

**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,

Case No. 11-1027-AA

vs.

Hon. ROSEMARIE E. AQUILINA

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,

Respondents.

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SEP 26 2011

Clerk of the Court
30th Judicial Circuit

**PETITION FOR REVIEW
OF THE
MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR PERMIT TO INSTALL NO. 317-07**

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PETITION FOR REVIEW

For its Petition for Review (“Petition”) of Air Permit to Install No. 317-07 (“Permit”) issued by the Michigan Department of Environmental Quality (“MDEQ”) for Wolverine Power Supply Cooperative, Inc.’s (“Wolverine”) proposed coal-fired power plant (“Proposed Coal Plant”) in Rogers City, Michigan, the Sierra Club and Natural Resources Defense Council (collectively “Petitioners”), on behalf of their members, state as follows:

INTRODUCTION

1. This Petition arises out of the MDEQ’s June 29, 2011 issuance of Air Permit to Install No. 317-07, pursuant to the Clean Air Act (“CAA” or “the Act”), 42 USC 7475, Michigan regulations implementing the Act, 2011 AC, R 336.2801 *et seq.*, and the Michigan Air Pollution Control Law, MCL 324.5503 and 324.5505.
2. The Permit authorizes Wolverine to install the Proposed Coal Plant and to annually emit into the air up to:
 - 4,002.0 tons of carbon monoxide (“CO”)
 - 1344.0 tons of sulfur dioxide (“SO₂”)
 - 2647.0 tons of nitrogen oxides (“NO_x”)
 - 270.0 tons of particulate matter (“PM”)
 - 725.0 tons of particulate matter smaller than 10 microns (“PM₁₀”)
 - 80.0 tons of sulfuric acid mist (“H₂SO₄”)
 - 171.1 tons of volatile organic compounds (“VOCs”)
 - 700 pounds of lead (“Pb”)
 - 46.8 pounds of mercury (“Hg”)

- 8 tons of hydrogen fluoride (“Hf”)
 - 29.2 tons of hydrogen chloride (“HCl”)
 - 6,024,107 tons of greenhouse gases (“GHGs”), including carbon dioxide (“CO₂”)
3. MDEQ’s issuance of the Permit was arbitrary, capricious, and not authorized by law because:
- MDEQ was required, but failed, to adequately consider the need for the Wolverine plant in light of the plant’s air quality impacts;
 - MDEQ was required, but failed, to establish emission limits in the Permit that represent Best Available Control Technology (“BACT”). Specifically, MDEQ:
 - Failed to properly consider, and improperly rejected, cleaner fuels in the BACT analysis, and instead set emission limits on the basis of worst-case fuels;
 - Improperly relied on outdated, over-three-year-old BACT analyses when determining BACT emission limits for the Permit;
 - Failed to conduct proper, meaningful BACT analyses, instead limiting the analyses to pre-selected technologies and fuels; and
 - Failed to reasonably justify why lower BACT emission limits are not achievable;
 - MDEQ was required, but failed, to properly analyze and establish emission limits in the Permit that reflect the use of Maximum Achievable Control Technology (“MACT”) for hazardous air pollutants; and
 - MDEQ issued the permit in violation of PSD requirements when it relied on flawed air quality modeling which fails to demonstrate that the plant will not cause or contribute to a violation of the new 1-hour National Ambient Air Quality Standard (“NAAQS”) for NO_x.

JURISDICTION AND VENUE

4. This Court has jurisdiction to grant the relief requested in this Petition pursuant to the Revised Judicature Act (“RJA”), MCL 600.631, and MCL 324.5505(8), which provides that when MDEQ issues a permit to install for a new source, a petition for review pursuant to the

RJA “shall be the exclusive means to obtain judicial review of such a permit and shall be filed within 90 days after the final permit action.”

5. MDEQ issued the Permit on June 29, 2011. This Petition is being filed within 90 days of the issuance of the Permit and, therefore, is timely filed.
6. 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.

PARTIES

7. Petitioner Sierra Club is the nation’s oldest grassroots organization, with more than 1.3 million members and supporters nationwide. The organization’s Michigan Chapter has 16,515 members statewide, including 39 in Presque Isle County. Sierra Club’s mission is to explore, enjoy, and protect the wild places of the earth and educate and enlist humanity to protect and restore the quality of the natural and human environment. Since its founding over a century ago, Sierra Club has become a national leader in working to reduce air pollution, avoid climate change, and promote clean energy sources. Many of the Sierra Club’s members live near and/or downwind of the site for the Proposed Coal Plant and will experience adverse impacts to their health, property, recreational, and/or aesthetic interests from the Proposed Coal Plant and the air pollution emissions allowed by the Permit.
8. Petitioner Natural Resources Defense Council is a national, non-profit, environmental organization with more than 447,000 members nationwide, including 10,617 members in Michigan, and 20 members in Presque Isle County. NRDC’s mission is to safeguard the Earth by working to restore the integrity of the elements that sustain life and protecting

nature in ways that advance the long-term welfare of present and future generations. NRDC is dedicated to the protection of the environment and public health and, as part of achieving its mission, has actively worked on behalf of its members for more than 30 years to protect air quality, ensure effective enforcement of the Clean Air Act, and challenge climate change. The Natural Resources Defense Council has a number of members who live near and/or downwind of the site for the Proposed Coal Plant whose health, property, recreational, and/or aesthetic interests would be adversely impacted by the Proposed Coal Plant and the air pollution emissions allowed by the Permit.

