

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

IN THE MATTER OF:)	APPEAL NUMBER: PSD 08-02
NORTHERN MICHIGAN)	
UNIVERSITY)	PSD PERMIT NUMBER: 60-07
)	

PETITIONER'S REPLY BRIEF

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INTRODUCTION

On May 12, 2008, the Michigan Department of Environmental Quality (“MDEQ”) issued a Prevention of Significant Deterioration (“PSD”) permit to Northern Michigan University (“NMU”). The permit allows construction of a circulating fluidized bed boiler, designed to burn wood, coal, and natural gas. (MDEQ Resp. at 1.)

On June 13, 2008, Sierra Club filed a petition for review of the PSD permit pursuant to 40 C.F.R. § 124.19(a) (2007). Following an order extending time to respond, MDEQ filed its response to the Petition on August 5, 2008. Sierra Club sought leave to file this reply and, on August 14, 2008, the Board granted Sierra Club’s request. Sierra Club respectfully submits this reply to MDEQ’s August 5th response.

ARGUMENT

I. THE PERMIT DOES NOT INCLUDE A SUFFICIENT BACT LIMIT FOR PM_{2.5}.

Sierra Club’s petition sought review of the best available control technology (“BACT”) limit for PM_{2.5}. (Pet. at 8-11.) As the Petition states, MDEQ improperly followed a guidance document from 1997 to conclude that a PM₁₀ BACT analysis is a substitute for PM_{2.5} analysis. *Id.* MDEQ does not disagree that its BACT analysis for PM_{2.5} was limited to an analysis for PM₁₀, but MDEQ argues that this appropriate based on the 1997 guidance. (MDEQ Resp. at 5-6 .) In addition, MDEQ asserts 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.” (MDEQ Resp. at 6.) This is a reference to a statement in MDEQ’s response to comments, which noted that the Clearinghouse listed a few PM_{2.5} limits for various production processes. (*Id.*, Ex. 4 at 18.) However, as MDEQ notes in its response to comments, none of the prior permit limits listed in the Clearinghouse is based on a

case-by-case analysis for PM_{2.5} from a fluidized bed boiler similar to the one proposed for NMU. Instead, the prior limits in the Clearinghouse are for “diesel generators, gas-fueled electric generation [combustion turbines], metallurgy processes, chemical processes, a cement process and slag processing.” (Id.) Based on this review, MDEQ found two metallurgy furnaces that exhaust through a baghouse. (Id.) Thus, MDEQ concludes, a baghouse with fabric filters would have been selected as the basis for BACT even if it had not followed the 1997 “surrogate approach.” (MDEQ Resp. at 6 (“EPA’s surrogate policy... is reinforced by [MDEQ’s] RBLC review which showed that a baghouse is add-on control equipment that satisfies LAER for PM-2.5 for other processes.”))

A review of prior BACT controls for various wide-ranging emission sources is not the comprehensive case-by-case BACT review envisioned by the Clean Air Act. The Clearinghouse is just one of many sources that a permitting agency should consult to identify applicable technologies. USEPA, *New Source Review Workshop Manual* at B.11 (Draft 1990) (“NSR Manual”); *see also In re ConocoPhillips*, PSD Appeal No. 07-02, Slip. op. at 28-29 (EAB June 2, 2008) (noting that a BACT analysis should conduct a broad search for applicable controls, including source beyond the Clearinghouse). Merely looking to a few PM_{2.5} limits listed in the Clearinghouse, for emission sources much different than the NMU boiler, is not a complete BACT analysis. This is especially true since most of the Clearinghouse limits for PM_{2.5} cited by MDEQ are identical to the PM₁₀ limits—indicating that the permitting authorities issuing the prior PM_{2.5} limits did not conduct an analysis for PM_{2.5} separate from PM₁₀. (MDEQ Resp. at 6.) In other words, MDEQ’s truncated review of the Clearinghouse is insufficient to satisfy its obligation to conduct a BACT analysis.

Petitioner also reserved its right to challenge the PM_{2.5} emission limit to the extent that MDEQ argued that it was bound by a regulation promulgated on May 16, 2008, 73 Fed. Reg.

28,321 (May 16, 2008). (Pet. at 9-10.) Petitioner argued that the May 16, 2008, regulation was invalid and likely to be stayed before the Board decided the Petition. (Id.) MDEQ responded the rule has not yet been vacated or stayed, but that MDEQ concedes that the NMU permit is not subject to the regulation promulgated on May 16, 2008. (MDEQ Resp. at 6-7.)¹ Therefore, the parties' arguments regarding the May 16 rule are simply not relevant.

MDEQ's only response to the Petition regarding the lack of a top-down BACT analysis specific to PM_{2.5} is to assert that the agency followed the "surrogate approach" and looked at limits for dissimilar sources in the RACT BACT LAER Clearinghouse. MDEQ did not otherwise respond to the petition, including to Petitioner's demonstration that PM and PM_{2.5} are not equivalents because PM_{2.5} contains a larger condensable fraction, that controls for PM₁₀ are not necessarily controls for PM_{2.5}, and that the particular fabric filter bags proposed for the NMU boiler are not as effective at controlling PM_{2.5} as for PM₁₀. (Pet. at 10-11, citing *In re So. Montana Elec. Generation and Transmission Coop., Highwood Gen. Station*, Slip. Op. at 9, 25-30 (Mont.Bd.Env'tl.Rev. May 30, 2008); Comments of Sierra Club, Pet. Ex. 2.) MDEQ has not determined whether the baghouse proposed for the NMU plant is the best technology for controlling PM_{2.5} through a top-down analysis, and has not determined whether the 0.030 lb/MMBtu permit limit represents the maximum achievable control of PM_{2.5} from such technology. At most, it conducted such review for PM₁₀, and followed the "surrogate" approach for PM_{2.5}. This is not an adequate BACT analysis and the Permit should be remanded to MDEQ for the reasons set forth in the Petition.

¹ MDEQ misunderstands the Petition related to the May 16, 2008, regulation. MDEQ asserts that the permit was issued on May 12, 2008. (MDEQ Resp. at 7.) The Petition attempts to distinguish between the issuance date (May 12, 2008) and the date on which the permit is "final" pursuant to 40 C.F.R. § 124.19(c). Regardless, because neither party contends that the May 16, 2008, regulation applies, this distinction is irrelevant here.

II. BACT LIMITS ARE REQUIRED FOR CO₂ AND N₂O BECAUSE THEY ARE POLLUTANTS SUBJECT TO REGULATION UNDER THE CLEAN AIR ACT.

Petitioner seeks review of MDEQ's failure to include BACT limits for carbon dioxide (CO₂) and nitrous oxide (N₂O). (Pet. 11-18.) MDEQ responds by asserting that: (1) the provisions of the 1990 Clean Air Act Amendments, Public Law 101-549, which require monitoring and reporting of carbon dioxide, are not part of the Clean Air Act; (2) that the regulation of landfill gas, which includes CO₂, does not make CO₂ regulated; and (3) that by incorporating regulations into state implementation plans (SIPs) under the Clean Air Act, the EPA does not make the pollutants "subject to regulation" under the Act. (MDEQ Resp. at 8-12.) None of these arguments have merit.

