

**STATE OF MICHIGAN
INGHAM COUNTY CIRCUIT COURT**

SIERRA CLUB, a California non-profit corporation,
and NATURAL RESOURCES DEFENSE COUNCIL,
a New York non-profit corporation,

Petitioners,

vs.

Case No. 11-1027-AA

MICHIGAN DEPARTMENT OF ENVIRONMENTAL
QUALITY, a department in the Executive Branch
of the State of Michigan, and DAN WYANT, Director
of the Michigan Department of Environmental Quality,

Hon. Rosemarie E. Aquilina

Respondents,

and

WOLVERINE POWER SUPPLY COOPERATIVE,
INC.,

Intervening Respondent.

**BRIEF OF PETITIONERS SIERRA CLUB
AND NATURAL RESOURCES DEFENSE COUNCIL**

ORAL ARGUMENT REQUESTED

**THE APPEAL INVOLVES A RULING THAT A PROVISION OF THE
CONSTITUTION, A STATUTE, RULE OR REGULATION, OR OTHER STATE
GOVERNMENTAL ACTION IS INVALID**

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STATEMENT OF JURISDICTION

This Court has jurisdiction to hear this case and grant the relief requested by Petitioners pursuant to the Revised Judicature Act (“RJA”), MCL 600.631, which is the “exclusive means to obtain judicial review” of the Clean Air Act Permit to Install (“Permit”) that the Michigan Department of Environmental Quality (“MDEQ”) issued for Intervening Respondent Wolverine Power Supply Cooperative, Inc.’s (“Wolverine”) proposed construction of a coal-fired power plant in Rogers City, Michigan (“Proposed Coal Plant”). MCL 324.5505(8). MDEQ issued the Permit on June 29, 2011, and Petitioners filed their Petition for Review on September 26, 2011, which was within the requisite 90-day filing period. *Id.* Venue is appropriate in this Court pursuant to MCL 600.631, which provides that a petition for review challenging a final agency action may be filed in the Circuit Court of Ingham County.

STATEMENT OF QUESTIONS PRESENTED

1. Did MDEQ fail to satisfy the Maximum Achievable Control Technology (“MACT”) requirements of the Clean Air Act and Michigan’s SIP, where the emission limits in the Permit fail to reflect the maximum emission reductions achieved by the best controlled similar sources in controlling hazardous air pollutants (“HAPs”) because:

- a. MDEQ refused to consider U.S. EPA’s proposed rule establishing National Emissions Standards for Hazardous Air Pollutants from Coal- and Oil-Fired Electric Utility Steam Generating Units, 76 FR 24,976 (May 3, 2011)?

Petitioners’ answer: Yes

- b. MDEQ improperly excluded fuel source as a control technology in identifying the best controlled similar sources?

Petitioners’ answer: Yes

- c. MDEQ failed to justify an emission limit applicable during periods of start-up, shutdown, and malfunction as reflecting MACT?

Petitioners’ answer: Yes

2. Did MDEQ fail to satisfy the Best Available Control Technology (“BACT”) requirements of the Clean Air Act and Michigan’s State Implementation Plan (“SIP”), where the emission limits in the Permit failed to reflect the maximum emission reductions achievable because:

- a. MDEQ failed to consider all available cleaner fuels in setting the emission limits?

Petitioners’ answer: Yes

- b. MDEQ failed to adequately examine recent permits for other facilities, in which more stringent BACT limits were set, to determine whether those limits were achievable for the Proposed Coal Plant?

Petitioners’ answer: Yes

- c. MDEQ failed to justify emission limits applicable during periods of start-up, shutdown, and malfunction as reflecting BACT?

Petitioners’ answer: Yes

3. Where MDEQ concluded that there was no demonstrated need for the Proposed Coal Plant, but then failed to consider that lack of need in making its permitting decision, was MDEQ's issuance of the Permit arbitrary, capricious, or otherwise not authorized by law?

Petitioners' answer: Yes

4. Did MDEQ fail to ensure compliance with recently-established National Ambient Air Quality Standards ("NAAQS") for maximum hourly nitrogen dioxide ("NO₂") and SO₂ concentrations (respectively, "1-hour NO₂ NAAQS" and "1-hour SO₂ NAAQS") by omitting maximum hourly emission limits for nitrogen oxides ("NO_x") or SO₂ in the Permit?

Petitioners' answer: Yes

INTRODUCTION

Wolverine seeks to build a 600-megawatt (“MW”) coal-fired power plant (“Proposed Coal Plant”) in Rogers City, Michigan. Each year, this Proposed Coal Plant would emit thousands of tons of pollutants posing risks to human health and the environment. Because of the amount of air pollution that the Proposed Coal Plant would cause, Wolverine was required to obtain a permit to install the plant pursuant to the Prevention of Significant Deterioration (“PSD”) program mandated by the federal Clean Air Act and Michigan law, and implemented in Michigan by MDEQ. This administrative appeal asks the Court to review a permitting process during which MDEQ failed to fulfill its role as Michigan’s PSD permitting authority. MDEQ’s issuance of the permit was not authorized by law in four central respects:

- First, MDEQ failed to ensure that the Permit includes emission limits for hazardous air pollutants that reflect the “maximum achievable control technology” because it disregarded proposed U.S. EPA standards and did not consider other plants with lower emission limits solely for the impermissible reason that those plants use different fuels than Wolverine wants to use.
- Second, MDEQ failed to ensure that the Permit reflects the “best available control technology” to reduce pollution from the Proposed Coal Plant because it failed to properly consider cleaner fuels as a control option for achieving lower emissions limits.
- Third, notwithstanding its explicit finding that there was not a demonstrated need for the Proposed Coal Plant, MDEQ failed to consider this lack of need when making its permitting decision, in violation of state and federal law.

- Fourth, MDEQ failed to protect against violations of recently adopted air quality standards for maximum hourly concentrations of NO₂ and SO₂, because it did not include maximum allowable hourly emission limits in the Permit.

Because MDEQ's issuance of the Permit to Wolverine was unauthorized by law, Petitioners respectfully request that this Court reverse and remand the permit to MDEQ for further proceedings to address the Permit's legal deficiencies.

STATEMENT OF FACTS

A. The Initial Draft Permit and Public Comment Period.

On September 26, 2007, Wolverine applied to MDEQ for a Clean Air Act Permit to Install the Proposed Coal Plant, including two 300-MW circulating fluidized bed ("CFB") boilers.¹ (AR Permit Appl Docs #1-39A). MDEQ issued a draft Permit to Wolverine for the Proposed Coal Plant on September 23, 2008. (AR Public Hearing on Draft Permit Docs #1, 2, 11). On January 6, 2009, Petitioners, along with other organizations, submitted a 177-page comment letter, raising numerous concerns with the draft Permit and providing additional information for MDEQ's consideration.² (AR Comments on Draft Permit Doc #7). Petitioners' members also attended public hearings and submitted testimony opposing the Proposed Coal Plant. (See Exs. A-C (affidavits from Petitioners' members)).

Petitioners' January 6, 2009 comments raised, first, the issue of MDEQ's failure to evaluate the need for, and existence of cleaner alternatives to, the Proposed Coal Plant. (See AR

¹ A circulating fluidized bed boiler is a type of fuel-burning boiler, in which crushed solid fuel (such as coal) and limestone are injected into a furnace, in which they are circulated and burned in a stream of upwardly flowing air. (See, e.g., AR Permit Appl Doc #3 at 5).

² Petitioners provided an amended version of those comments on January 27, 2009. While the amended version contains no substantive changes, it provided exhibit numbers. It does not appear that MDEQ included the amended version in the administrative record. Therefore, Petitioners cite to the original version of the January 6, 2009 comments that MDEQ included in the administrative record.

Comments on Draft Permit Doc #7 at 5-14).³ Petitioners noted that Wolverine itself had acknowledged that it did not need a full 600 MW of additional generating capacity, and they proposed that “a combination of energy efficiency, wind, concentrated solar, combined heat and power, and sustainable biomass”—all less polluting alternatives than a new coal-fired power plant—could meet Wolverine’s claimed energy needs. (*Id.* at 11).

Second, Petitioners pointed out deficiencies in Wolverine and MDEQ’s BACT analysis for the Proposed Coal Plant. (See *id.* at 20-94). Specifically, Petitioners noted that (1) MDEQ had accepted Wolverine’s fuel choice without any evaluation of cleaner fuels for the source (*id.* at 26-34); and (2) MDEQ had not considered a number of facilities with more stringent pollutant limits (see, e.g., *id.* at 64-65, 78-80, 82-84, 91).

Third, Petitioners’ comments criticized the MACT analysis for the Proposed Coal Plant. (*Id.* at 94-120). Among other concerns, Petitioners noted that MDEQ had failed to determine the emissions control achieved in practice by the best controlled similar source—called the “MACT floor”—because it improperly narrowed the universe of “similar sources” by ignoring sources that used cleaner fuels. (*Id.* at 105-110).

Fourth, Petitioners’ comments emphasized the draft Permit’s failure to ensure that the Proposed Coal Plant would not violate applicable National Ambient Air Quality Standards (“NAAQS”) and applicable “increments” (the maximum allowable increases in baseline concentrations of pollutants in an area). (See *id.* at 120-154; 162-164). Petitioners stated that MDEQ had failed to set enforceable emission limits with proper averaging times for several pollutants. (*Id.* at 162-164).

³ All citations to pages in the administrative record use the page numbers of the PDF file provided by MDEQ, instead of any internal document numbering.

On March 25, 2009, Petitioners submitted follow-up comments to MDEQ. (AR Permit Review Doc #103). Among other points, Petitioners cited the U.S. EPA's Environmental Appeals Board's ("EAB") decision in *In re Northern Michigan University Ripley Heating Plant*, PSD Appeal No 08-02, 2009 EPA App LEXIS 5 (EAB Feb. 18, 2009) ("*NMU*"), in which the EAB reversed and remanded another permit issued by MDEQ for the construction of a CFB boiler, because of MDEQ's failure to conduct a proper BACT analysis. (AR Permit Review Doc #103 at 8-11). Among the errors highlighted in *NMU* was MDEQ's failure to consider adequately the cleanest mixture of fuels for the boiler.⁴ (*Id.*).

