, at 45.

Petitioner argument fails for several reasons. First, the MDEQ's analysis used the maximum, worst-case, hourly emission rate of SO₂ emissions, and assumed the boiler would be operated continuously (i.e., 24 hours per day and 365 days per day). The MDEQ's analysis is documented in both its Air Dispersion Analysis Summary and the information provided by NMU in its permit application.⁷⁴ Petitioner's claim that the MDEQ relied on the SO₂ emission limits in the Permit is simply incorrect.

Second, Petitioner's assertion that the Permit limits do not apply during periods of startup and shutdown is also wrong. The Permit's SO₂ emission limits apply at all times. Petitioner misreads the Permit's provisions. In addition to the SO₂ emission limits, the Permit requires NMU to establish operating limits (during the initial performance test) to ensure that the boiler is operated in a manner consistent with good air pollution control practices and that emissions are minimized. Those operating limits include parameters such as maximum fuel use rate and minimum fabric filter pressure drop. The operating limits must be met at all times except during periods of startup, shutdown and malfunction. There is nothing in the Permit, however, that allows NMU to exceed the SO₂ emission limits during startup and shutdown. Moreover, the Permit conditions regarding operating limits had no role in the MDEQ's analysis regarding NAAQS impacts and PSD increments.

Third, the MDEQ's analysis was based on NMU burning a higher sulfur coal than it is authorized to burn. The agency performed its analysis based on NMU burning coal with 3.5%

⁷⁴ See Air Dispersion Analysis Summary, attached as Exhibit 9, at 2 (listing an SO₂ emission rate of 8.78E+01 lb/hour, or 87.8 lb/hr, for its modeling, and identifying its conclusions regarding PSD increments and NAAQS impacts); Exhibit 2, at 64 (identifying maximum emission rates based on worst-case emissions).

⁷⁵ Exhibit 1, at 7.

⁷⁶ Id.

sulfur by weight, whereas the Permit requires that the sulfur content of the coal used in the boiler not exceed 1.5% by weight.⁷⁷ In other words, the MDEO's analysis was extremely conservative.

Based on the maximum emissions of sulfur with the boiler burning coal containing more than twice the amount of sulfur allowed, the MDEQ determined that the SO₂ emissions will not exceed the NAAQS. The agency also determined the emissions will not exceed the PSD increments. The actual SO₂ emissions, NAAOS impacts, and PSD increment consumption will be even less (indeed, much less) when NMU burns 1.5% sulfur coal as required by the Permit. Petitioner has therefore failed to show any error, and review on this issue should be denied.

X. Appropriate air quality monitoring data was used

Petitioner asserts that the MDEQ erred by not requiring NMU to submit ambient air quality monitoring data collected exclusively for the purpose of determining whether emissions from the proposed boiler will exceed the NAAOS or the PSD increment. According to Petitioner, NMU must itself install and operate air quality monitors in the area around the proposed facility. It may not, Petitioner contends, use data from monitors installed by anyone else for any purpose other than the permit application.⁷⁸

Nothing in the Clear Air Act requires that the preconstruction monitoring data be collected solely for the purpose of analyzing NAAQS impacts or PSD increment consumption. Nor does the Act mandate that the permit applicant gather the data itself. Instead, the Act provides that the permitting analysis must include "continuous air quality monitoring data gathered for purposes of determining whether emissions from such facility will exceed the [NAAQS or PSD increment]."79 Pursuant to that provision, a permit applicant may use air quality monitoring data, regardless of who collected it, that serves the dual purposes of, for

⁷⁷ Exhibit 2, at 24, Table 4-1, note 1 (maximum SO₂ emission rates are based on 3.5 percent sulfur coal); Exhibit 1, at 7, special condition 1.3.

⁷⁸ Petition, at 45-48.

⁷⁹ 42 U.S.C. § 7475(e)(2).

example, demonstrating a region is in attainment with a NAAQS and evaluating whether emissions from a proposed facility will exceed the NAAQS or PSD increment. To require an applicant to collect additional monitoring information when representative data collected by others already exists would needlessly require the applicant to expend resources. Nothing in the Act requires the wasteful result sought by Petitioner.

Here, the data gathered consists of continuous air quality monitoring data from different locations in Michigan and Wisconsin that the MDEQ provided to NMU.⁸⁰ NMU and the MDEQ appropriately relied on that data in analyzing whether the emissions from the proposed boiler will exceed the NAAQS or PSD increment.