Notably, MDEQ does not contend that monitoring, recordkeeping and reporting requirements, generally, are not "regulation under [the Clean Air Act]" under 42 U.S.C. § 7475(a)(4), and that only emission limits constitute "regulation." Rather, MDEQ asserts that Public Law 101-549's "unmistakable terms" "unambiguously" state that section 821 is not part of the Act. (MDEQ Resp. at 8-9.) However, MDEQ identifies no such "terms." Instead, MDEQ goes on to identify what MDEQ thinks are intentional omissions. MDEQ speculates that by prefacing other sections of Pub. L. 101-549 with the phrase "amended by adding...", Congress intended to distinguish section 821 as *not* amending the Act because section 821 does not contain that phrase. (Id.) If this was the intent of Congress, it was a convoluted way to convey a simple concept. It is certainly not "unambiguous," and the terms are not "unmistakable," as MDEQ asserts.

Although MDEQ's theory of statutory interpretation and Congressional intent is questionable, it is ultimately irrelevant. CO₂ is unmistakably regulated by regulations under the

Clean Air Act, regardless of whether section 821 is part of the “Clean Air Act.” In enacting the 1990 Amendments to the Clean Air Act, Congress provided that:

The Administrator of the Environmental Protection Agency shall *promulgate regulations* within 18 months after the enactment of the Clean Air Act Amendments of 1990 to require that all affected sources subject to title V of the Clean Air Act shall also monitor carbon dioxide emissions according to the same timetable as in section 511(b) and (c). The regulations shall require that such data be reported to the Administrator. The provisions of section 511(e) of title V² of the Clean Air act shall apply for purposes of this section in the same manner and to the same extent as such provision applies to the monitoring and data referred to in section 511³.

Pub. L. 101-549 § 821 (emphasis added); 104 Stat. 2699; 42 U.S.C. § 7651k, Note. In other words, Congress required EPA to promulgate *regulations* regarding monitoring and reporting of CO₂ emissions, which were then enforceable under the Clean Air Act in the same way as the monitoring and reporting provisions for sulfur dioxide, nitrogen oxides, opacity and volumetric flow under 42 U.S.C. § 7651k. *See* 42 U.S.C. § 7651k(e) (“It shall be unlawful for the owner or operator of any source subject to this title to operate a source without complying with the requirements of this section, and any regulations implementing this section.”).

Following Congress’ directive, EPA promulgated CO₂ regulations pursuant to the Clean Air Act. *See* 40 C.F.R. §§ 75.1(b), 75.10(a)(3), (requiring monitoring and reporting of CO₂ emissions), 75.22 (requiring preparation and maintenance of monitoring plans), 75.57 (requiring maintenance of CO₂ emission records), and 75.60-75.64 (requiring sources to report CO₂ emissions to EPA). The regulations confirm that violations of the CO₂ monitoring and reporting requirements are violations of the Clean Air Act. 40 C.F.R. § 75.5. Such violations are subject to EPA administrative penalty assessments, administrative compliance orders, civil actions by EPA or

² It has been recognized that this is an error and probably refers to section 411(e) if Title IV. *See* 42 U.S.C. § 7651k, Note.

³ Section 411, 42 U.S.C. § 7651k.

citizens, or criminal prosecutions *under the Clean Air Act*. 42 U.S.C. §§ 7413(a)(3), (b)(2), 7604(a)(1). In fact, EPA commenced enforcement proceedings under the Clean Air Act for, among other violations, facilities' failure to monitor CO₂ emissions. *See e.g., In re City of Detroit, Dept. of Public Lighting, Mistersky Power Station*, Docket No. CAA-05-2004-0027, Consent Agreement and Final Order ¶ 7 (May 10, 2004) (finding that "[t]he Acid Rain Program requires, among other things, that the owner or operator of an affected unit monitor, record and report... carbon dioxide (CO₂) emissions, volumetric flow and opacity data," that the respondent failed to comply, and assessing penalties) (attached as Exhibit 13); *In re Indiana Mun. Power Agency*, Docket No. CAA-05-2000-0016, Compl. ¶ 5 ("Pursuant to Section 412 and 821 of the Act, 42 U.S.C. §§ 7401-7671q, as amended by Public Law 101-549 (November, 1990) the Administrator established requirements for the monitoring, record keeping, and reporting of... carbon dioxide emissions... under the Acid Rain Program at 40 C.F.R. Part 75.") (attached as Exhibit 14); *see also id.* at ¶¶ 14-15, 34-37. EPA attorneys have recently filed a brief with the Board agreeing that CO₂ monitoring and reporting requirements in 40 C.F.R. pt. 75 are enforceable under the Clean Air Act. Resp. of EPA Region 8 and Office of Air and Radiation to Bd.'s Request for Suppl. Briefing, *In Re Deseret Elec. Power Coop.*, PSD Appeal No. 07-03 at 6, 11-18 (Aug. 8, 2008) (attached as Exhibit 15).

The fact that Congress made monitoring, recordkeeping and reporting of CO₂ emissions enforceable under the Clean Air Act is sufficient to demonstrate that CO₂ is subject to regulation. As the Georgia court in *Friends of the Chattahoochee, Inc. v. Couch* recently held, any other interpretation is "untenable." Docket No. 2008CV146398, Superior Court of Fulton County, Georgia, Slip. Op. at 7 (Final Order, June 30, 2008) (attached as Exhibit 16).

Moreover, since the CO₂ regulations in Part 75 are promulgated in subchapter C to Title 40 of the Code of Federal Regulations, the CO₂ regulations fall within the category that EPA identified

as being subject to BACT limits. 43 Fed. Reg. 26,388, 26,397 (June 19, 1978) (stating that BACT determinations apply to “any pollutant regulated in Subchapter C of Title 40 of the Code of Federal Regulations for any source type.”); 42 Fed. Reg. 57,479, 57,481 (Nov. 3, 1977) (“The Amendments require BACT for all pollutants regulated under the Act. Thus any pollutant regulated in Subchapter C of Title 40 of the Code of Federal Regulations will be subject to a case-by-case BACT determination.”)

If there were any remaining doubt, Michigan and EPA have unequivocally regulated CO₂ under the Clean Air Act by incorporating CO₂ requirements into Michigan’s federally-approved State Implementation Plan (“SIP”). Rules 801(7), 802a; Mich. Admin. Code r.336.1801(7), 336.1802a.⁴ Like the regulations in 40 C.F.R. Part 75, the regulations incorporated into Michigan’s SIP are enforceable pursuant to the Clean Air Act by EPA or by any other person. 42 U.S.C. §§ 7413(a) (providing for EPA enforcement of any requirement of any SIP), (b)(1) (providing for civil action for violating any requirement of a SIP), (c)(1) (providing for criminal prosecution for violation of any SIP requirement), (d)(1)(A) (providing for administrative penalties for violating any SIP requirement), 7604(a)(1), (f)(3); *see also Espinosa v. Roswell Tower, Inc.*, 32 F.3d 491, 492 (10th Cir. 1994) (“The state implementation plan has the force and effect of federal law, therefore permitting the Administrator to enforce it in federal court.”); *Safe Air for Everyone v. EPA*, 475 F.3d 1096, 1105 (9th Cir. 2007) (holding that a state implementation plan approved by EPA has the “force and effect of federal law” under the Clean Air Act); *Union Elec. Co. v. EPA*, 515 F.2d 206, 211 (8th Cir. 1975), *aff’d*, 427 U.S. 246 (1976); *U.S. v. Murphy Oil USA Inc.*, 155 F.Supp.2d 1117, 1137 (W.D. Wis. 2001) (holding that a state implementation plan is enforceable

⁴ Other states have similarly adopted these provisions into their SIPs pursuant to the Clean Air Act. *See e.g.*, Wis. Admin. Code § NR 438.03(1)(a) (requiring reporting of pollutants listed in Table I, including CO₂), adopted under the Act at 40 C.F.R. § 52.2570(c)(70)(i); Wis. Admin. Code § NR 439.095(1)(f) (Phase I and phase II acid rain units... shall be monitored for... carbon dioxide...), adopted under the Act at 40 C.F.R. § 52.2570(c)(73)(i)(I).

by EPA under the Clean Air Act). Nitrous oxides (“N₂O”) are similarly regulated under the Clean Air Act. N₂O permitting requirements are adopted from a state SIP into federal law, 40 C.F.R. § 52.2570(c)(70)(i), pursuant to the Clean Air Act. Once approved into federal law, these requirements become part of the enforceable Clean Air Act. 42 U.S.C. §§ 7413(a), (b)(1), (c)(1), (d)(1)(A), 7604(a)(1), (f)(3); *General Motors*, 496 U.S. at 540.