B. Wolverine Amends Its Application.

On April 7, 2009, MDEQ sent a letter to Wolverine requesting that Wolverine provide additional information about its alleged need for the Proposed Coal Plant. (See Ex. D hereto).⁵ Citing to "state and federal law, specifically Rule 1817(e) of the Michigan Air Pollution Rules (Mich Admin Code R 336.2817(e)) and Section 165(a)(2) of the federal Clean Air Act [42 USC 7475(a)(2)]," MDEQ requested that Wolverine conduct an analysis of alternatives to the Proposed Coal Plant. (See AR Comments Received on EGAA Doc #4 at 1).

On June 8, 2009, Wolverine submitted the requested Electric Generation Alternatives Analysis ("EGAA"), in which Wolverine purported to identify a need for additional generating capacity, and suggested the Proposed Coal Plant to meet that purported need. (AR Comments Received on EGAA Doc #1). In response, on August 17, 2009, Petitioners submitted comments to MDEQ on the EGAA, which were supported by analyses from experts in the electric utility

⁴ MDEQ's permit decision in that case was reviewed by the EAB, instead of by a Michigan circuit court, because U.S. EPA at that time had not yet approved Michigan's SIP, and MDEQ was operating the Michigan PSD permitting program pursuant to a delegation agreement with U.S. EPA. See *NMU*, 2009 EPA App LEXIS 5, at *6 n.1.

⁵ This April 7, 2009 letter was not included in the administrative record. However, MDEQ's counsel advised Petitioners' counsel by email of January 4, 2012 that it planned to supplement the administrative record to include this document, at Petitioners' request. The document is attached as Exhibit D.

industry. (See AR Comments Received on EGAA Doc #40).⁶ These comments demonstrated that there was not a need for the Proposed Coal Plant, because Michigan's energy demand was flat, or even decreasing, and other options such as energy efficiency, demand management, combined heat and power, renewable energy, and existing natural gas capacity were sufficient to satisfy any demand. (See *id.* at 1).

The Staff of the Michigan Public Service Commission ("MPSC") agreed with this conclusion in a report submitted to MDEQ on September 8, 2009. (AR Docs From MPSC Doc #25). In its report, MPSC's Staff found that (1) Wolverine had failed to demonstrate the need for the proposed facility as the sole source to meet its projected capacity needs, and (2) Wolverine's forecasted demand growth of approximately 2% annually appeared questionable, or optimistic. (*Id.* at 3-4). MPSC's Staff concluded:

Wolverine failed to demonstrate the need for the proposed facility as the sole source to meet their projected capacity. In particular, long-term purchase power options were not fully explored as part of their analysis. It should be noted that the majority of Wolverine's long-term projected capacity need is based upon the expiration of power purchases (540 MW) on or before December 31, 2011. Wolverine has presented no evidence that the capacity currently supporting this existing contract will be unavailable in the future.

(*Id.* at 3).

During approximately the same time period, Wolverine submitted a supplemental BACT analysis for particulate matter less than 2.5 micrometers in diameter ("PM2.5"),⁷ relating to a permit deficiency Petitioners had identified in their January 6, 2009 comments. (AR Permit Appl Docs #74 and 75). MDEQ re-issued the draft Permit on August 18, 2009 to include the

⁶ Petitioners in their August 17, 2009 comments cited to two earlier sets of comments, dated July 8, 2009 and July 30, 2009, that Petitioners had submitted to the Michigan Public Service Commission ("MPSC"). MDEQ included these submissions in the administrative record. (See AR Comments Received on EGAA Docs #22 and 34). MDEQ also included Petitioners' November 25, 2009 comments to the MPSC regarding the EGAA in the administrative record. (AR Comments Received on EGAA Doc #45).

⁷ PM2.5 is particulate matter consisting of particles with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers. See, e.g., 40 CFR 50.7.

PM2.5 analysis. (AR Public Hearing on Draft Permit Docs #7 and 9). On September 17, 2009, Petitioners submitted comments to MDEQ, in which Petitioners showed that the BACT analysis for PM2.5 was flawed, because MDEQ uncritically had accepted Wolverine's pre-selected BACT limit. (See Ex. E hereto).⁸ Petitioners also pointed out that MDEQ had failed to consider lower emission limits at other facilities. (*Id.* at 4-5).

C. MDEQ First Denies, Then Issues the Permit.

On May 21, 2010, MDEQ denied Wolverine's permit application. (AR Permit Review Doc #137). MDEQ stated that Wolverine "has not demonstrated a need for the proposed facility" and thus, the permit would be denied. (*Id.* at 2). MDEQ did not explicitly reference air quality issues in its denial letter. Instead, it only cited the lack of a need for the facility. (*Id.*). On August 9, 2010, Wolverine appealed MDEQ's denial of its permit application to the Missaukee County Circuit Court.

On January 28, 2011, the Missaukee County Circuit Court reversed MDEQ's denial of the permit application, holding that MDEQ had misinterpreted federal and state law. Specifically, the court held that MDEQ had erred by denying Wolverine's permit application "based *only* on need" because "neither the federal or state requirements or regulations authorize denial based on need *alone*." *Wolverine Power Supply Coop, Inc v Mich Dep't of Nat'l Res & Env*, No. 10-7686-CE, slip op at 8, 9 (Mich Cir Ct Jan 28, 2011) (emphasis added). (See AR GHG BACT Docs (2 of 2) Doc #11 at 10, 11). Instead, the Court held that Section 165(a)(2) of the CAA and Michigan Administrative Code Rule 336.2817(e) "require that there be an evaluation of the need and the alternatives to the need in light of the goals of the Clean Air Act,"

⁸ These September 17, 2009 comments were not included in the administrative record. However, MDEQ's counsel advised Petitioners' counsel by email of January 4, 2012 that it planned to supplement the administrative record to include this document, at Petitioners' request. The document is attached as Exhibit E.

and ordered MDEQ to reconsider Wolverine's permit application consistent with its opinion within 60 days. (*Id.* at 10-12).

Following the decision of the Missaukee County Circuit Court, Petitioners submitted supplemental comments to MDEQ on March 11, 2011. (See Ex. F hereto).⁹ Petitioners emphasized that the court's decision did not foreclose MDEQ from denying the Permit application based on a lack of need for, and air quality impacts from, the Proposed Coal Plant—it simply meant that MDEQ could not make its decision based on need alone, but rather should consider the need for the plant with reference to the goals of the Clean Air Act. (*Id.* at 4). Petitioners also stressed that, if MDEQ issued the Permit, it needed to ensure that the Proposed Coal Plant did not violate the new 1-hour NAAQS for NO₂ and SO₂ that went into effect in April and August 2010, respectively. (*Id.* at 11-12).

During the same period, Wolverine submitted revisions to its Permit application. The new information related to concerns that Petitioners had raised in previous comments about the need for a BACT analysis for greenhouse gases (“GHGs”) and the need to assure compliance with U.S. EPA's recent 1-hour NO₂ and SO₂ NAAQS. (AR GHG BACT Docs (1 of 2) Doc #11; GHG BACT Docs (2 of 2) Doc #9).

On April 13, 2011, MDEQ announced another public comment period to address the new material. (AR GHG BACT Docs (2 of 2) Doc #4). In that announcement, MDEQ also stated that, in light of the Missaukee County Circuit Court's decision, it had “re-evaluated the Permit to Install application for the proposed power plant, *absent the consideration of need . . .*” (*Id.* at 4) (emphasis added).

⁹ These March 11, 2011 comments were not included in the administrative record. However, MDEQ's counsel advised Petitioners' counsel by email of January 4, 2012 that it planned to supplement the administrative record to include this document, at Petitioners' request. The document is attached as Exhibit F.

In response, Petitioners submitted comments to MDEQ on May 19, 2011. (AR GHG BACT Docs (1 of 2) Doc #17).¹⁰ Petitioners again emphasized “that the [Missaukee County Circuit] Court’s decision does not foreclose MDEQ from denying the permit application based on need when such a basis is specifically tied to air quality concerns or because the proposal fails to satisfy other requirements of the Clean Air Act.” (*Id.* at 4). Petitioners noted that, once existing pollution levels were taken into account, the Proposed Coal Plant would consume 84% of the 24-hour PM10 “increment” and 65% of the SO₂ “increment” for the area. (*Id.* at 6). This new pollution not only would constitute a significant negative impact on air quality, but also would limit the possibility for future economic development in the region by unnecessarily consuming increments that could be allocated to other new sources. (*Id.* at 7).

On June 29, 2011, MDEQ issued the Permit, authorizing construction of the Proposed Coal Plant. (AR Permit Review Doc #5).¹¹ Petitioners filed their Petition for Review on September 26, 2011.

In this action, Petitioners appeal MDEQ’s issuance of the Permit to Wolverine. In particular, Petitioners challenge MDEQ’s decision to issue the Permit, the process it used to reach that decision, and the provisions it included in the Permit. The Permit approval must be reversed and remanded to MDEQ for further consideration.

¹⁰ Petitioners also incorporated by reference all of their previous comments to MDEQ. (*Id.* at 1).

¹¹ On July 12, 2011, MDEQ re-issued the Permit to correct several “administrative” errors. (AR Permit Review Doc #1 at 1).

ARGUMENT

I. STATUTORY AND REGULATORY BACKGROUND.

A. The Clean Air Act's Prevention of Significant Deterioration Program.

The U.S. Congress established the Clean Air Act as a means “to protect and enhance the quality of the Nation’s air resources so as to promote the public health and welfare.” 42 USC 7401(b)(1). The Act seeks to achieve this goal by establishing NAAQS for identified pollutants, which are set at levels designed to prevent serious injury to human health and welfare. 42 USC 7409(b). States are then required to develop State Implementation Plans (“SIPs”) to ensure NAAQS compliance. *Train v Natural Res Def Council*, 421 US 60, 64-65 (1975).

The NAAQS do not fully protect public health by themselves, however. *LaFleur v Whitman*, 300 F3d 256, 270 (CA2 2002). Additionally, compliance with the NAAQS can be threatened by new major sources of emissions. Therefore, the Clean Air Act establishes the PSD program that sets forth stringent requirements for the permitting of new major sources of air pollution. See 42 USC 7470 *et seq.*

B. Michigan’s SIP and the Applicability of Federal Clean Air Act Standards.

In Part 55 of the Natural Resources and Environmental Protection Act (“NREPA”), the Michigan legislature directed MDEQ to promulgate rules for purposes of complying with the Clean Air Act. MCL 324.5512(1)(b). Under that authority, MDEQ adopted a SIP for administering PSD permitting. See Mich Admin Code R 336.2801 *et seq.* Because U.S. EPA approved that SIP, MDEQ now has primary authority to implement the PSD program.¹² In so doing, MDEQ must ensure that all requirements of the federal Clean Air Act are complied with in permitting, even if they are not specifically found in Michigan’s SIP.