XI. The continuous air quality monitoring data was provided by the MDEQ and was appropriate for use in the air quality analysis

Petitioner claims that the regional ambient air quality monitoring data NMU submitted cannot be used by the MDEQ because the agency did not determine whether the data was representative of air quality near the proposed boiler. Petitioner also asserts that no such determination could have been made. As discussed below, Petitioner ignores the information in the record. The ambient monitoring data of background concentrations, as well as the modeled ambient impacts from existing emission sources and the proposed boiler, were used correctly to analyze where the NAAQS and PSD increments would be met.

Prior to submitting its permit application, NMU followed EPA guidance and contacted the MDEQ to determine which continuous air quality monitoring data it should use in its air quality analysis.⁸¹ As stated in the permit application, "background concentrations CO, SO₂ emissions, PM₁₀, and NO_x, were obtained from the MDEQ's [Air Quality Division] via email on

⁸⁰ See Exhibit 2, at 69 and at Appendix C, Background Concentrations spreadsheet.

The New Source Review Workshop Manual prepared by EPA in 1990 (NSR Manual) states that "applicants are advised to review the details of their proposed modeling analysis with the appropriate reviewing agency before a complete PSD application is submitted." NSR Manual, at C.2.

August 21, 2006."82 The MDEO determined that regional monitoring data from monitors located in Michigan and Wisconsin was appropriate for NMU's air quality analysis because it was either representative of air quality near NMU or even more conservative because it reflected higher concentrations of criteria pollutants in the ambient air than those present in Marquette. The data included, for example, information from a PM₁₀ monitor in Green Bay and a CO monitor in Milwaukee, both of which are much larger, urban areas than Marquette and have substantially higher pollutant concentrations.

In addition to the MDEQ determining that the monitor location was satisfactory, the agency also determined that it was current (it was collected during the three prior years: 2003, 2004, and 2005) and of appropriate quality. The MDEQ provided the monitoring data to NMU in a spreadsheet dated August 21, 2006. The spreadsheet the MDEQ provided is included in the permit application.83

The NSR Manual states that "existing ambient data" may be used in an air quality analysis if it is "judged by the permitting agency to be representative of the air quality for the area in which the proposed project would construct and operate."84 In determining whether the existing ambient data is acceptable, the permitting agency must consider monitor location, quality of the data, and currentness of the data. The MDEO considered all of the factors when it provided the monitoring data to NMU.

Petitioner's claim that the MDEO made no investigations or determinations as to the representativeness of the monitoring data is simply wrong. Petitioner fails to acknowledge that it was the MDEQ that selected and provided the existing ambient data to NMU in response to

⁸² Exhibit 2, at 69. NMU also contacted the MDEQ and obtained a list of off-site emissions sources the MDEQ determined was appropriate for NMU to use in its dispersion modeling

analysis. Id., at 67-68.

33 Id., at Appendix C, Background Concentrations spreadsheet.

44 NSR Manual, at C.18.

NMU's request for data to use in its air quality analysis. The MDEQ provided data it deemed to be acceptable for purposes of the air quality analysis.

Petitioner makes the related claim that NMU failed to demonstrate why it should not be required to collect site-specific ambient air quality monitoring data. Such data collection is needed, however, only if existing, acceptable ambient data is not available. Here, the MDEQ provided existing ambient data that it determined was acceptable.

Petitioner also maintains that the only ambient data that can be used is data collected from monitors within Michigan. Petitioner offers no support for that claim, other than its repeated assertion that the record lacks information to show that such data is representative and acceptable. As discussed, the record establishes that the MDEO affirmatively determined the data from Green Bay and Milwaukee is representative and acceptable when it provided the data to NMU for use in its air quality analysis.

In sum, Petitioner has failed to show any error, and review on this issue should be denied.

XII. The MDEQ correctly analyzed increment consumption in Class I areas

Petitioner maintains that the MDEQ erred when it did not perform a full PSD increment analysis for the Seney National Wildlife Refuge (Seney), a Class I area located approximately 55 miles to the east-southeast of the proposed boiler.

The NSR Manual states that "EPA requires a NAAQS and increment analysis of any PSD source the emissions from which increase pollutant concentrations by 1 µg/m³ or more (24-hour average) in a Class I area."85 The MDEO determined "that the maximum increase in the 24-hr SO₂ concentration from the facility at Seney would only be 0.42 μg/m³. π⁸⁶ Accordingly, no further analysis was required to demonstrate compliance with PSD increments.