Further still, MDEQ has incorporated these CO₂ requirements into federal permits, making the requirements subject to enforcement actions under the Clean Air Act. *See e.g.*, Permit for Campbell Plant p. 24 § VI.1, p. 42 § VI.1, p. 56 §1-3.6 (attached in relevant part as Exhibit 17); Permit for Cobb Plant p. 24 § VI.1., p. 27 § VI.1., p. 37 § VI.1., p. 54 § 3.9 (attached in relevant part as Exhibit 18). Such Title V permit requirements are enforceable pursuant to the Clean Air Act. 42 U.S.C. §§ 7413(a)(1) (providing enforcement authority for violations of any permit), (a)(3) (providing for enforcement of any requirement of a Title V permit), (b) (providing for civil enforcement of any requirement in a permit and any requirement pursuant to Title V), (c)(1) (providing criminal enforcement for any violation of any requirement of a Title V permit), (d)(1)(B) (providing for administrative penalties for violating any requirement of Title V), 7604(f)(4) (providing for citizen suit enforcement of any standard, limitation, or schedule established under any Title V permit); 40 C.F.R. § 70.6(b)(1) (“All terms and conditions in a part 70 [Title V] permit... are enforceable by the Administrator and citizens under the Act.”).⁵

⁵ Additionally, on April 29, 2008, the EPA approved and promulgated a state implementation plan revision submitted by the State of Delaware after notice and comment rulemaking. 73 Fed. Reg. 23,101 (April 29, 2008). That SIP provision establishes CO₂ emission limits and operating requirements, CO₂ record keeping and reporting requirements, and CO₂ emissions certification, compliance and enforcement obligations for new and existing stationary electric generators. *See* Regulation 1144 (attached as Exhibit 19). Those provisions prohibit emissions of CO₂ greater than 1900 lbs/MWh for existing distributed generators, 1900 lbs/MWh for new distributed generators, and 1,650 lb/MWh for new distributed generators installed on or after January 1, 2012. Regulation No. 1144: Control of *Stationary Generator Emissions*, §3.2. EPA’s determination is clear that EPA intended to approve the CO₂ under the Clean Air Act. Memorandum from Rose Quinto, Environmental Engineer Air Quality Planning Branch, U.S. EPA Region 3, Re: Technical Support Document - Delaware; Regulation No. 1144 – Control of Stationary Generator Emissions (January 25, 2008) (“**CONCLUSIONS AND RECOMMENDED AGENCY ACTION:** Regulation No.

MDEQ also disputes that CO₂ is regulated as a landfill emission. (*See* Pet. at 16 (citing 40 C.F.R. §§ 60.33c, 60.751; 63 Fed. Reg. 2154-01 (Jan. 14, 1998); Office of Air Quality Planning & Standards, U.S. EPA, Publ'n No. EPA-453/R-94-021, Air Emissions from Municipal Solid Waste Landfills—Background Information for Final Standards and Guidelines (December 1995) (available at <http://www.epa.gov/ttn/atw/landfill/landflpg.html>) (“Background Information”).)

Under these regulations, EPA defines “municipal solid waste landfill emissions” or “MSW landfill emissions” as “gas generated by the decomposition of organic waste deposited in an MSW landfill or derived from the evolution of organic compounds in the waste.” 40 CFR § 60.751. Thus, the pollutants regulated by these standards include methane, CO₂, and NMOC. *See* Background Information at 1-2. However, MDEQ makes the incredible claim that landfill emissions, but not the components of landfill emissions, are regulated under the Act. (MDEQ Resp. at 9-10.) Neither the Part 60 regulations, nor the statements from the preamble to the Part 60 regulations identified by MDEQ support the conclusion that the individual components of landfill gas are not regulated as a result of the composite of gases being regulated. MDEQ’s theory is nonsensical. CO₂ emissions from landfills are included in landfill gas emissions, and therefore are regulated, as are all other landfill gas emissions.

Lastly, MDEQ argues that pollutants regulated under EPA-approved SIPs are not regulated under the Act. (MDEQ Resp. at 10-11.) Although vague, MDEQ seems to argue that because the Wisconsin SIP goes beyond the minimum set of obligations required by EPA, the SIP does not constitute regulation under the Act. (*Id.*) First, as to the incorporation by Wisconsin (and Michigan) of CO₂ monitoring requirements in Part 75 into their SIPs, those obligations are

1144 adopted by the State of Delaware will result in the control of ... CO₂ emissions from stationary generators and will help the State in attaining compliance with the 8-hour ozone NAAQS. EPA approval of the SIP revision is recommended.”) (attached as Exhibit 20).

mandatory under the Act. Therefore, MDEQ's argument is inapplicable to these EPA-established minimum requirements of the Act. Second, there is simply no legal basis for MDEQ's assertion that requirements SIP components beyond those that MDEQ deems to be the bare minimum of the Clean Air Act are not enforceable under the Act. The two statutory sections MDEQ cites, 42 U.S.C. §§ 7410(a)(2)(A) and 7416, do not support this interpretation of law. Rather, these statutory sections merely provide that a SIP must include all provisions necessary to meet the requirements of the Clean Air Act, § 7410(a)(2)(A), and that states can adopt and enforce air pollution regulations outside of the SIP process as long as such regulations do not contradict the SIP. § 7416 ("... nothing in this chapter shall preclude or deny the right of any State... to adopt or enforce (1) any standard or limitation respecting emission of air pollutants or (2) any requirement respecting control or abatement of air pollution; except that if an emission standard or limitation is in effect under an applicable implementation plan... such State or political subdivision may not adopt or enforce any emission standard or limitation which is less stringent... than the standard or limitation under such plan..."); *Kentucky Resource Council v. EPA*, 304 F.Supp.2d 920, 926 (W.D.Ky. 2004) ("The Act specifically precludes the right of any state to 'adopt or enforce any emission standard or limitation which is less stringent than the standard or limitation' contained in the SIP."). The law is clear that even where an approved SIP extends beyond the minimum provisions necessary to meet the Clean Air Act's requirements, the SIP provisions are still binding federal law under the Clean Air Act unless and until EPA approves a SIP revision. *Sweat v. Hull*, 200 F.Supp.2d 1162, 1170 (D.Ariz. 2001) (holding that a SIP provision was enforceable under the Act even though was no longer necessary to meet EPA's revised minimum standards). Therefore, MDEQ's argument that EPA-approved, federally-enforceable SIP provisions exceeding the minimum requirements of the Clean Air Act are not regulations under the Clean Air Act is unsupported by any statute or case law

and should be rejected. But, regardless, there is no question that CO₂ is regulated under other provisions of the Act, in addition to being regulated in SIPs.

In summary, CO₂ and N₂O are regulated under the Clean Air Act. Whether section 821 is part of the Clean Air Act, there is no question that the monitoring, recordkeeping and reporting requirements for CO₂ are under the Act because they are included in Part 75, included in SIPs, and included in Title V permits—all of which are enforceable under the Clean Air Act. N₂O permitting obligations are included in a SIP that is enforceable under the Clean Air Act. CO₂ is also a landfill gas, and is regulated as a landfill gas in 40 C.F.R. Part 60 Subparts CC and WWW.