¹² See US EPA, *Approval and Promulgation of Air Quality Implementation Plans; Michigan; PSD Regulations*, 75 Fed Reg 14,352 (March 25, 2010).

Michigan law makes clear that federal standards must be complied with and consulted in PSD permitting. The Michigan Air Pollution Control Act provides that any air permit to install:

shall include terms and conditions necessary to assure compliance with all applicable requirements of this part, the rules promulgated under this part, and the clean air act, including those necessary to assure compliance with all applicable ambient air standards, emission limits, and increment and visibility requirements pursuant to part C of title I of the clean air act, 42 USC 7470 to 7492.

MCL 324.5505(5). MDEQ is required to deny applications for PSD permits that would violate the Clean Air Act. Mich Admin Code R 336.1207(1)(c). In addition, Michigan law requires MDEQ to “promulgate rules for purposes of . . . complying with the clean air act,” MCL 324.5512(1)(b). See also MCL 324.5501(g) (defining “clean air act” as meaning the federal statute and rules). MDEQ’s regulations also adopt by reference federal PSD permitting rules, 40 CFR 52.21, “for the purpose of clarifying the definitions” in Michigan’s PSD rules. Mich Admin Code R 336.1299(3)(b) and 336.2801a(a)(ii). Thus, Michigan’s SIP must be interpreted as being at least as stringent as federal standards because (1) the Michigan legislature has directed MDEQ to promulgate rules for the purpose of complying with federal law; (2) MDEQ has adopted by reference federal PSD permitting rules; and (3) U.S. EPA has approved Michigan’s SIP as being consistent with federal law.

Accordingly, in this proceeding, federal standards found both in the federal Clean Air Act and U.S. EPA regulations implementing the Act must be applied.

II. STANDARD OF REVIEW

Pursuant to the Michigan Constitution, MDEQ’s issuance of the Permit must be overturned if it was not “authorized by law.” Const 1963, Art 6, § 28. An agency’s decision is not authorized by law if it “is in violation of statute or constitution, in excess of the statutory authority or jurisdiction of the agency, made upon unlawful procedures resulting in material

prejudice, or is arbitrary and capricious.” *Nw Nat’l Cas Co v Comm’r of Ins*, 231 Mich App 483, 488 (Mich Ct App 1998) (internal quotations and alterations omitted). Although the court should provide “respectful consideration” to MDEQ’s interpretation of law, such interpretations are not binding, should not be afforded deference, and “cannot conflict with the Legislature’s intent as expressed in the language of the statute at issue.” *In re Complaint of Rovas Against SBC Michigan*, 482 Mich 90, 103, 108-109 (2008).

Additionally, the determination of whether MDEQ’s issuance of the Permit was authorized by law must be made on the basis of the reasons that the Department gave when it acted. *Ashland Oil, Inc v FTC*, 548 F2d 977, 981 (CA DC 1976) (“No principle of administrative law is more firmly established than that a court must review discretionary actions in terms of the rationale on which the agency acted, rather than accept appellate counsel’s post hoc rationalizations.”) (quoting *Burlington Truck Lines v United States*, 371 US 156, 169 (1962)). In reviewing MDEQ’s decision, the Court should be guided by:

a simple but fundamental rule of administrative law. That rule is to the effect that a reviewing court, in dealing with a determination or judgment which an administrative agency alone is authorized to make, must judge the propriety of such action solely by the grounds invoked by the agency. If those grounds are inadequate or improper, the court is powerless to affirm the administrative action by substituting what it considers to be a more adequate or proper basis.

SEC v Chenery Corp, 332 US 194, 196 (1947).

III. MDEQ’S ISSUANCE OF THE PERMIT WAS NOT AUTHORIZED BY LAW BECAUSE THE PERMIT FAILS TO INCLUDE EMISSION LIMITS FOR HAZARDOUS AIR POLLUTANTS THAT REFLECT THE MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY.

Remand of the Permit is necessary because it does not contain emission limits for hazardous air pollutants (“HAPs”) that meet the Clean Air Act’s rigorous MACT standard. Specifically, the Permit’s emission limits of 0.0077 pounds per gigawatt hour (“lb/GWh”) for mercury, 0.010 pounds per million British thermal units (“lb/MMBtu”) for particulate matter

("PM"), 0.0011 lb/MMBtu for hydrogen chloride, and 0.00014 lb/MMBtu for hydrogen fluoride do not meet stringent MACT standards. (AR Permit Review Doc #1 at 30, 32). MDEQ failed to conduct a proper MACT analysis because it failed to 1) consider the U.S. EPA's proposed national MACT standard, despite having been instructed specifically by U.S. EPA to do so; 2) properly establish a MACT floor reflecting the emission reductions achieved by the best controlled similar source; and 3) set proper emission limits during periods of startup, shutdown, and malfunction. Remand is necessary due to MDEQ's flawed MACT analysis, a process that led to flawed emission limits on the release of dangerous toxic pollutants.

A. MDEQ Was Required to Conduct a Case-By-Case MACT Analysis for the Proposed Coal Plant in Conformity with Federal Statutory and Regulatory Requirements.

Congress focused its attention on HAPs in the 1990 amendments to the Clean Air Act when it created the MACT standard. This strict standard conveyed Congress' intent to quickly provide protection against dangerous HAP emissions. Section 112 of the Clean Air Act requires that emissions standards applicable to new sources of HAPs "require the maximum degree of reduction in emissions of hazardous air pollutants" that is determined to be "achievable." 42 USC 7412(d)(2). At a minimum, "the maximum degree of reduction in emissions that is deemed achievable for new sources in a category or subcategory shall not be less stringent than the emission control that is achieved in practice by the best controlled similar source." *Id.* at 7412(d)(3).

U.S. EPA regulations implement the Clean Air Act's statutory MACT requirement. 40 CFR 63.43. MDEQ is required to deny applications for permits that do not meet these federal requirements. Mich Admin Code R 336.1207(1)(c), 336.1101(o) (defining "applicable requirement" for MDEQ's PSD permitting). For those sources for which U.S. EPA has yet to

establish specific national emission standards, MDEQ must set MACT emission limits on a case-by-case basis using a two-step process. 42 USC 7412(j). MDEQ's first step is to identify "the emission control which is achieved in practice by the best controlled similar source." 40 CFR 63.43(d)(1); 40 CFR 63.41 (defining MACT). This "MACT floor" is determined irrespective of cost or other concerns. *Sierra Club v EPA*, 479 F3d 875, 877 (CA DC 2007) ("*Sierra Club P*"); *Cement Kiln Recycling Coalition v EPA*, 255 F3d 855, 858 (CA DC 2001). After setting a MACT floor, MDEQ must conduct the "beyond-the-floor" analysis. During this second stage of review, MDEQ must determine whether additional HAP emission reductions are possible "by utilizing those control technologies that can be identified from the available information." 40 CFR 63.43(d)(2); see also 40 CFR 63.41.

The federal regulations also require that any *proposed* national emission standard for a particular type of source must be considered in making a case-by-case MACT determination:

If the Administrator has either proposed a relevant emission standard pursuant to section 112(d) or section 112(h) of the Act or adopted a presumptive MACT determination for the source category which includes the constructed or reconstructed major source, then the MACT requirements applied to the constructed or reconstructed major source shall have considered those MACT emission limitations and requirements of the proposed standard or presumptive MACT determination.

40 CFR 63.43(d)(4). In promulgating the MACT regulations, U.S. EPA explained that:

In determining the appropriate level of control, this rule requires consideration of "available information." . . . For example, if a Federal MACT standard has been proposed, but not yet promulgated, the EPA expects that a MACT determination will strongly consider that proposal.

US EPA, *Hazardous Air Pollutants: Regulations Governing Constructed or Reconstructed Major Sources*, 61 Fed Reg 68,384, 68,394 (Dec 27 1996).

B. MDEQ Failed to Consider U.S. EPA's Proposed MACT Emission Limitation for New Coal-Fired Power Plants Despite Being Legally Required to Do So.

On May 3, 2011, U.S. EPA published its proposed HAP emission standards for new coal-fired power plants. See US EPA, *National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units*, 76 Fed Reg 24,976 (May 3, 2011) (“Proposed Utility MACT Rule”). Thus, when MDEQ issued the Permit on June 29, 2011, U.S. EPA had not yet promulgated final national emission standards for coal-fired power plants, and MDEQ was required to conduct a proper case-by-case MACT analysis.¹³ In doing so, however, MDEQ was required to consider the proposed emission standards for EGUs.¹⁴ 40 CFR 63.43(d)(4). By its own admission, MDEQ did not consider the Proposed Utility MACT Rule prior to issuing the Permit, though. (AR Permit Review Doc #6 at 72). Thus, MDEQ failed to conduct a MACT analysis in conformance with one of the mandatory regulatory principles, namely that any proposed national MACT standards be considered by the permitting authority if those standards were proposed prior to final permit issuance. 40 CFR 63.43(d)(4).

MDEQ's refusal to consider the proposed national standards, as required by law, is particularly brazen given that U.S. EPA itself reminded MDEQ of its obligations in May 19, 2011 comments on the Permit, stating:

¹³ Neither Wolverine nor MDEQ disputes that the Proposed Coal Plant would be a major source of HAPs including mercury, acid gases such as hydrogen chloride and hydrogen fluoride, metals such as arsenic, and organic toxins such as dioxin.

¹⁴ In the Proposed Utility MACT Rule, U.S. EPA defines “coal-fired” units as ones that “combust coal and meet the proposed definition of ‘fossil fuel fired.’” 76 Fed Reg 24,976, 25,026 (May 3, 2011). “Fossil fuel fired” is defined as a unit that is “capable of combusting more than 73 megawatt-electric . . . heat input . . . of coal or oil.” *Id.* at 25,020. The Proposed Coal Plant meets both of the conditions for “coal-fired,” so the Proposed Utility MACT Rule is applicable.

Since your previous permitting action on the proposed Wolverine facility, please be aware that the EPA recently proposed the National Emissions Standards for Hazardous Air Pollutants from Coal-and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating (see 76 FR 24976; May 3, 2011). Please ensure that any applicable requirements are reflected in a permit.

(Ex. G at 2, 4).¹⁵ U.S. EPA's admonition, while clearly supported by the federal regulatory obligation on point, was not incorporated into the final MACT analysis for the Proposed Coal Plant. In its Response to Comments Document, MDEQ offered the following reply to U.S. EPA's comment:

The rule has only been proposed and is not final yet. MDEQ does not put proposed rule requirements in PTI's because the rule may change and then the permit would need to be modified. Also, as stated above, MDEQ properly applied a case-by-case MACT determination.