9. Respondent Michigan Department of Environmental Quality is a department within the Executive Branch of the State of Michigan with primary responsibility for administration and enforcement of Michigan's environmental laws and rules.
10. Respondent Dan Wyant is the Director of MDEQ and its principal executive officer. His principal office is in the City of Lansing, Ingham County, Michigan.

LEGAL BACKGROUND

Clean Air Act

11. The Clean Air Act, 42 USC 7401 *et seq.*, is designed "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population." 42 USC 7401(b)(1).
12. The Act seeks to achieve this goal by establishing National Ambient Air Quality Standards ("NAAQS") that limit the concentration of identified pollutants that can be in the ambient air. 42 USC 7409(b).

13. The Act also establishes a Prevention of Significant Deterioration (“PSD”) program, 42 USC 7470-7479, which sets forth requirements for the permitting of new major sources of air pollution in order to “protect public health and welfare” and “prevent significant deterioration of air quality.” 42 USC 7470(1) & (4).

14. Michigan has an approved PSD State Implementation Plan (“SIP”), Rule 336.2801 *et seq.*, which provides MDEQ with the authority to administer the PSD program in the state. MDEQ must administer the program in a manner that is consistent with and at least as stringent as the federal Clean Air Act requirements.

15. The PSD program requires, in the permitting of major new sources of air pollution, the establishment of emission limits reflecting the use of Best Available Control Technology (“BACT”) for each air pollutant subject to regulation under the Act that the source would emit in significant amounts. 42 USC 7471, 7475(a)(2), 7479(3); 40 CFR 51.166(j), (q); 2011 AC, R 336.2810.

16. BACT is defined as:

an emission limitation based on the maximum degree of reduction of each pollutant subject to regulation under this chapter 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 Rule 336.2801(f).

17. Clean Air Act regulations establish the following levels of pollution as “significant” for purposes of triggering PSD permitting for a source that would emit such pollutant:

- SO₂ – 40 tons per year
- NO_x – 40 tons per year

- VOCs – 40 tons per year
- PM – 25 tons per year
- PM₁₀ – 15 tons per year
- PM_{2.5} – 10 tons per year of direct PM_{2.5} emissions or 40 tons per year of SO₂ or NO_x
- H₂SO₄ – 7 tons per year
- GHGs – 75,000 tons per year

40 CFR 51.166(b)(23)(i); Rule 336.2801(qq)(i); U.S. EPA, *Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule* (“Tailoring Rule”), 75 FR 31514, 31516 (June 3, 2010).

18. The Clean Air Act has a “technology-forcing” objective; thus, BACT limits must reflect what is presently known about a given technology’s effectiveness at reducing pollutant emissions. *Ala. Power Co. v. Costle*, 204 US App DC 51; 636 F2d 323, 372 (1980); *In re Prairie State Generating Co.*, PSD Appeal No. 05-05, 13 EAD 1, 53; 2006 EPA App. Lexis 38 (2006).
19. BACT limits must be set with fidelity to the Clean Air Act’s purpose and must be reasonably justified. *Alaska Dep’t of Env’tl. Conservation v. Env’tl. Prot. Agency*, 540 US 461, 482-87; 124 S Ct 983; 157 L Ed 2d 967 (2004).
20. The PSD program further requires that, in order to obtain a PSD permit, the owner or operator of a major new source of air pollution must demonstrate that it will not cause or contribute to the violation of any NAAQS. 42 USC 7475(a)(3); 40 CFR 51.166(k); Rule 336.2811.
21. The Clean Air Act requires in the permitting of major new sources of air pollution the establishment of emission limits that represent the Maximum Achievable Control

Technology (“MACT”) for hazardous air pollutants (“HAPs”). 42 USC 7412(g). HAPs are identified at 42 USC 7412(b).

22. A new source of hazardous air pollution is a “major source” if it has the potential to emit 10 tons per year or more of a single HAP, or 25 tons per year or more of any combination of HAPs. 42 USC 7412(a)(1).

23. MACT is defined as:

the emission limitation which is not less stringent than the emission limitation achieved in practice by the best controlled similar source, and which reflects the maximum degree of reduction in emissions that the permitting authority, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable by the constructed [] major source.

40 CFR 63.41; Rule 336.1299(e).

24. MACT requirements apply during periods of startup, shutdown and malfunction (“SSM”).

Sierra Club v. Env'tl. Prot. Agency, 384 US App DC 96; 551 F3d 1019 (2008).