III. MDEQ IMPROPERLY IGNORED CLEAN FUELS IN ESTABLISHING BACT LIMITS.

As Sierra Club notes in its petition, the Clean Air Act and the applicable regulations mandate that clean fuels be considered in establishing BACT limits. (Pet. at 18-19.) NMU is proposing to build a boiler than not only can, but is expected to burn clean biomass as the main fuel. (MDEQ Resp. at 1 (“The proposed boiler is designed to operate on wood chips for its heat input. It can also burn coal and natural gas.”)⁶; *see also* Pet. at 19 (and cited references)).

However, MDEQ established a BACT limit for SO₂ based on the assumption that the boiler will burn primarily coal. (Pet. Ex. 1, p. 6 (establishing an SO₂ limit of 0.20 lb/MMBtu for 24-hours and 0.15 lb/MMBtu for 30-day periods)). Specifically, the 24-hour SO₂ limit of 0.20 lb/MMBtu is based on 100% coal combustion, and the 30-day SO₂ limit of 0.15 lb/MMBtu is based on 100% coal combustion for 22 out of 30 days. (MDEQ Resp. Ex. 3 p 4.) This leap in logic— establishing

⁶ MDEQ’s concession that the plant can also burn natural gas is new. In its response to comments, the MDEQ asserted that the plant can only burn solid fuel. See Response to Comments (Pet. Ex. 6) at 19 (refusing to consider natural gas as a clean fuel based on the assertion that the boiler was only a solid fuel boiler). If, as MDEQ asserts, the plant can also burn gas as a clean fuel, a BACT analysis should have also considered gas, which is delivered by pipeline and therefore unaffected by snowfall as MDEQ claims wood delivery is.

a BACT limit based on firing mostly coal for a plant planning to burn mostly (or entirely) cleaner wood fuel requires a remand.

It is not disputed that the boiler can and will primarily burn wood, that wood is cost-effective, and that wood results in significantly less pollution. Nevertheless, MDEQ contends that the permit limits are based on burning mostly coal because snowstorms that occur “during the late fall, winter and early spring” could prevent the delivery of wood. (MDEQ Resp. at 12). As Sierra Club points out in its Petition, however, there are a number of problems with this logic, none of which MDEQ addresses in its Response. First, there is no information in the record upon which to base an assumption that snowfalls will prevent delivery of the primary fuel (wood) for *any* number of days, much less for most days each month, 12 months per year, as the BACT limit assumes. Second, MDEQ failed to consider the possibility of increasing storage on or near the proposed boiler to allow a sufficient supply of wood even during short-term delivery stoppages due to snow. Third, even assuming coal combustion was required in snow emergencies, MDEQ’s assumption that coal is burned 22 out of every 30 days, 12 months per year, is unreasonable.

A. MDEQ’s Resort to A Website Outside the Record Demonstrates That The Agency Record Did Not Contain A Sufficient Basis for MDEQ’s Decision.

In response to Sierra Club’s Petition, noting that there was no evidence in the record to support MDEQ’s assumptions that coal must be assumed as the predominant fuel because of snowstorm-caused clean fuel delivery disruptions, MDEQ asserts that unavailability of wood “is based on publicly available information regarding the frequent, severe snowstorms that disrupt travel and wood delivery to NMU in the Marquette area.” (MDEQ Resp. at 13.) However, MDEQ points to nothing in the record showing the number of days per year that snow makes the roads impassable for wood delivery. Rather, it points to a website for the National Climatic Data Center. (MDEQ Resp. at n.49.) This is insufficient for two reasons. First, MDEQ must rely on information

that is in the public record and was available to the public for review and comment. Second, the website MDEQ points to does not provide data to support MDEQ's conclusion that coal must be used 264 days per year, and during summer as well as winter months, due to delivery blockages caused by snow. Instead, the data show 110 days of snow and ice over a 15-year period. The annual average (10 days) is less than half of the number of days MDEQ's BACT limit assumed coal combustion was necessary *every month* (more than 22 days).⁷ In short, the data was not in the record for Sierra Club to comment on and, even if it were, is insufficient to demonstrate that wood fuel is unavailable for 22 days per month, 12 months per year, as MDEQ assumed when establishing the BACT limits for SO₂. (MDEQ Resp. Ex. 3 at p. 4 (assuming "100% coal firing for more than 22 days in any 20 day period...")). This does not satisfy MDEQ's obligation to adequately document the basis for its decision making process in the record. *In re Steel Dynamics, Inc.*, 9 E.A.D. 165, 191 and n.31 (EAB 2000); *see also In re General Motors, Inc.*, 10 E.A.B. 360, 379 (EAB 2002) (remanding because, inter alia, the MDEQ failed to adequately supporting its conclusions with evidence in the record).

MDEQ's attempt to rely on information submitted by Sierra Club is also misplaced. The information provided in Sierra Club's comments does not state what MDEQ represents. MDEQ asserts that "the comments Petitioner submitted on the draft permit further demonstrate the unavailability of wood as fuel." (MDEQ Resp. at 13.) To the contrary, the comment says nothing about the availability of wood, generally, but only questions whether there are sufficient wood scraps from primary and secondary manufacturing vs. standing timber. (*Id.* at 17.) MDEQ omits the context of the comment. Sierra Club's comments noted that MDEQ's materials refer to "waste

⁷ It is also not clear from the database MDEQ cites that each snowfall event results in the inability of wood deliveries for three days. In other words, not only are there fewer snowfall events than MDEQ implies, but not every one of those snowfall events represents a fuel delivery stoppage.

wood,” without defining that term. (See MDEQ Resp. Ex. 8 at 1 (noting that the term “waste wood” is not defined), 3 (noting that there is “no information in the materials provided by the state indicating the source of the ‘waste wood’ and whether this term includes the harvesting of uncut, standing timber”).) Sierra Club’s comments had asked MDEQ to include impacts from timber harvesting in its analysis pursuant to 40 C.F.R. § 52.21(o) if standing timber was to be used as the fuel source for the NMU boiler. (*Id.*) There is no comment supporting MDEQ’s conclusion that wood is seasonally unavailable due to snow. In fact, on the very page that MDEQ cites, Sierra Club’s comments note that there is sufficient biomass wood for a fuel source, that a 2007 Energy Center of Wisconsin report indicates the availability of wood, and that a large facility in northern Wisconsin will burn 100% biomass. (*Id.*) MDEQ’s attempt to cover for its own failure to supply a basis for the SO₂ BACT limit in the record by citing Sierra Club’s comments out of context is misleading, at best.

The SO₂ BACT limit established by MDEQ does not account for the clean fuel that NMU intends to burn as the primary fuel for the boiler. Instead, it assumes that the boiler will predominantly burn dirtier coal fuel, without support in the record and contrary to the requirement to establish BACT based on the maximum degree of reduction from clean fuels. The BACT limit should be remanded.

B. MDEQ Does Not Address The Reason For Its Failure To Consider Additional Wood Storage In The Vicinity of The Boiler To Avoid The Need To Burn Coal In Snow Emergencies.