(AR Permit Review Doc #6 at 72).

While the MACT determination regulations do not require case-by-case emission limits to align perfectly with a newly proposed emission standard, the large gap between the proposed rule's lower limits and the Permit's limits highlight the flawed MACT determination made here. In particular, the Permit's mercury emission limit is 0.0077 lb/GWh, whereas the Proposed Utility MACT Rule's mercury emission limit is 0.0002 lb/GWh¹⁶; the Permit's PM emission limit is 0.010 lb/MMBtu (when converted to an output-based emission limit, 0.087 lb/MWh),

¹⁵ U.S. EPA's May 19, 2011 comments were not included in the administrative record. However, MDEQ's counsel advised Petitioners' counsel by email of January 5, 2012 that it planned to supplement the administrative record to include this document, at Petitioners' request. The document is attached as Exhibit G.

¹⁶ The Proposed Utility MACT Rule as published contained a mercury emissions limit of 0.00001 lb/GWh. Several weeks after publication, U.S. EPA acknowledged a calculation error and corrected the mercury emission limit by revising its "MACT floor" technical support document. See U.S. EPA, *NESHAP MACT Floor Analysis Memo – REVISED*, 14 (May 18, 2011), available at http://www.epa.gov/ttn/atw/utility/pro/egu_revised_mact_floor_memo_051811_final.pdf.

whereas the Proposed Utility MACT Rule's PM emission limit is 0.05 lb/MWh.^{17,18} On remand, MDEQ needs to carefully consider the proposed rule and its relevance to the case-by-case MACT determination.¹⁹

C. MDEQ Failed to Establish MACT Limits that Reflect the Emissions Reductions Achieved by the Best Controlled Similar Sources Since it Unlawfully Excluded Sources Simply Because They Used Different Fuels than Wolverine Wanted to Use.

MDEQ repeatedly rejected emission limits lower than those contained in the Permit because its definition of "similar source" unlawfully excluded other relevant sources that used fuels that Wolverine could use, but prefers not to. This exclusion is contrary to both the plain meaning of the federal statutory MACT provisions, as well as implementing regulations and case law, which support an expansive understanding of "similar source" when setting a MACT limit. The permit should be remanded so that MDEQ can conduct a MACT analysis in which it properly considers all "similar sources" to the Proposed Coal Plant.

Federal regulations define "similar source" as "a stationary source or process that has comparable emissions and is structurally similar in design and capacity to a constructed or

¹⁷ These limits are for coal-fired units designed for coal greater than 8,300 Btu/lb. The EPA defines such a unit to be an EGU that combusts coal; meets the proposed rule's definition of "fossil fuel fired"; and is designed to burn coal equal to or greater than the above calorific value.

¹⁸ The Proposed Coal Plant's MACT emission limit for PM is expressed in the Permit as an input-based value while the Proposed Utility MACT Rule's PM limit is expressed as an output-based value. Petitioners converted the Permit's limit into an equivalent output-based value using the U.S. EPA's suggested conversion calculation. See U.S. EPA, OUTPUT-BASED REGULATIONS: A HANDBOOK FOR AIR REGULATORS 24 (2004), available at http://www.epa.gov/chp/documents/obr_final_9105.pdf. An input standard is converted to an output standard by multiplying the input standard by the power plant's heat rate value and then dividing that result by 1000. This converts the initial limit into one expressed in pounds per megawatt-hour. Petitioners utilized the heat rate value referenced by Wolverine project engineers. (See AR MACT-112g Doc #11) (including email from Wolverine's consultant to MDEQ referencing a gross plant heat rate of 8,730 Btu/gross kWh for the Proposed Coal Plant).

¹⁹ In fact, on remand, MDEQ should be under two separate obligations compelling it to reconsider the Permit's HAP emission limits. Given that EPA finalized the Proposed Utility MACT Rule on December 16, 2011, the Proposed Coal Plant also must comply with the emission standards for new sources in the final rule. See U.S. EPA, *National Emission Standards for Hazardous Air Pollutants from Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units; Final Rule*, available at <http://www.epa.gov/mats/pdfs/20111216MATSfinal.pdf>. The final rule defines new sources to include coal-fired power plants for which construction began after May 3, 2011. *Id.* at 344. Construction has not yet begun on the Proposed Coal Plant, so it would be regulated as a new source under the final Utility MACT Rule.

reconstructed major MACT source such that the source could be controlled using the same control technology.” 40 CFR 63.41. U.S. EPA explains that two criteria govern whether an existing source is “similar” to the proposed new source: 1) Do the two sources have similar emission types? 2) Can the sources be controlled with the same type of control technology? US EPA, *Hazardous Air Pollutants: Regulations Governing Constructed or Reconstructed Major Sources*, 61 Fed Reg 68,384, 68,394 (Dec 27, 1996).

The Clean Air Act makes clear that the MACT limit for each HAP must reflect the use of “measures, process, methods, systems or techniques to reduce HAP emissions.” 42 USC 7412(d)(2). This includes measures which “reduce the volume of, or eliminate emissions of, such pollutants through process changes, *substitution of materials*, or other modifications.” 42 USC 7412(d)(2)(A) (emphasis added). In light of this directive, courts have mandated that permitting agencies evaluate steps beyond pollution controls that the applicant can apply to reduce HAP emissions. *Cement Kiln*, 255 F3d at 862-867; *Sierra Club I*, 479 F3d at 881-883. In particular, given that the type of coal can impact emissions of HAPs, an evaluation of the emission reductions that can be achieved through the use of different coal types or blends must be included in establishing MACT. *Sierra Club I*, 479 F3d at 881-883 (U.S. EPA erred in not evaluating the use of cleaner forms of clay when establishing MACT standards for cement kilns).

Wolverine is capable of burning a range of fuels, including bituminous and subbituminous coal, petroleum coke, and biomass. (AR Permit App Doc #3 at 4). Thus MDEQ must collect data on all “similar sources,” broadly and properly defined, then set the Permit’s MACT emission limits by ranking those sources according to their “emission limits achieved in practice,” and then select as MACT that source with the lowest emission limit. The administrative record shows that MDEQ did not proceed in this fashion. In a number of its

responses to comments, MDEQ declined to consider possible existing sources that may represent MACT by treating them as not being “similar sources.” A typical response was, “The MACT determination was based on the maximum achievable control for the types of fuels proposed to be combusted while maintaining fuel flexibility as a practical consideration” (AR Permit Review Doc #6 at 63-64). A proper MACT analysis, however, broadly looks at emissions data for all existing sources defined as “similar sources” to the Proposed Coal Plant and does not limit the similar source category based on fuel type.

MDEQ’s failure was particularly glaring because Petitioners pointed to a number of existing sources that fit the legal definition of “similar source” and which also have achieved lower emission limits of HAPs in practice than those limits contained in the Permit in their January 9, 2009 comments. (See Comments on Draft Permit Doc #7 at 114-118). For example, as to mercury emissions, Petitioners identified the Reliant Energy Seward power plant in Pennsylvania as the best controlled similar source. (*Id.* at 117). That plant operates CFB boilers, and has been tested as emitting only 0.03 pounds of mercury per trillion British thermal units (“TBtu”), almost *thirty times less* than the Permit’s mercury emission limit, which is equivalent to 0.882 lb/TBtu. (*Id.* at 116-117). MDEQ refused to consider Reliant Energy Seward as a similar source, though, because it burns a different type of coal than Wolverine proposes to burn. (See AR Permit Review Doc #6 at 70; AR MACT-112(g) Doc #4 at 2 (spreadsheet of power plants stating that Reliant Energy Seward “not a similar source due to fuel”). As to emissions of hydrogen chloride (“HCl”) and hydrogen fluoride (“HF”), Petitioners cited the Gilbert Unit 3 at East Kentucky Power’s Hugh Spurlock power plant, tested to have emissions of less than 0.000056 lb/MMBtu of HCl and HF each—far lower than the Permit’s limits of 0.0011 lb/MMBtu and 0.00014 lb/MMBtu for HCl and HF, respectively. (See AR Comments on Draft

Permit Doc #7 at 115, 116). MDEQ again rejected the unit as a similar source because the plant burned a different type of coal than Wolverine proposes to use. (AR Permit Review Doc #6 at 67, 68).

Thus, MDEQ failed to consider data from all “similar sources,” broadly and properly defined, and to rank those sources according to their “emission limits achieved in practice,” selecting as the best controlled similar source that source with the lowest emission limit. MDEQ’s permitting decision therefore was unauthorized by law and must be reversed.

D. MDEQ Did Not Justify Emission Limits Applicable During Periods of Start-up, Shutdown, and Malfunction As Reflecting MACT.

Remand of the Permit is also necessary because MDEQ failed to justify how alternate emission limits in the Permit for start-up, shutdown, and malfunction (“SSM”) reflect proper MACT determinations. MDEQ set two different emission limits for volatile organic compounds (“VOC”):²⁰ an alternate VOC emission limit of 17.8 pounds per hour that applies at all times, and a primary VOC emission limit of 0.003 lb/MMBtu that excludes startup and shutdown. (AR Permit Review Doc #1 at 31). In other words, the alternate limit alone regulates emissions during periods of SSM.

Permitting authorities must ensure that MACT requirements are met during periods of SSM. *Sierra Club v EPA*, 551 F3d 1019, 1027-1028 (CA DC 2008). Indeed, “Congress has required that there must be continuous Section 112-compliant standards.” *Id.* at 1027. Here, there has been no attempt to justify that the alternate SSM VOC emission limits for organic HAPs constituted MACT floor or beyond-the-floor level. Because MDEQ did not justify the alternate emission limit as MACT, it failed to conduct a proper analysis, and its issuance of the Permit was unauthorized by law.

²⁰ MDEQ set VOC emission limits as a surrogate for organic HAPS.

IV. MDEQ's ISSUANCE OF THE PERMIT WAS NOT AUTHORIZED BY LAW BECAUSE THE PERMIT FAILS TO REFLECT THE BEST AVAILABLE CONTROL TECHNOLOGY.