NSR Manual, at E.16-E.17. Exhibit 4, at 13.

The MDEO also contacted the Federal Land Manager for Seney so the manager could consider whether the proposed boiler will have an adverse impact on air quality related values.87 In light of the distance from the facility to Seney and the modest increase in the 24-hour SO₂ concentration, the Federal Land Manager determined that the proposed boiler was not expected to have adverse impact on visibility or air quality related values. 88 The MDEQ correctly followed EPA guidance and the Clean Air Act in evaluating the PSD increments at Seney.

In addition, Petitioner asserts for the first time in its petition that the MDEQ erred by not conducting a full PSD increment analysis regarding a Class I area within the reservation of the Forest County Potawatomi (FCP) Community. On February 14, 1995, the FCP Community submitted to EPA its request for redesignation of the area to Class I. EPA announced the redesignation on April 29, 2008, after the close of the public comment period.⁸⁹ Petitioner asserts "there was no way to know whether or when, EPA might grant the Tribe's request," and that therefore it was not required to provide comments to the MDEQ about purported errors regarding the Class I area.90

In fact, any arguments regarding the FCP Community Class I area were reasonably available to Petitioner during the public comment period. On July 10, 1997, EPA proposed to approve the FCP Community's request for redesignation. 91 Moreover, on December 18, 2006, EPA proposed that it would promulgate a Federal Implementation Plan (FIP) if it approved the request, with the FIP to be implemented by EPA until it was replaced by a Tribal Implementation Plan. 92 The agency's announcement in the Federal Register was made just nine months before

⁸⁷ See 42 U.S.C. § 7475(d)(2)(B); Exhibit 4, at 13.

⁸⁸ Exhibit 4, at 13; E-mail dated April 4, 2008 from U.S. Fish and Wildlife Service, attached as Exhibit 10.

89 73 Fed. Reg. 23,086 (April 29, 2008).

90 Petition for Review, at 56.

91 73 Fed. Reg. at 23,089.

92 71 Fed. Reg. 75,694 (Dec. 18, 2006).

the public comment period for the Permit. It gave Petitioner notice that EPA was actively evaluating whether to approve the redesignation request.

Petitioner's suggestion that the request was laying dormant for more than 10 years is contradicted by EPA's recent actions. Any comments Petitioner may have regarding increments at the Class I area within the reservation were therefore "reasonably available" to it. 93 Petitioner was required to submit such comments to the MDEQ so that the agency could "make timely and appropriate adjustments to the permit determination.⁹⁴ Petitioner waived its argument by failing to raise it during the public comment period.

Additionally, the MDEQ considered the impact emissions would have on the Class I area within the FCP Community reservation. The MDEQ determined that, since the air quality impacts on Seney (roughly 55 miles from Marquette) met EPA guidance and the Act's requirements for an air quality analysis, the impacts at the newly designated Class I area (which is approximately 100 miles away) were also acceptable. As the MDEQ explained in its response to comments, "the closest Class I area to the facility is the Seney National Wildlife Refuge located approximately 55 miles to the ESE. Modeling indicated that the maximum increase in the 24-hr average SO2 concentration from the facility at Seney would only be 0.42 µg/m³."95 The FCP Community "reservation is located at least 100 miles (160 kilometers) from Marquette. No additional evaluation is required."96

None of Petitioner's arguments regarding increment consumption at Class I areas have merit, and review on this issue should be denied.

 ⁹³ 40 C.F.R. § 124.13.
 ⁹⁴ In re Union County Res. Recovery Facility, 3 E.A.D. 455, 456 (1990).
 ⁹⁵ Exhibit 4, at 13.

⁹⁶ Id. Petitioner misrepresents the MDEQ's statement that the reservation is 100 miles from Marquette as "reli[ance] on an unlawful distance threshold of 100 miles[.]" Petition, at 57. The MDEQ reference to 100 miles was to identify the approximate distance from Marquette to the reservation.

Conclusion

For the reasons stated above, the petition filed by the Sierra Club fails to show that the MDEQ's PSD analysis is based on a clearly erroneous finding of fact or conclusion law or involves an important matter of policy or exercise of discretion that warrants review. The petition should therefore be denied.

Respectfully submitted,

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