Sierra Club’s Petition also notes that MDEQ’s purported basis for assuming predominantly coal fuel in establishing the SO₂ BACT limit-- due to the potential for snow events to cause short term delivery delays-- fails to consider increasing the storage capacity to weather the storms. (Pet. at 31-32; *see also* MDEQ Resp. Ex. 3 at 2 (“there is sufficient storage area for three days fuel

supply... short term availability of any of the fuel supplies could be interrupted.”); MDEQ Resp. at 12 (“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 nearby power plants.”)) As noted in the Petition, the lack of sufficient wood fuel storage to burn 100% biomass during snow events constitutes a “technical obstacle” that does not justify elimination of a more effective pollution control if a physical modification is available. (Pet. at 31, citing *NSR Manual* at B.20.) MDEQ’s Response to the Petition fails to address the option of providing additional storage to provide access to fuel during snow events, to the extent such events exist. The Permit should be remanded to require MDEQ to consider additional storage in the immediate proximity to the boiler to avoid impassable road due to seasonal snow events.

C. Even Assuming That BACT Limits Must Allow For Coal Burning As an Emergency Fuel, the Limits Set By MDEQ Are Unlawful and an Unreasonable Exercise of Discretion.

MDEQ’s asserts that was made available for public comment stated that “[h]eavy snowfalls occur on a regular basis in the Upper Peninsula of Michigan, and the *short term* availability of any of the fuel supplies could be interrupted.” (MDEQ Resp. Ex. 3 at 2 (emphasis added).) However, the BACT limits MDEQ established do not provide for combustion of coal during only short-term periods. Instead, the BACT limits assume coal combustion is necessary for more than 22 days per month and during each month of the year. *Id.* at 4 (“0.15 lb/MMBtu allows 100% coal firing for more than 22 days in any 30 day period...”)) This conflicts with the policy of the EPA Regions and with the Board’s prior decisions holding that where short-term events prevent a source from meeting an otherwise applicable emission limit, those events should be circumscribed and not used as a basis to weaken long-term BACT limits. (*See* Pet. at 33.)

MDEQ does not contend that its decision to assume predominantly coal combustion due to periodic, seasonal, short-term snow events was appropriate or reasonable. Instead, it asserts that Sierra Club failed to raise this issue in its comments. (MDEQ Resp. at 13-14.) In its comments, Sierra Club noted that clean fuels must be used as the basis for BACT limits, that NMU's vague "fuel stability" assertion was an insufficient basis to assume coal when establishing BACT limits, that wood is a cost-effective pollution control option, and that NMU has failed to demonstrate that wood fuel is not a feasible pollution control option. (MDEQ Resp. Ex. 8 at 12-18.) In its response to these comments, MDEQ asserted (without evidence in the record) that coal-based BACT limits are necessary because snow events can "foreeabl[y] prevent fuel suppliers from delivering wood." (MDEQ Resp. Ex. 4 at 19.) In rebuttal to this response to comments, the Petition states that, even "[a]ssuming, *arguendo*, that there are infrequent winter weather events that block deliveries of biomass fuel," such events do not justify a BACT limit that assumes coal as the predominant fuel. (Pet. at 32-33.) In other words, the MDEQ's choice to assume predominantly coal fuel in establishing BACT limits is a part of the Petition's request for review of MDEQ's erroneous BACT analysis based on clean fuels. The MDEQ's erroneous treatment of clean fuels was raised in comments.

Furthermore, to the extent MDEQ argues that a petitioner must not only raise concerns with a BACT analysis, but must also foresee and rebut all potential responses by the agency, MDEQ's argument is without merit. An unreasonable response to comments, or a response that relies upon an erroneous interpretation of law is, by definition, not reasonably ascertainable during the comment period. See *In re Encogen Cogeneration Facility*, 8 E.A.D. 244, 250 n.8 (EAB 1999); see also *In re Dominion Energy Brayton Point, L.L.C.*, NPDES APPEAL 03-12, 2006 WL 3361084 n.154 (EAB 2006) (allowing for review of an issue that the petitioner asserted was only

ascertainable after further illumination by the EPA Region respondent's brief, after the close of the comment period). Certainly, the requirement to raise "reasonably ascertainable issues and submit all reasonably available arguments," 40 C.F.R. § 124.13, does not require clairvoyance to anticipate and comment in advance on the agency's future response to public comments.⁸

Moreover, the Board has held that comments questioning the adequacy of the top-down BACT process for an emission source can adequately preserve the issue for review, even when the final agency decision contains an inadequate BACT analysis for a slightly different reason. *In re ConocoPhillips*, PSD Appeal No. 07-02, 2008 WL 2324133 (EAB June 2, 2008). The Board has also held that it can consider a petitioner's reply that relates to the issue raised in a petition. *In re Knauf Fiber Glass*, 8 E.A.D. 121, 126 n.9 (EAB 1999). Likewise, the Board should allow a petitioner to raise reasonable rebuttals to an agency's response to comments and to tailor its petition to respond to the agency's post-comment rationalizations for the deficient BACT limits that were questioned in comments.

IV. MDEQ'S ASSUMPTION OF WORST CASE FUEL TO ESTABLISH BACT LIMITS CONFLICTS WITH THE DEFINITION OF BACT AND EPA POLICY.

The Petition raises two related issues concerning MDEQ's assumed coal sulfur content—if reliance on coal rather than cleaner burning wood is even appropriate. First, that MDEQ did not adequately respond to Sierra Club's comments regarding the typical, representative, PRB sulfur coal that will be burned at the NMU boiler. (Pet. at 34-36.) Second, that MDEQ improperly assumed the theoretically worst-case coal, rather than the actual coal that will be burned at the

⁸ Petitioner attempted to do so, in its comment that if MDEQ found wood fuel to be economically infeasible, it should consider a mix of wood and coal to the maximum extent cost-effective. (MDEQ Resp. Ex. 8 at 14 n.4.) In the end, MDEQ rejected a mix of wood and coal fuel that maximized wood based on a vague snow-related-delivery concern and not cost effectiveness. This demonstrates the near impossibility of anticipating an agency's response to comments.

NMU boiler, in establishing the SO₂ limits. (Pet. at 34, 36-38.) MDEQ's Response misconstrues these issues.

A. MDEQ Fails To Show Where It Responded To Sierra Club's Comment Regarding Actual Sulfur Content At The Presque Isle Plant.

MDEQ asserts that Petitioner claims that BACT for SO₂ emissions must be based on "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..." (MDEQ Resp. at 14.) MDEQ then goes on to explain why it cannot receive direct shipments of coal from the PRB region. (*Id.* at 14-15.) MDEQ is mistaken. The Petition explicitly states that MDEQ assumed the wrong sulfur content of the coal *from the two local power plants*, which will be the source of any coal burned at the NMU boiler. (Pet. at 35.) Specifically, the Petition notes that the EPA's Clean Air Markets Database showed that the actual uncontrolled sulfur content of coal burned at the Presque Isle Power Plant ranged from 1.12 to 1.30 lb SO₂/MMBtu, compared to the 2 lb SO₂/MMBtu that MDEQ assumed. (*Id.*) Moreover, the Petition noted that this sulfur range for the Presque Isle Plant appeared high, compared to other PRB coals. (Pet. at 35-36.) In other words, it would be unlikely that NMU would receive coal with an SO₂ content higher than 1.12 to 1.30 lb/MMBtu from the Presque Isle plant. Despite its rambling response, MDEQ fails to identify anywhere in its Response to Comments showing that it responded to Sierra Club's comment regarding the representative sulfur content of the coal from the local Presque Isle plant.