Remand of the Permit is necessary because MDEQ failed to establish emission limits that reflect BACT, as required by the Clean Air Act and Michigan law. 42 USC 7471, 7475(a)(4), 7479(3); 40 CFR 51.166(j), (q); Mich Admin Code R 336.2801(f), 336.2810(2). The BACT requirement mandates that MDEQ assess the maximum degree of pollution reduction achievable at the Proposed Coal Plant. 42 USC 7479(3); Mich Admin Code R 336.2801(f). Wolverine acknowledged in its initial permit application that the Proposed Coal Plant's emissions of SO₂ and PM would be affected by the type of fuel the plant burned. (See AR Permit Appl Doc #6 at 18, 23). Nevertheless, MDEQ failed to consider all available fuel blends in determining the Permit's emission limits and instead set limits that Wolverine thought the Proposed Coal Plant could meet while burning up to 70% high-sulfur, but relatively inexpensive, petroleum coke. MDEQ also failed to investigate, examine, and respond to examples of similar facilities with more stringent BACT emission limits, in some cases because they used fuel sources that Wolverine preferred not to use. MDEQ also failed to demonstrate that the Proposed Coal Plant's emissions during start-up, shutdown, and malfunction ("SSM") would meet BACT requirements. As a result of these errors, the Permit allows Wolverine to emit more pollution than is legal, and MDEQ's issuance of the Permit was unauthorized by law.

A. BACT Requires an Analysis Focused on the Maximum Emission Reductions Achievable.

BACT is defined as:

an emission limitation based on the maximum degree of reduction of each pollutant subject to regulation under this Act emitted from or which results from any major emitting facility, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility through application of production

processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each such pollutant.

42 USC 7479(3); see also Mich Admin Code R 336.2801(f). Consistent with the “strong, normative terms ‘maximum’ and ‘achievable’” found in the definition of BACT, *Alaska Dep’t of Env’t Conservation v EPA*, 540 US 461, 485 (2004), “the most stringent technology is BACT” unless the applicant or permitting agency can show that such technology is not feasible or should be rejected due to specific collateral impact concerns. *Alaska Dep’t of Env’t Conservation v EPA*, 298 F3d 814, 822 (CA9 2002), *aff’d*, 540 US 461.

The fundamental first step in a BACT analysis is to identify *all* available options for reducing emissions from a proposed source. *NMU*, 2009 EPA App LEXIS 5, at *26; US EPA’s Draft New Source Review Manual (“NSR Manual”) at B.5, B.11.²¹ The law is clear that use of the cleanest fuels available is one of the “control options” for pollution that must be considered in determining BACT. *Sierra Club v EPA*, 499 F3d 653, 656 (CA7 2007) (“*Sierra Club IP*”); *NMU*, 2009 EPA App LEXIS 5, at *32-33. Indeed, as part of the 1990 Clean Air Act Amendments, the U.S. Congress added “clean fuels” to the statutory definition of BACT, 42 USC 7479(3), in order to codify U.S. EPA’s longtime practice requiring the evaluation of the use of cleaner fuels as an available method for reducing emissions. *In re Inter-Power of NY, Inc.*, PSD Appeals Nos 92-8 and 92-9, 5 EAD 130, 134 (EAB 1994). In light of this amendment, “Congressional direction to permitting applicants and public officials is emphatic. In making BACT determinations, they are to give prominent consideration to fuels.” *NMU*, 2009 EPA App LEXIS 5, at *33; *id.* at *50 (noting “the CAA promotes ‘clean fuels’ with particular vigor”). To not evaluate cleaner fuels would “pointedly frustrate congressional will,” by reading the phrase

²¹ The Manual is available at <http://www.epa.gov/ttn/nsr/gen/wkshpman.pdf>.

“clean fuels” out of the statutory definition of BACT. *Id.* at *50 (citing *Sierra Club II*, 499 F3d at 656).

The EAB’s decision in *NMU* is instructive. There, the EAB reversed and remanded MDEQ’s issuance of a PSD permit because of MDEQ’s inadequate consideration of cleaner fuels. The permit at issue was to install a CFB boiler to generate electricity and heat at Northern Michigan University. Like the CFB boilers proposed by Wolverine, the CFB boiler proposed in *NMU* was capable of burning a wide range of fuels—including wood, coal, and natural gas—each with its own pollutant profile. See *id.* at *33-35. Nevertheless, MDEQ permitted the facility to use the higher-sulfur coals proposed by the applicant, in lieu of either wood or lower-sulfur coals, and set the facility’s emission limits based on that fuel supply. *Id.* at *35-38. The EAB reversed MDEQ’s decision. Because the record reflected that fuels other than those proposed by the applicant for setting limits would produce lower emissions, MDEQ had to explain adequately why those fuels were unavailable or not technically feasible. See *id.* at *52-53. The EAB found MDEQ’s failure to explain why it had not based emission limits on the cleanest fuels particularly “striking” where the record showed other similar facilities employing cleaner fuels. *Id.* at *38.

The EAB also rejected MDEQ’s contention that asking the permit applicant to burn cleaner fuels would “redefine the source,” and thus constitute an overly stringent BACT review. *Id.* at *48-52. MDEQ had argued that, if it did not defer to the applicant’s preselected fuels, it would be asking the applicant to change the project’s “fundamental purpose.” *Id.* at *50-51. As the EAB noted, however, that position was rejected by the Court of Appeals for the Seventh Circuit. *Id.* at *50. In *Sierra Club II*, the court indicated that requiring a new facility to burn a cleaner fuel than that proposed by the applicant only in limited circumstances will constitute an

overly-stringent modification of the facility’s “fundamental design.” 499 F3d at 656. In the case of the ordinary power plant, the court reasoned that: “[s]ome adjustment in the design of the plant would be necessary in order to change the fuel source from high-sulfur to low-sulfur coal . . . but if it were no more than would be necessary whenever a plant switched from a dirtier to a cleaner fuel the change would be the adoption of a ‘control technology’”—not a redefinition of the source. *Id.* In order for fuel choice to be regarded as protected under the “redefining the source” doctrine, the fuel choice must be “integral to the basic design” of the proposed source, and a change in the fuel choice would have to “call into question [the facility’s] existence.” *NMU*, 2009 EPA App. LEXIS 5, at *49-50.

B. MDEQ Failed to Set Emission Limits Based on the Cleanest Fuels Available For the Proposed Coal Plant.

MDEQ failed to require Wolverine to analyze different fuel combinations and to set emission limits based on the cleanest fuels available for the Proposed Coal Plant. While the proposed CFB boilers are capable of burning a wide range of fuels, MDEQ set limits reflecting Wolverine’s preference to use up to 70% petroleum coke (“pet coke”).²² Wolverine acknowledges that pet coke is higher in sulfur content than any of the other fuels that the CFB boilers can burn—including biomass and both lower- and higher-sulfur coal—thereby causing higher emissions of the pollutant SO₂, and also PM_{2.5}, for which SO₂ is a precursor. (AR Permit Appl Doc #6 at 18); (Ex. E at 2) (citing federal guidance for the proposition that “SO₂ is presumptively a precursor for PM_{2.5}”). MDEQ’s failure to take cleaner fuels into account in setting the Permit’s emission limits was unauthorized by law.

²² As stated in Wolverine’s permit application, pet coke “historically has been a low valued, by-product material that was ‘disposed of’ in the cement industry and, where possible, utility plants.” (AR Permit Appl Doc #12 at 24). It is a by-product of the coking process used to refine crude oil into lighter transportation fuels. (*Id.*).

In permitting the Proposed Coal Plant, MDEQ relied upon a Fuel Supply and Fuel Selection Study submitted as part of Wolverine's original permit application. (Permit Appl Doc #12). That study is not a BACT analysis, but rather selects a preferred fuel blend based primarily on economic and transportation considerations, with a few considerations of environmental impacts as afterthoughts.²³ One chart from the Study tells the tale, comparing the price of pet coke, at \$1.32 per MMBtu, to the relatively more expensive Powder River Basin ("PRB") (\$1.91 per MMBtu), Illinois Basin ("IB") (\$2.17 per MMBtu), Appalachia (\$2.32 per MMBtu), and Western Canadian (\$3.01/mmBtu) coals. (*Id.* at 35). This cost comparison yielded Wolverine's conclusion that pet coke could constitute up to 70% of the Proposed Coal Plant's fuel supply. Notably, Wolverine's Study does not contain any explanation for the source of the 70% limit for pet coke, instead of 60%, 50%, or any other percentage. The Study failed to identify all available fuels and fuel combinations for the Proposed Coal Plant and to evaluate the cost effectiveness of the different fuels in terms of limiting pollutant emissions. See *NMU*, 2009 EPA App LEXIS 5, at *26; NSR Manual, at B.5-B.8.

Despite the Fuel Supply and Fuel Selection Study's failings as a BACT analysis, it is a basis for the Permit's SO₂ emission limits. In its application, Wolverine proposed SO₂ limits of 0.05 lb/MMBtu, based on an annual average, and 0.06 lb/MMBtu, based on a 30-day rolling average. (AR Permit Appl Doc #6 at 22-23). Wolverine acknowledged that other facilities, including the AES-Puerto Rico and NEVCO-Sevier power plants, were permitted for lower SO₂ emissions, but distinguished them because they were not designed to use the pet coke that Wolverine wished to use. (See *id.* at 21-22).

23 (See, e.g., AR Permit Appl Doc #12 at 35 ("The fuel selection process was broken down into two parts. First, the average coal prices were compared by region, and the more economic coals were chosen. Second, the remaining coals were put through a coal/ash consideration and were screened using critical fuel characteristics.")).

MDEQ accepted Wolverine's proposed SO₂ limits in the initial draft Permit it issued, (see AR Public Hearing on Draft Permit Doc #3 at 80), and they remain in the final Permit that MDEQ issued (see AR Permit Review Doc #1 at 3). In its initial Public Participation Documents for the Draft Permit, issued September 23, 2008, MDEQ implied that it would be inappropriate to ask Wolverine to consider cleaner fuels than those it had proposed, because it would "redefine the source" proposed by Wolverine. (See AR Public Hearing on Draft Permit Doc #3 at 13). Any such contention is contrary to law. There is nothing in the record to indicate that simply requiring the Proposed Coal Plant to use the cleanest fuels available to it would "call into question [its] existence." See *NMU*, 2009 EPA App. LEXIS 5, at *49-50. As with the CFB boiler proposed in *NMU*, the CFB boilers proposed by Wolverine are capable of burning a wide range of fuel, and the BACT requirement mandates that they be permitted to burn the cleanest mixture of fuels available.

Wolverine's supplemental June 22, 2009 "Fuel BACT Review", (AR Permit Appl Doc #73), also failed as a BACT analysis. Not only did the Analysis limit itself to the fuels considered in the earlier Fuel Supply and Fuel Selection Study, but it also considered only three possible blends of those fuels: the original 70%/30% blend of petcoke and lower-sulfur PRB coal, 100% lower-sulfur PRB coal, and a 20%/80% blend of biomass and PRB. (*Id.* at 34). By doing so, Wolverine failed to analyze the full range of possible fuel combinations for an optimal balance of pollution control and cost-achievability.

In its June 29, 2011 Response to Comments document, MDEQ attempted to justify its failure to examine all available fuels for the Proposed Coal Plant and set emission limits based on the cleanest fuels. Its explanations are legally insufficient. For example, MDEQ stated: "[t]he chosen fuel blends will meet the 0.05 lb/mmBtu, based on an annual average and 0.06 lb

SO₂ mmBtu 30 day rolling average, limits identified as BACT.” (AR Permit Review Doc #6 at 74). In their January 6, 2009 comments, Petitioners pointed to several facilities permitted for significantly lower levels of SO₂, or actually achieving lower emissions, including:

- AES Puerto Rico (consisting of two coal-fired CFB boilers (approximately 225-MW each), which has a 0.022 lb/MMBtu limit for SO₂ based on a 3-hour average, (AR Comments on Draft Permit Doc #7 at 81-82); and
- NEVCO-Sevier, a 270-MW coal-fired CFB boiler with a limit of 0.022 lb/MMBtu (30-day rolling average) and 0.05 lb/MMBtu (24-hour, including startup, shutdown, and malfunction), (*id.*) and
- JEA Northside plant (consisting of 300 MW CFB boilers firing coal), achieving 0.0-0.4 lb/MMBtu SO₂ emissions in 2002. (*Id.* at 83).

MDEQ attempted to distinguish the AES Puerto Rico and NEVCO-Sevier facilities on the basis that they are permitted to burn lower- sulfur fuels than Wolverine wishes to burn. (AR Permit Review Doc #6 at 77).²⁴ MDEQ’s analysis again misconstrues the BACT requirement. The fact that there are existing facilities—also power plants utilizing CFB boilers burning solid fuels to produce electricity—with much lower SO₂ limits puts the responsibility on MDEQ to either adopt those lower limits or demonstrate why those limits are not achievable at the Proposed Coal Plant through the use of cleaner fuels, or other pollution control options. As held in *NMU*, “if the target ever eases from the ‘maximum degree of reduction’ available to something less or more convenient, the result may be somewhat protective, may be superior to some pollution control elsewhere, but it will not be BACT.”^{2009 EPA App LEXIS 5, *29-30.} MDEQ also attempted to defend Wolverine’s choice of fuel by contending that pet coke burned in the Proposed Coal Plant’s CFB boiler could “result[] in similar outlet SO₂ emissions as other boilers burning coal.” (AR Permit Review Doc #6 at 73). Crucially, MDEQ misses the point that the

²⁴ MDEQ’s only response to the JEA Northside plant’s lower emissions of SO₂ was to assert that the Proposed Coal Plant’s overall control efficiency would be comparable to the JEA Northside plant, when taking into account the Proposed Coal Plant’s higher-sulfur fuel source. (See AR Permit Review Doc #6 at 90).

BACT requirement is not intended to determine how the Proposed Coal Plant would compare with other, older, coal-fired power plants, but what is achievable at the Proposed Coal Plant. Permitting a facility so that it “has *similar* outlet SO₂ emissions” to other facilities, (*id.*), simply does not reflect the “*best* available control technology” available for the permitted facility. 42 USC 7479(3).

Finally, MDEQ also attempted to justify its permitting decision by noting the relative annual costs of the fuel supplies considered by Wolverine in its June 22, 2009 Fuel BACT Report, (AR Permit Appl Doc #73). MDEQ noted that: “The cost per year of burning PRB (alone), Biomass/PRB blend, or IB alone were compared to the Wolverine selected fuel blend and determined the difference, respectively, as follows: \$7,414,697; \$17,676,785; and \$15,546,348.” (AR Permit Review Doc #6 at 77). This explanation does not meet the BACT requirement, under which permitting authorities should assess not just the overall cost of a pollution control option, but, more importantly, its average and incremental cost effectiveness in reducing pollution. (See NSR Manual at B.41). A technology might appear to cost a significant amount of money, but if it also prevents a great deal of pollution, it must be considered as reflecting BACT. In *In re General Motors, Inc.*, the EAB reversed another MDEQ PSD permitting decision because MDEQ had relied on the incremental, but not average, cost effectiveness of control options to justify its BACT decision in its Response to Comments. *In re General Motors, Inc.*, PSD Appeal No 01-30, 2002 EPA App LEXIS 2, at *32-37 (Mar 6, 2002) (“*General Motors*”). Here, MDEQ failed to assess either average or incremental cost effectiveness in its June 29, 2011 Response to Comments, so its response was even less sufficient than the one reversed in *General Motors*.

MDEQ did have available to it some information relating to the incremental and average cost-effectiveness of three fuel scenarios in reducing SO₂ emissions. (See AR Permit Appl Doc #73 at 34, 40 (containing incremental analysis between cases of 70% pet coke/30% PRB coal, 100% PRB coal, and 80% PRB coal/20% biomass); AR Permit Appl Doc #76 at 13 (containing average cost-effectiveness analysis of the same three scenarios). However, these analyses were improperly limited to only three blends of fuel. They also contradict each other, in that the incremental analysis shows that burning 100% low-sulfur PRB coal would yield the lowest SO₂ emissions, while the average analysis incorrectly assumes that burning 100% PRB coal and the 70% pet coke/30% PRB coal blend would yield the same SO₂ emissions. In any case, as in *General Motors*, MDEQ did not consider these analyses in its Response to Comments. MDEQ's issuance of the Permit was unauthorized by law. *General Motors*, 2002 EPA App LEXIS 2, at *32 (holding that MDEQ had failed to provide adequate explanation of its BACT decision by failing to discuss average cost-effectiveness in its Response to Comments).

C. MDEQ Failed to Examine Other Similar Facilities With Lower Emission Limits.

MDEQ also failed to meet the BACT requirement because it failed to adequately investigate other sources permitted for stricter emission limits when it set emission limits for the Proposed Coal Plant. In their comments, Petitioners noted that several permits have established more stringent BACT emission limits than those set by MDEQ. MDEQ is required to consider and respond to comments made in the permitting record. Mich Admin Code R 336.2817(f); *In re RockGen Energy Ctr*, PSD Appeal No 99-1, 8 EAD 536, 1999 EPA App LEXIS 27, *41-48 (EAB Aug 25, 1999) (remanding permitting decision where agency did not adequately consider comments, rendering BACT analysis incomplete). Moreover, MDEQ is further required to

investigate and examine recent regulatory determinations, especially if one is brought to [its] attention. The existence of a similar facility with a lower

emissions limit creates an obligation for the permit applicant and permit issuer to consider and document whether that same emission level can be achieved at the proposed facility.

Mississippi Lime, 2011 EPA App LEXIS 24, at *43 (internal quotations and brackets omitted).

MDEQ entirely failed to respond, or inadequately responded, to Petitioners' comments asserting that other Permits contain more stringent BACT limits than those set for Wolverine, and failed to examine whether those limits could be met at the Proposed Coal Plant.

As discussed in Section IV.B, above, MDEQ failed to adequately response to permits brought to its attention reflecting lower SO₂ emissions. In addition, MDEQ failed to examine permits reflecting lower emissions of PM_{2.5}. The Permit's limits on emissions from the Proposed Coal Plant's CFB boilers are a maximum: 1) 0.024 lb/MMBtu of heat input, excluding periods of startup and shutdown, 2) 72.7 pph, excluding periods of startup and shutdown, and 3) 54.5 pph during periods of startup and shutdown. (AR Permit Review Doc #1 at 30). In their comments to MDEQ, Petitioners pointed to two recent permits for similar facilities that established PM_{2.5} limits that were *half* of the 0.024 lb/MMBtu limit: 1) the Plant Washington facility, with a total PM_{2.5} limit of 0.0123 lb/MMBtu based on a 3-hour average, and 2) the Virginia City Hybrid Center, with a total PM_{2.5} limit of 0.012 lb/MMBtu based on a 3-hour average. (Ex. B at 5). MDEQ never acknowledged or addressed these facilities. (See, e.g., AR Permit Review Doc #6 at 81-83) (discussion of PM_{2.5} in June 29, 2011 Response to Comments). Due to this failure, MDEQ's BACT analysis was faulty, see *Mississippi Lime*, 2011 EPA App LEXIS 24, at *42-43, and unauthorized by law.

D. MDEQ Did Not Justify Emission Limits Applicable During Periods of Start-up, Shutdown, and Malfunction as Reflecting BACT.

MDEQ's error on alternative limits during SSM in its MACT analysis also extended to other pollutants covered by BACT requirements. As noted in U.S. EPA's May 19, 2011

comments, “it is unclear whether emissions that result from [SSM] are considered to be in compliance with BACT emission limits.” (Ex. D at 2, 4). MDEQ did not respond to this comment in its June 29, 2011 Response to Comments. The Permit must be remanded so that MDEQ can clarify how emission limits applicable during SSM reflect BACT requirements.

V. MDEQ’S ISSUANCE OF THE PERMIT WAS NOT AUTHORIZED BY LAW BECAUSE MDEQ FAILED TO CONSIDER THE NEED FOR THE PROPOSED COAL PLANT IN LIGHT OF ITS NEGATIVE IMPACTS ON AIR QUALITY.

MDEQ already has determined that there is no demonstrated need for the Proposed Coal Plant. (AR Permit Review Doc #137 at 2). Federal and state law required that MDEQ consider that lack of need for the Proposed Coal Plant in light of the unquestionably negative air quality impacts the Plant would have. In its final Permit decision, though, MDEQ failed to consider the lack of need for the Proposed Coal Plant at all. Remand of the Permit is necessary so that MDEQ can conduct this legally required analysis.

A. Federal and State Law Require MDEQ to Consider the Need For, and Alternatives to, the Proposed Coal Plant.

State and federal law are clear that MDEQ could issue the Permit only after considering the need for and the alternatives to the Proposed Coal Plant. The MDEQ’s regulations require it to:

provide opportunity for a public hearing for interested persons to appear and submit written or oral comments on the air quality impact of the major source, *alternatives to it*, the control technology required, and other appropriate considerations.