Elsewhere in its Response, MDEQ points to a statement that "[t]he limit of 1.5% sulfur leaves a reasonable margin of compliance as the coal used at the Presque Isle Plant... may, by permit, contain up to 1.5% sulfur, but actual has not exceeded 1.4% sulfur as noted by the commenter." (MDEQ Resp. at 16 n.60, citing Response to Comments at 20.) MDEQ does not

contend that this statement responds to Sierra Club's comments regarding the actual, representative sulfur content of coal burned at the Presque Isle plant (1.12 and 1.30 lb SO₂/MMBtu). (Pet. at 35.) MDEQ failed to meaningfully address the comment and a remand is appropriate. 40 C.F.R. § 124.17(a)(2) (requiring a response to all significant comments); *In re Steel Dynamics, Inc.*, 9 E.A.D. 165, 180-81 (EAB 2000) (remanding for permitting agencies failure to respond to significant comment regarding emission calculation).

B. MDEQ Does Not Explain Why It Should Establish BACT Based On Worst-Theoretical-Case, Rather Than Representative Fuel.

MDEQ's decision to establish the SO₂ BACT limit based on worst-theoretical coal sulfur content was in error. MDEQ is clear that it believes a proper top-down BACT analysis can assume the worst theoretical fuel when establishing limits, rather than representative fuel. Specifically here, the NMU boiler proposes to burn coal from one of two local power plants—one with a permitted sulfur limit of 1.5% and the other with a permitted sulfur limit of 1%. (MDEQ Resp. at 16.) Therefore, MDEQ contends, it is entirely proper to establish SO₂ BACT limits based on the worst coal that the plants are allowed to burn—regardless of the fact that the local plants actually receive and burn coal that contains half as much sulfur as they are permitted for, and that NMU could and presumably would burn the same coal. MDEQ's interpretation of law is wrong, and if followed by other permitting agencies, would invite permit applicants to weaken BACT limits by proposing much dirtier fuels than they actual intend to burn. As set forth in the Petition, MDEQ's interpretation of BACT by assuming the worst possible coal that NMU could theoretically burn is the equivalent to establishing a BACT limit for a PRB-fired coal plant based on the worst theoretical sulfur content within the PRB range—a practice that the EPA Regions have rejected.

(Pet. at 36-37, citing three comments from EPA Region 7 criticizing state permitting agencies for proposing BACT limits based on worst-case, rather than representative PRB coal sulfur contents.)

MDEQ's Response provides no persuasive rebuttal to the Petition's statement that MDEQ should have assumed typical PRB coal delivered to and burned at the Presque Isle plant—which would result in a BACT limit of between 0.06 and 0.11 lb/MMBtu, rather than the permit limit of 0.2 lb/MMBtu. (Pet. at 38.) In fact, all MDEQ can muster is that because “the coal to be supplied to NMU can legally contain as much as 1.5% sulfur by weight, the MDEQ appropriately calculated the SO₂ emission limits based on that sulfur content.” (MDEQ Resp. at 16.) The conclusory statement is nothing more than a restatement of the Response to Comments. (MDEQ Resp. Ex. 4 at 20.) The MDEQ's decision to establish BACT based on worst theoretical fuel sulfur content, rather than representative fuel content, conflicts with EPA Region 7's interpretations and invites applicants to game the BACT process by proposing dirtier fuels. (See Pet. at 37-38). A remand is appropriate.

V. BASED ON MDEQ'S CLARIFICATION, SIERRA CLUB WITHDRAWS SECTION IV OF THE PETITION.

In the Petition, Sierra Club raised the issue that the Permit requires approval of a startup, shutdown and malfunction plan (“SSM plan”) after the Permit is issued, which violates the participation requirements of the Act. (Pet. at 28-29.); see also *In re RockGen Energy Center*, 8 E.A.D. 536 (EAB 1999). Sierra Club interpreted “maximum operating limits” in Permit section 1.7 to include the emission limits on page 6 of the Permit. (MDEQ Resp. Ex. 1 at 6.) However, based on MDEQ's clarification in its Response, it appears that “SC 1.6” refers to Permit section 1.6, and that the phrase “listed in SC 1.6” modifies both “maximum operating limits” and “minimum operating limits,” which excludes the emission limits on Permit page 6 from the startup and shutdown exemption. (MDEQ Resp. at 21.) Based on this interpretation, and the understanding

that the emission limits listed on page 6 apply at all times, including startup, shutdown and malfunction, Sierra Club withdraws section IV of the Petition.

VI. MDEQ'S ATTEMPT TO ACCOUNT FOR THE INCREMENT CONSUMPTION FROM THE PRESQUE ISLE PLANT DOES NOT COMPLY WITH THE PLAIN LANGUAGE OF THE APPLICABLE REGULATION.

In the Petition, Sierra Club asserts that the Presque Isle Power Plant located near the proposed NMU boiler commenced construction after the baseline date and, therefore, consumes increment. (Pet. at 30-41.) MDEQ does not disagree that the Presque Isle plant commenced construction and that it consumes increment. (MDEQ Resp. at 19.) The issue is how much increment is consumed—or put another way, what amount of emissions from the plant consume increment.

MDEQ and Sierra Club agree that “MDEQ was required to exclude from the baseline concentration *actual emissions* from the WE Presque Isle Power Plant... on which construction commenced after the major source baseline date of January 1, 1975.” (MDEQ Reps. at 20 (emphasis added).) Additionally, MDEQ and Sierra Club agree that for purposes of increment consumption, the two potential definitions of “actual emissions” are contained in 40 C.F.R. § 52.21(b)(21)(ii) and (iii): actual emissions are either “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...” or the allowable emissions. (MDEQ Resp. at 19.)⁹ therefore, there is no dispute that MDEQ must exclude the “actual emissions” from the Presque Isle plant, as defined as either

⁹ At a minimum, the “actual emissions” from the Presque Isle plant would be the average rate during the representative two years preceding the date of permit issuance for the NMU plant; while MDEQ did not calculate this amount, it is approximately between 14,235 and 16,690 tons of SO₂. (Pet. at 42 and n.6.)

the plant's emissions during the most recent 24-months, or the plant's allowable emissions, from the baseline and must model those emissions as consuming increment.

However, MDEQ did not determine the "actual emissions" from the Presque Isle plant under either § 52.21(b)(21)(ii) or 52.21(b)(21)(iii). Rather, MDEQ took the difference in emissions between two random years: 1973 (15,274 tons) and 2006 (16,609 tons), and assumed that difference (1335 tons) to represent "actual emissions." (MDEQ Resp. at 20.) There is no lawful explanation for this error. The difference in emissions between 1973 and 2006 meets neither definition of actual emissions in 40 C.F.R. § 52.21(b)(21)(ii) or (iii). The Permit must be remanded to conduct an increment analysis wherein the "actual emissions" from the Presque Isle plant are excluded by baseline and included as increment consuming. 40 C.F.R. § 52.21(b)(13)(ii).

VII. MDEQ ERRED BY FAILING TO MODEL NAAQS AND INCREMENT IMPACTS BASED ON MAXIMUM EMISSIONS.

The Petition raises two specific problems with the emission rates MDEQ used to model NAAQS and Increment impacts from the new NMU boiler. (Pet. at 42.) First, MDEQ assumed that long-term BACT limits ensure constant short-term emission rates for PM, PM₁₀, PM_{2.5}, and SO₂. (Id.) Second, that MDEQ exempted periods of startup and shutdown from emission limits, but failed to model potential uncontrolled emission rates during those periods. (Id. at 42-43.) Based on the clarification made by MDEQ, and MDEQ's interpretation of the permit as not exempting periods of SSM from the permit limits, Sierra Club agrees that only the first problem with MDEQ's modeling assumptions needs to be addressed in the Petition.¹⁰

¹⁰ Regarding the second part of Issue VI in the Petition (Pet. at 42-45)-- the exemption of startup and shutdown periods-- MDEQ has clarified that the startup, shutdown and malfunction exemption in Permit section 1.7 does not exempt the plant from the emission limits in Permit section 1.1. (MDEQ Resp. at 21.) With that clarification, and MDEQ's apparent concurrence that it is improper to exempt periods of startup and shutdown from modeled emission rates, section VI of the Petition is limited to MDEQ's failure to establish emission limits corresponding to short-term NAAQS and Increment standards.