Mich Admin Code R 336.2817(e) (emphasis added). This requirement is rooted in Section 165(a)(2) of the Clean Air Act. *See* 42 USC 7475(a)(2) (also requiring public hearing for interested persons to present information on alternatives to the proposed source). As courts and the EAB have held, this provision requires a permitting agency to consider alternatives to a

proposed major source of air pollution when raised by commenters. *Sierra Club v US EPA*, 499 F3d 653, 654-55 (CA7 2007) (Section 165(a)(2) “directs the EPA to consider ‘alternatives’ suggested by interested persons (such as the Sierra Club) to a proposed facility”); *In re Prairie State Generating Co*, PSD Appeal No 05-05, 2006 EPA App LEXIS 38, at *74-76 (EAB Aug 24, 2006) (“*Prairie State*”). It must then follow that MDEQ is authorized to deny a permit application on the grounds that there are less-polluting alternatives. Otherwise, Section 165(a)(2) would be rendered meaningless, as the public’s ability to raise alternatives and the agency’s evaluation of them could never impact the permitting process. *Prairie State*, 2006 EPA App LEXIS 38, at *74-76.

The consideration of alternatives extends to “need,” which is nothing more than a determination of whether the alternatives of not building a source—the “no-build alternative”—or of building a smaller source are feasible ways to better protect air quality. *Id.* at *81 (“We are unable to reconcile the view that consideration of need for a facility is outside the scope of section 165(a)(2) of the Clean Air Act with the text of the statute and prior decisions.”). As such, Section 165(a)(2) allows for consideration of the no-build and smaller-source alternatives and MDEQ must consider the “need” for a proposed coal plant where the issue has been raised by the public. *Id.* at *81-83.

The conceptual point at which consideration of the “no-build alternative” and smaller-source alternative ties into regional air quality is at the “increments” of allowable air pollution increases in a region. The PSD program was created to “insure that economic growth will occur in a manner consistent with the preservation of existing clean air resources.” *NMU*, 2009 EPA App LEXIS 5, at *7 (quoting 42 USC 7470(3)). The program does this by setting maximum allowable increases in pollution from a proposed source for certain criteria pollutants. 42 USC

7473, 7475(a)(3). The Clean Air Act gives states the authority to allocate these “increments,” which represent the portion of air quality between the existing air pollution concentration in an area and the maximum amount of air pollution allowed under the NAAQS. In making allocation decisions, states are authorized to take a wide variety of steps, including denying permit applications to preserve increments for future applicants. US EPA, *Prevention of Significant Deterioration (PSD) and Non-Attainment New Source Review (NSR)*, 61 FR 38,249, 38,272 (July 23, 1996); *Prairie State*, 2006 EPA App LEXIS 38, at *82-83.

The amount of air quality that can be impacted before reaching the NAAQS threshold is limited. As a result, when MDEQ issues a PSD permit, it necessarily decides how existing air quality increments will be distributed between different uses. By issuing a permit, MDEQ effectively has allowed one particular source to consume a portion of the increment for the life of the permit. That decision will preclude the development of other businesses in the area that might require use of that same portion of the increment. MDEQ therefore has the authority—and the responsibility—to deny a permit application for a source when there is no need for that source, or when there are less-polluting alternatives to it, in order to avoid specific air quality impacts and preserve increments for consumption by other permit applicants.

B. The Missaukee County Circuit Court’s Opinion Provides Only That an Evaluation of Need Must be Tied to Air Quality Concerns.

The legal requirements to consider need, alternatives, and air quality impacts are reflected in the Missaukee County Circuit Court’s review of MDEQ’s May 21, 2010 denial of the Permit. *Wolverine Power Supply Coop, Inc v Mich Dep’t of Nat’l Resources and Env*, No 10-7686 (Mich Cir Ct Jan 28, 2011) (See AR GHG BACT Docs (2 of 2) Doc #11 at 3-12). While the court reversed MDEQ’s denial, the court also made clear that MDEQ did not err in considering need—

which was required of MDEQ—but rather in failing to articulate that it had considered need specifically in light of the Proposed Coal Plant’s effects on air quality and increment usage.

In reversing MDEQ’s denial, the Missaukee County Circuit Court questioned neither the analysis in *Prairie State* nor MDEQ’s authority to reject a permit based on concerns about increment usage in light of the need for a proposed source. Instead, the court simply held that MDEQ did not demonstrate in its denial letter that its denial was based on these specific concerns. *Id.* at 10-11). Determining that “[t]here is no genuine issue of material fact that the denial was based only on need,” the court noted that

The denial letter does not refer to the air quality standards, the use of increments or the competing economic needs for those increments to air quality. There was **no evaluation of relative public need for competing increment uses** as required by *Prairie State, supra*.

(*Id.* at 10) (emphasis in original). The court’s holding was a limited one, namely, that MDEQ could not deny a permit based on need *alone*.

The court made clear, though, that MDEQ must evaluate need in the context of air quality. Specifically, the court held that Section 165(a)(2) of the Clean Air Act and Michigan Administrative Code Rule 336.2817 “require that there be an evaluation of the need and the alternatives to the need in light of the goals of the Clean Air Act as enacted through [the Natural Resources and Environmental Protection Act (“NREPA”)] Part 55.” (*Id.* at 11) (emphasis added). The court also acknowledged that Section 165(a)(2) of the Clean Air Act and Michigan Administrative Code Rule 336.2817(e) “require the permitting authority to consider public comments and to evaluate alternatives to the major source proposed in the permit application” (*Id.*). The Court remanded the Permit to MDEQ for further consideration and to make a new determination consistent with the Court’s opinion within sixty days. (*Id.* at 12).

Reading the Missaukee County Circuit Court's decision in conjunction with Section 165(a)(2) of the Clean Air Act, Michigan Administrative Code Rule 336.2817(e), and the legal authorities interpreting those provisions, MDEQ's path on remand seemed clear. MDEQ had the authority, and responsibility, to deny the permit application based on need or alternatives in order to avoid specific air quality impacts and/or to preserve increments for consumption by other permit applicants. Instead, contradicting both the Missaukee County Circuit Court's order and clearly established federal and state law, MDEQ failed to consider the issue of need for the Proposed Coal Plant in any context.

C. The Proposed Plant Would Have Substantial Air Quality Impacts That Could Be Avoided or Minimized Through Cleaner Alternatives.

The Proposed Coal Plant will have significant air quality impacts. Specifically, the plant will consume 65% of the existing 24-hour PSD increment for SO₂ and 84% of the 24-hour PSD increment for PM₁₀. (AR GHG BACT Docs (2 of 2) Doc #17 at 6). These impacts, coupled with the lack of need for and feasibility of cleaner alternatives to, the Proposed Coal Plant compel the conclusion that MDEQ should have denied the permit. Instead, MDEQ unlawfully ignored these impacts entirely during its permitting decision.

D. The Available Evidence Demonstrates That The Proposed Coal Plant is Not Needed and That There are Cleaner Feasible Alternatives to the Proposed Coal Plant

When MDEQ initially considered the need for the Proposed Coal Plant in making a Permit decision in 2010, the result was clear: the Permit should be denied. In its May 21, 2010 denial letter, MDEQ stated that: "Wolverine has not adequately demonstrated its inability to

secure long-term power supply purchase arrangements to meet its member needs. Wolverine has not demonstrated a need for the proposed facility.”²⁵ (AR Permit Review Doc #137 at 2).

This finding was well supported by the analysis of the need for the Proposed Coal Plant prepared by the Staff of the Michigan Public Service Commission (“MPSC”). (*Id.* (citing to MPSC Staff Report (Sep. 8, 2009) (AR Docs from MPSC Doc #25)). In that Report, the MPSC Staff concluded that Wolverine’s Electric Generation Alternatives Analysis (“EGAA”), (AR Comments Received on EGAA Doc #1), had overestimated Wolverine’s future energy needs, and failed to adequately account for numerous alternatives to the Proposed Coal Plant. Findings of the MPSC Staff Report included:

- “Wolverine failed to demonstrate the need for the proposed facility as the sole source to meet their projected capacity.” (AR Docs from MPSC Doc #25 at 3).
- “[L]ong-term purchase power options were not fully explored as part of their analysis.” (*Id.*).
- “[T]he majority of Wolverine’s long-term projected capacity need is based upon the expiration of power purchases (540 MW) on or before December 31, 2011.” (*Id.*).
- “[T]he proposed CFB plant is one alternative out of a range of alternatives that may be used to fill the projected capacity need. Other alternatives that may fill all or portions of the projected capacity need include[:] energy efficiency and load management; renewable resources; or a combination of a number of alternatives that could include lesser amounts of purchased power.” (*Id.*).
- “Wolverine’s forecasted demand growth . . . appears questionable, or optimistic, and the risk associated with this uncertainty was not fully addressed.” (*Id.* at 4).

²⁵ In its denial, MDEQ also noted that “the MPSC estimated that building Wolverine’s proposed coal plant would increase the rates of its customers by approximately 60 percent to over 20 cents per kilowatt hour. This would make the electric rate the highest in the nation after Hawaii.” (AR Permit Review Doc #137 at 2). MDEQ further stated: “While this is not a factor in the consideration of the permit decision, it is a factor that should be considered in good public policy.” (*Id.*).

- “[E]nergy efficiency, demand side options, and purchased power are not among the list of alternatives that was considered.” (*Id.* at 27).
- “Wolverine’s EGAA does not present an adequate analysis of the costs and benefits of reliance on short-term power supply options to mitigate long-term planning risk.” (*Id.*).

Petitioners’ August 17, 2009 comments further supported the MPSC Staff’s analysis.

(see AR Comments Received on EGAA Doc #40). Petitioners’ comments included two expert evaluations responding to Wolverine’s EGAA. The analyses concluded that energy demand in Michigan was projected to remain flat for at least the next decade, and that there was achievable potential for substantial amounts of energy efficiency, combined heat and power, renewable energy, and increased utilization of natural gas that could meet any needs for increased capacity that Wolverine might have. (see AR Comments Received on EGAA Doc #40 (citing AR Comments Received on EGAA Docs #22 and #34)). Specifically, the report Petitioners submitted from Synapse Energy Economics identified over 18,000 MW of potentially achievable new capacity throughout Michigan from energy efficiency, combined heat and power, and renewable energy, along with approximately 4,000 MW of existing unused natural gas capacity. (see Comments Received on EGAA Doc #40 at 14). All of those alternatives would have significantly less negative public health and environmental impacts than the Proposed Coal Plant would. (*Id.* at 4).