In its Response, MDEQ addresses only SO₂. (MDEQ Resp. at 20-21.) MDEQ does not contend that it modeled PM, PM₁₀, or PM_{2.5} correctly. (Id.) Additionally, MDEQ is wrong that it modeled SO₂ correctly. The emission limits in the permit do not correspond to the NAAQS and increment averaging periods. Instead, the permit limits are averaged over long periods of time, or provide no averaging period. Limits that do not specify an averaging period, or that are averaged over a longer period of time than the NAAQS or Increment standard, do not ensure compliance because emissions can vary within the averaging period. Where emissions can vary over short-term periods, but nevertheless show compliance with a longer-term emission limit due to averaging, the longer-term limits do not ensure compliance with short-term NAAQS and Increment. For example, the Permit contains emission rate limits (lb/MMBtu) and annual limits for PM, PM₁₀ and PM_{2.5}. (MDEQ Resp. Ex. 1 at 6 §§ 1.1a, 1.1b, 1.1bb, 1.1c, 1.1cc.) The emission rate limits (lb/MMBtu) provide no averaging period other than “Test Protocol.”¹¹ (Id.) The applicable NAAQS and Increments are averaged over 24-hour periods. 40 C.F.R. §§ 50.6, 50.7, 50.13, 52.21(c). Because the Permit does not establish limits averaged on the same, or shorter time periods than the NAAQS and Increments, there is no assurance that emissions during each 24-hour period will comply with NAAQS and Increment. Similarly, the SO₂ emission limits in the permit are expressed as an emission rate (lb/MMBtu) averaged over 24-hour and 30-day periods and as an annual limit. (MDEQ Resp. Ex. 1 at §§ 1.1d, 1.1e, 1.1f.) The SO₂ NAAQS and Increment, however, are averaged over a 3-hour period, in addition to 24-hour and annual periods. 40 C.F.R. §§ 50.4, 50.5, 52.21(c). Compliance with the 24-hour, 30-day, or annual emission limits, which allow for varying emissions within the averaging period, does not ensure compliance with the 3-

¹¹ The “Test Protocol” is not specified and will not be determined until after the plant is constructed and MDEQ approves a test plan. (MDEQ Resp. Ex. 1 at 8 § 1.9.) While the Permit requires testing according to “the applicable federal Reference Methods,” it does not identify which methods apply. (Id.)

hour NAAQS and Increment. (Pet. at 43.) For this reason, permitting agencies typically include maximum emission rates averaged over time period equal to or less than the applicable NAAQS and Increment. (See e.g., Permit No. 03-RV-248 (Weston Unit 4) at pp. 2, 4 (averaging PM and PM10 limits over 3 hours), 5 (including SO₂ limits averaged over 24-hour and 3-hour periods) (attached in relevant part as Exhibit 21)).

As to SO₂, MDEQ contends that “MDEQ’s analysis used the maximum, worst-case, hourly emission rate of SO₂ emissions...” (MDEQ Resp. at 21 and n.74.) This emission rate, 87.8 pounds of SO₂ per hour, represents 0.428 lb/MMBtu at 205 MMBtu maximum hourly heat input. (MDEQ Resp. at n. 74 (MDEQ modeled 87.8 lb/hour), Ex. 2 at 1 (205 MMBtu/hour maximum heat input).) Although MDEQ contends that this worse than “worst case” emissions because MDEQ assumed higher sulfur coal, MDEQ Resp. at 21-22, MDEQ fails to recognize that these emission rates assume a minimum 92% SO₂ removal. Without assuming a 92% removal, the uncontrolled emission rate is 512.5 pounds of SO₂ per hour.¹² There is nothing in the permit to ensure that a minimum 92% control is achieved each hour (or over a 3-hour average). Instead, the boiler can achieve lower control efficiencies for a few hours and still comply with the 24-hour limit by overcontrolling for the remaining 19 hours. In short, there is no assurance with 24-hour, 30-day and 365 day limits that the permit limits ensure compliance with the 3-hour SO₂ NAAQS and Increment. Because a permittee must demonstrate that it will not cause or contribute to a violation of NAAQS and Increment, which was not sufficiently done here, the Permit should be remanded. (Pet. at 42-45.)

¹² 1.5% sulfur coal = 2.5 lb/MMBtu uncontrolled coal SO₂ content * 205 MMBtu/hour = 512.5 lb/hour.

VIII. MDEQ ERRED BECAUSE THE PRECONSTRUCTION MONITORING USED WAS NOT LEGALLY SUFFICIENT.

The Petition seeks review of the failure to conduct the required preconstruction ambient air monitoring for the Permit. (Pet. at 45-54.) Rather than relying on monitoring data for the relevant impacted area, MDEQ approved the permit based on the applicant's use of emission monitoring data from existing air quality monitors as far away as 240 miles. (Pet. at 50-51.) MDEQ's Response fails to provide any basis for finding that such data can be used for permitting the NMU plant.

A. The Clean Air Act Requires That PSD Permitting Air Impact Analysis Be Based On Ambient Air Quality Data Collected for Purposes of Permitting and That Shows Air Quality In The Area Impacted.

MDEQ agrees that it did not collect, and did not require the applicant to collect, ambient air data showing air quality in the vicinity of the NMU plant. (MDEQ Resp. at 23 n.80 (conceding that MDEQ used data from MDEQ Resp. Ex. 2 Appx. C "Background Concentration" sheet providing concentrations in Escanaba, Michigan, and Two Rivers, Green Bay, and Milwaukee, Wisconsin).) The applicant and MDEQ assumed that maximum impacts from the proposed boiler would be limited to an area extending only 5 km from the plant in all four directions, and limited the air impact modeling to that area. (MDEQ Resp. Ex. 2 at 62 ("Far-filed Cartesian Receptor Grid: Receptors were placed at 250 meter spacing... outward to 5km. As a result, the overall grid occupies a 10.0 km by 10.0 km area.") However, none of the ambient air monitors from which data was taken to show background concentrations are within that area of expected maximum impact, and none are close to that area. (MDEQ Resp. Ex. 2 at Appx. C p. 107 (ambient air data taken from Escanaba, Michigan, Two Rivers, Wisconsin, Green Bay, Wisconsin, and Milwaukee, Wisconsin).)

The plain language of both the Act and the applicable regulation provide that the applicant must “conduct such monitoring as may be necessary to determine the effect which emissions... may have... on air quality in *any area which may be affected by emissions from such source,*” and require the applicant to submit ambient air monitoring data for “the area that the major stationary source or major modification *would affect...*” 42 U.S.C. § 7475(a)(7) (emphasis added); 40 C.F.R. § 52.21(m) (emphasis added). The Act is also clear that such data must be “*gathered for purposes of determining whether emissions from [the permitted] facility will exceed*” NAAQS or Increment. 42 U.S.C. § 7475(e)(2). This plain language makes clear that a PSD permit can only be issued if the applicant demonstrates it will not cause or contribute to a violation of NAAQS or Increment, based on ambient air data gathered for purposes of PSD permit, and which is representative of the air quality in the area that will be impacted by the permitted source.

B. The Existing Monitor Data MDEQ Relied Upon Does Not Meet The Minimum Standards For PSD Permitting.

Even assuming that a permitting authority can allow the use of existing air monitoring data “that serves the dual purpose of, for example, demonstrating a region is in attainment with NAAQS and evaluating whether emissions from a proposed facility will exceed the NAAQS or PSD increment,” as MDEQ contends, that does not describe the facts here. (MDEQ Resp. at 22-23.) In this case, there is no analysis, or basis in the record, for MDEQ’s apparent assumption that the ambient air data from Escanaba, Michigan, and Two Rivers, Green Bay, and Milwaukee, Wisconsin, located 82 to 387 km away, are representative of air quality in the 5 km radius where NMU will have its greatest impact.

MDEQ implies that the record contains an analysis showing that “the regional ambient air monitoring data NMU submitted... was representative of air quality near the proposed boiler.” (MDEQ Resp. at 23 (asserting that the Petitioner “ignores the information in the record.”).)

However, MDEQ points to no such analysis in the record. Instead, MDEQ states that because it selected and sent NMU background concentrations “via email on August 21, 2006,” such background data is representative and sufficient. (MDEQ Resp. at 23-24.) Of course, the mere fact that MDEQ sent NMU monitoring data from distant air monitors via email does not make the data representative of the area that will be impacted by the NMU boiler’s emissions—email has no such magical properties. To be sufficient, existing must be representative of air quality in the area to be impacted regardless of who selected and emailed it.

MDEQ also implies that the *NSR Manual* states that any ambient air monitoring as long as the permitting agency sanctions it. (MDEQ Resp. at 24 n.84.) This misrepresents the *NSR Manual* statements that MDEQ purports to cite. The *NSR Manuals* does state that a permitting agency can judge existing data to be sufficient, but establishes specific criteria for doing so, based on the PSD

Monitoring Guideline:

It is generally preferable to use data collected within the area of concern; however, the possibility of using measured concentrations from representative “regional” sites may be discussed with the permitting agency. The PSD Monitoring Guideline provides additional guidance on the use of such regional sites.

Once a determination is made by the permitting agency that ambient monitoring data must be submitted as part of the PSD application, the requirement can be satisfied in two ways. First, under certain conditions, the applicant may use existing monitoring data. To be acceptable, such data must be judged by the permitting agency to be representative of the air quality for the area in which the proposed project would construct and operate. Although a State or local agency may have monitored air quality for several years, the data collected by such efforts may not necessarily be adequate for the preconstruction analysis required under PSD. In determining the representativeness of any existing data, the applicant and the permitting agency must consider the following critical items (described further in the PSD Monitoring Guidelines):

- Monitor location;

- Quality of data; and
- Currentness of the data.

NSR Manual at C.18-C.19. MDEQ erroneously suggests that a permitting agency can sanction regional monitoring data without acknowledging the criteria that the permitting agency must apply. As set forth in the Petition, the data used for the Permit here does not meet those criteria. (Pet. at 49-54.)

MDEQ also attempts to provide *post hoc* explanation for using monitoring data from distant monitors: asserting that such data “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.” (MDEQ Resp. at 24.) This alleged “determination” is not in the record. Nor is there a basis in the record to assume that the data MDEQ used is representative or “more conservative” than data that would have been collected if monitors were installed in the area that will be impacted by NMU. More importantly, there is nothing in the record to demonstrate that the monitoring data meet the “monitor location, quality of the data, and currentness...” criteria. (MDEQ Resp. at 24.) Therefore, MDEQ’s *ipse dixit* that it considered the relevant factors is both insufficient, because it is not in the record, and erroneous because the facts show that the data does not meet at least the location criteria. The data not from a monitor located at the point of the maximum concentration increase from the NMU boiler, the maximum concentration from existing source, *or* the location of maximum total impact of existing and new sources. (Pet. at 50-53.; MDEQ Resp. Ex. 2 at 62 (impacts from plant only reviewed to 5 km from plant); MDEQ Resp. Ex. 2 at Appx. C (monitoring data used from Escanaba, Michigan, Two Rivers, Wisconsin, Green Bay, Wisconsin, and Milwaukee, Wisconsin).) The monitors are certainly not within 10 km, which is the maximum distance provided in the PSD Monitoring Guidelines. (Pet. at 52.) MDEQ fails to

show that the monitoring data used is sufficient and the Permit should be remanded for a new air impact analysis based on representative background data.

IX. MDEQ CONTINUES TO RELY ON UNLAWFUL GUIDANCE TO AVOID CLASS I IMPACT ANALYSIS.

As the Petition sets forth, MDEQ relied upon Significant Impact Levels (“SILs”) to avoid conducting an analysis of impacts on Class I areas. (Pet. at 54-55.) MDEQ’s Response merely asserts that this is true: that MDEQ did rely upon the NSR Manual’s SILs. (MDEQ Resp. at 25-26.) This is insufficient because the *NSR Manual’s* SILs guidance is unlawful, as set forth in the Petition. (Pet. at 54-55.)

Additionally, MDEQ failed to conduct an analysis of the Forest County Potawatomi Class I area. (Pet. at 55-57.) There is nothing limiting the required analysis to Class I areas located 100 miles from the source, as MDEQ assumed because, as set forth in the Petition, the guidance that MDEQ relies upon for this 100 km threshold is unlawful. (*Id.*)

MDEQ asserts that Sierra Club waived this issue because Sierra Club’s comments, which preceded the Class I redesignation for the Forest County Potawatomi area, did not address the Class I area. (MDEQ Resp. at 26.) As set forth in the Petition, it was not foreseeable that the Class I redesignation that had been pending for more than a decade would be promulgated by EPA after the comment period but before the NMU permit issued. (Pet. at 55-56.) MDEQ’s argument that Sierra Club should have foreseen this event because “[o]n July 10, 1997, EPA proposed to approve the FCP Community’s request for redesignation” defies credulity. (MDEQ Resp. at 26.) The fact that a redesignation was published eleven years ago does not suggest that final action will occur on April 29, 2008—just weeks before the final permit is issued to NMU. Moreover, the fact that EPA proposed, in December, 2006, to promulgate a Federal Implementation Plan for the Forest County Potawatomi area “if it approved the request” to redesignate the area as Class I does not indicate

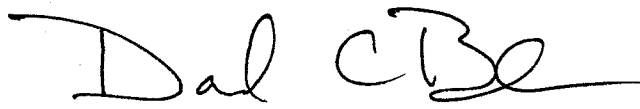
whether, and if so, when, EPA might finalize a redesignation. (MDEQ Resp. at 26 (emphasis added).) Nothing MDEQ points to shows that Sierra Club should have reasonably foreseen that redesignation would occur between the close of comments on the NMU permit and the final permit issuance. 40 C.F.R. § 124.13.

CONCLUSION

For these reasons MDEQ fails to offer any credible reason why the Board should not review and remand the Northern Michigan University PSD permit.

Respectfully submitted, this 21st day of August, 2008.

GARVEY MCNEIL & MCGILLIVRAY, S.C.

A handwritten signature in black ink that reads "Dal CBe". The signature is written in a cursive, somewhat stylized font. The "D" is large and loops around the "al". The "CBe" is written in a similar cursive style.

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

IN THE MATTER OF:)	
NORTHERN MICHIGAN)	APPEAL NUMBER: PSD 08-02
UNIVERSITY)	PSD PERMIT NUMBER: 60-07
)	


CERTIFICATE OF SERVICE OF PETITIONER'S REPLY BRIEF

On August 21, 2008, I caused to be served via Federal Express delivery a copy of the foregoing Reply Brief to:

Ericka Durr
Clerk of the Board
U.S. Environmental Protection Agency
Environmental Appeals Board
1341 G Street, N.W. Suite 600
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I declare that the foregoing is true to the best of my knowledge.



Laura Boyd