E. MDEQ Failed to Consider the Need For the Proposed Coal Plant In Its Final Permit Decision.

Notwithstanding this overwhelming amount of evidence, MDEQ failed to consider need in its final permitting decision. As it explained in its public notice issued on April 13, 2011, MDEQ had “re-evaluated the Permit to Install application for the proposed power plant, *absent the consideration of need . . .*” (AR GHG BACT Docs (2 of 2) Doc #4 at 4) (emphasis added)).

MDEQ's failure to consider need continued through its final permitting decision. In response to continuing comments from the public requesting that it evaluate the need for the facility in light of its air quality impacts, MDEQ simply indicated that it would not be considering need in its permitting decision. For example, MDEQ made the following response:

Comment:

The EGAA fails to recognize that it is possible to construct nothing and still meet Michigan's foreseeable generation requirements.

Response:

This comment is directed at the issue of whether there is a need for the facility. In its Opinion and Order dated January 28, 2011 in Case No. 10-7686-CE, the Missaukee County Circuit Court ruled that the alleged lack of need for the proposed facility alone, separate from air quality concerns, is not a legal basis to deny the permit application.

(AR Permit Review Doc #6 at 21). While that is an accurate summary of the Missaukee County Circuit Court's opinion, it did not preclude MDEQ from considering the need for the proposed facility *in light* of air quality concerns.

To the extent that MDEQ discussed alternatives to the Proposed Coal Plant in the June 29, 2011 Response to Comments at all, its discussion was minimal to the point of non-existence. In one representative response to a comment about Wolverine's EGAA, MDEQ responded that:

The MDEQ requested Wolverine address the question of alternatives raised during public comment and Wolverine responded with submittal of the EGAA. Wolverine, as part of their alternatives analysis, evaluated the cost of coal firing alternatives and made the determination that the chosen technology is the most cost effective for the variety of fuels they are proposing to use. MDEQ concurred with that determination.

(AR Permit Review Doc #6 at 22). This response failed to address alternatives to the Proposed Coal Plant in any substantive fashion. MDEQ wrongfully presupposed that there was a need for additional electricity generation in the first place (a proposition that MDEQ already rejected),

and that burning Wolverine’s proposed “variety of fuels” was a required component of the project that MDEQ must accept. Moreover, MDEQ’s concurrence with Wolverine’s response in the EGAA was contrary to its earlier rejection of the EGAA as being unconvincing in the face of the MPSC Staff report. This is the very definition of an agency acting in an arbitrary and capricious manner.²⁶

MDEQ’s responses demonstrate that it has misconstrued its responsibilities under federal and state law. While need *alone* may not be a sound basis for MDEQ to reject a permit, MDEQ inarguably must consider the need for the facility in light of the Proposed Coal Plant’s severely negative potential air quality impacts. Its failure to do so was unauthorized by law, and the Permit should be remanded for MDEQ’s further consideration.

VI. MDEQ’S ISSUANCE OF THE PERMIT WAS NOT AUTHORIZED BY LAW BECAUSE MDEQ FAILED TO DEFINE MAXIMUM ALLOWABLE HOURLY EMISSION LIMITS TO PROTECT THE 1-HOUR NAAQS FOR SO₂ AND NO₂.

Remand of the Permit is also necessary because MDEQ did not include maximum allowable hourly emission limits for SO₂ and NO_x. Without these limits, the Permit impermissibly fails to protect against violations of the 1-hour NAAQS for SO₂ and NO₂.

Congress has charged U.S. EPA with developing National Ambient Air Quality Standards (“NAAQS”) for air pollutants that “cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare.” 42 USC 7408(a). U.S. EPA adopted the 1-hour NAAQS for SO₂ and NO₂ in 2010 to provide necessary protection “for asthmatics and other at-risk populations against an array of adverse respiratory health effects”

²⁶ MDEQ’s discussion of non-coal alternatives in the June 29, 2011 Response to Comments was limited to three brief passages, one regarding the cost of wind power, (AR Permit Review Doc #6 at 21), and the others stating summarily that the costs of the alternatives to the proposed facility investigated in the EGAA are “substantially more expensive” and that some of the alternative technologies were not available (*id.* at 19, 20). Again, MDEQ wrongfully presupposed that there was a need for additional electricity generation in the first place and was arbitrary and capricious in concurring with the EGAA that it earlier had rejected.

related to short-term exposure to SO₂ and NO₂. See US EPA, *Primary National Ambient Air Quality Standards for Nitrogen Dioxide, Part III*, 75 Fed Reg 6,474, 6,502 (Feb 9, 2010); US EPA, *Primary National Ambient Air Quality Standard for Sulfur Dioxide, Part II*, 75 Fed Reg 35,520, 35,550 (Jun 22, 2010). The NAAQS therefore establish limits on the average concentration of NO₂ and SO₂ in a region's ambient air over an hour-long period. See 75 Fed Reg 6,474, 6,502 (adopting average one-hour standard for NO₂); 75 Fed Reg 35,520, 35,550 (adopting average one-hour standard for SO₂).

Applicants for PSD permits must demonstrate that their facilities' emissions will not cause or contribute to an exceedance of any applicable NAAQS. See 42 USC 7475(a)(3)(B). Specifically, the Clean Air Act prohibits the construction of a major emitting facility unless “the owner or operator of such facility demonstrates . . . that emissions from construction or operation of such facility will not cause, or contribute to, air pollution in excess of any . . . national ambient air quality standard in any air quality control region” *Id.* See also Mich Admin Code R 336.1207(1)(c)(iii) (requiring MDEQ to deny applications for permits that would violate PSD requirements).

As noted in Petitioners' January 9, 2009 comments on the draft permit, the Clean Air Act and Michigan law require permits to install to be practicably enforceable and to include reasonable averaging times. (See AR Comments on Draft Permit Doc #7 at 162). Michigan's SIP provides that a permit to install must contain “emission limits that are enforceable as a practical matter.” Mich Admin Code R 336.1205(1)(a). U.S. EPA has defined “practicable enforceability” as meaning the permit “must specify: (1) A technically-accurate limitation and the portions of the source subject to the limitation; (2) the time period for the limitation (hourly, daily, monthly, and annual limits such as rolling annual limits); and (3) the method to determine

compliance including appropriate monitoring, recordkeeping, and reporting.” US EPA, *Approval and Promulgation of Air Quality Implementation Plans; Michigan; PSD Regulations*, 73 Fed Reg 1,570, 1,573 (Jan 9, 2008).

In order to protect the purpose of the 1-hour NAAQS, a PSD permit needs to include an emission limit with an hourly averaging period for each relevant pollutant. If limits were set as an hourly average over the course of a 24-hour period, all of the facility’s emissions of that pollutant could be concentrated into a single hour. These high short-term levels of emissions could contribute to violations of the 1-hour NAAQS.

U.S. EPA and the EAB have confirmed this rule in recent guidance on the 1-hour NAAQS for SO₂ and NO₂. Specifically, U.S. EPA guidance on the 1-hour SO₂ NAAQS makes clear that PSD permits issued after the 2010 effective date for the standard should include a maximum allowable hourly emission limit. U.S. EPA, *General Guidance for Implementing the 1-hour SO₂ NAAQS in PSD Permits, Including an Interim 1-hour SO₂ SIL* at 7 (Aug 23, 2010) (attached as Ex. H) (cited in *Mississippi Lime*, 2011 EPA App LEXIS 24, *76). U.S. EPA states:

Because compliance with the new SO₂ NAAQS must be demonstrated on the basis of a 1-hour averaging period, the reviewing authority should ensure that the source’s PSD permit defines a maximum allowable hourly emissions limitation for SO₂. . . . *Hourly limits are important because they are the foundation of the air quality modeling demonstration relative to the 1-hour SO₂ NAAQS.*

Id. (emphasis added). Based on that U.S. EPA guidance, the EAB already has reversed and remanded a PSD permit for failing to include maximum allowable hourly emission limits for SO₂ and NO_x, and therefore failing to assure protection of the 1-hour SO₂ and NO₂ NAAQS. See *Mississippi Lime*, 2011 EPA App LEXIS 24, at *75-80.

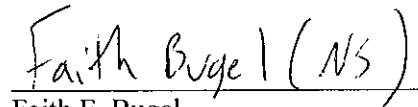
Here, MDEQ failed to define a maximum allowable hourly emission limit for either SO₂ or NO_x. Instead, compliance with the SO₂ emission limit for the boilers is measured over 1) a

24-hour rolling averaging period, 2) a 30-day rolling averaging period, and 3) a 12-month rolling averaging period. (AR Permit Review Doc #1 at 31). Compliance with the NO_x emission limit for the boilers is measured over 1) a 24-hour rolling averaging period and 2) a 30-day rolling averaging period. (*Id.*). Nowhere does the Permit include SO₂ or NO_x emission limits measured over a 1-hour averaging period, though. Just as in *Mississippi Lime*, MDEQ's issuance of a permit without maximum allowable hourly emission limits for SO₂ and NO_x should be reversed, and the Permit remanded for MDEQ's consideration of appropriate limits.

RELIEF REQUESTED

For the foregoing reasons, MDEQ's issuance of the Permit was arbitrary, capricious, and not authorized by law, and the Court should reverse and remand to MDEQ so that it may appropriately address all applicable legal requirements.

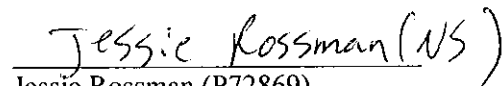
Respectfully Submitted,

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**STATE OF MICHIGAN
INGHAM COUNTY CIRCUIT COURT**

SIERRA CLUB and NATURAL
RESOURCES DEFENSE COUNCIL,

Petitioners,

v.

Case No. 11-1027-AA

MICHIGAN DEPARTMENT OF
ENVIRONMENTAL QUALITY, and
DAN WYANT,

Hon. Rosemarie E. Aquilina

Respondents,

and

WOLVERINE POWER SUPPLY
COOPERATIVE, INC.,

Intervening Respondent.

PROOF OF SERVICE

Nicholas J. Schroeck certifies that a copy of Petitioners' Brief and supporting exhibits was served upon the listed parties at their respective address by U.S. mail on the date indicated below.

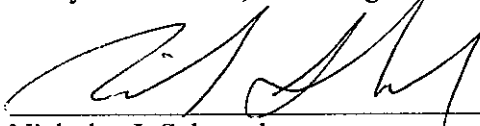
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A copy of Petitioners' Brief has also been emailed to the attorneys of record.

Date of Service: January 17, 2012.

I declare that the statement above is true to the best of my information, knowledge and belief.



Nicholas J. Schroeck
Attorney for NRDC and Sierra Club