FACTUAL BACKGROUND

The Proposed Coal Plant

25. Wolverine is proposing to build a 600-megawatt power plant, including two 300-megawatt circulating fluidized bed (“CFB”) boilers, in Rogers City, Michigan. The Permit authorizes the plant to burn Powder River Basin coal, Illinois Basin coal, up to 70% petroleum coke on a heat-input basis, and between 5% and 20% biomass on a heat-input basis, as fuel. The Permit also allows burning of diesel fuel during startup of the CFB boilers.

26. The Proposed Coal Plant qualifies under the Clean Air Act as a major new air pollution source that would emit numerous pollutants in significant amounts, including PM, PM₁₀, PM_{2.5}, SO₂, NO_x, CO, VOCs, H₂SO₄, GHGs, and HAPs.

The Public Health Impacts of the Proposed Coal Plant

27. The Permit authorizes the Proposed Coal Plant to emit up to 1344.0 tons per year of SO₂. At elevated concentrations, SO₂ directly impairs human health by causing and exacerbating respiratory conditions, such as asthma, and cardiovascular illness. See generally U.S. EPA, *National Ambient Air Quality Standards for Sulfur Oxides (Sulfur Dioxide) – Final Decision*, 61 FR 25,566, 25,570-76 (May 22, 1996). The U.S. EPA recently found the existing SO₂ NAAQS, which had not been modified since 1971, inadequate to protect human health. As a result, the U.S. EPA finalized a more stringent NAAQS on June 22, 2010, which was set as a maximum concentration over a 1-hour period in order to address adverse respiratory impacts of short-term SO₂ exposure. U.S. EPA, *Primary National Ambient Air Quality Standard for Sulfur Dioxide – Final Rule*, 75 FR 35,520 (June 22, 2010). EPA determined that there are adverse health impacts from exposure to elevated SO₂ concentrations for as little as five minutes. The new 1-hour SO₂ NAAQS went into effect on August 23, 2010.
28. The Permit authorizes the Proposed Coal Plant to emit up to 2647.0 tons of NO_x and 171.1 tons of VOCs per year. NO_x can adversely affect human health, vegetation, materials, and visibility by combining with VOC and sunlight to form ground level ozone, which is also known as smog. U.S. EPA, *National Ambient Air Quality Standards for Nitrogen Dioxide: Final Decision*, 61 FR 52,852-01, 52,853 (Oct 8, 1996). It also poses health threats as oxides of nitrogen. U.S. EPA, *Primary National Ambient Air Quality Standards for Nitrogen Dioxide*, 75 FR 6,474 (Feb. 9, 2010). Ozone pollution can lead to throat irritation, aggravation of asthma, bronchitis, heart disease, and emphysema, and lung tissue damage, and can also make plants more susceptible to disease and insect pests by reducing plant's ability to produce and store food. Nitrogen oxides cause respiratory illness and breathing

difficulties, especially among asthmatics and children. NO_x and SO₂ also combine with other pollutants to form acid rain, which acidifies lakes and streams, destroys crops and other vegetations, and can impact areas hundreds of miles away from the pollution source.

29. The U.S. EPA recently found that the existing NO_x NAAQS, which had not been modified since 1971, were inadequate to protect human health. As a result, the U.S. EPA finalized a more stringent 1-hour NO_x NAAQS on February 9, 2010. U.S. EPA, *Primary National Ambient Air Quality Standard for Nitrogen Dioxide – Final Rule (“1-hour NO_x NAAQS”)*, 75 FR 6,474 (Feb. 9, 2010). The new 1-hour NO_x NAAQS went into effect on April 12, 2010.
30. The Permit authorizes the Proposed Coal Plant to emit up to 725 tons of PM₁₀, including PM_{2.5}, per year. Short-term exposure to PM has been associated with hospital admissions for cardiopulmonary disease, increased respiratory symptoms, and possibly premature mortality. U.S. EPA, *National Ambient Air Quality Standards for Particulate Matter*, 71 FR 61,144-01, 61,145 (Oct 17, 2006). PM_{2.5}, meanwhile, can cause coughing and shortness of breath, aggravation of respiratory conditions such as asthma and bronchitis, increased susceptibility to respiratory infections, and heart attacks or even premature death in people with heart and lung disease. *Id.* There is no established safe level of PM_{2.5}. Each incremental increase in PM_{2.5} emissions and concentration in the ambient air is associated with increased health risk. The U.S. EPA is currently revising the PM_{2.5} NAAQS following a remand by the Court of Appeals for the D.C. Circuit and is expected to make the existing standards more stringent to better protect public health based on the U.S. EPA’s studies showing lower standards are required to protect health from PM_{2.5} exposure. Both types of particulate matter also impair visibility and negatively impact vegetation and ecosystems. *Id.* at 61,145.

31. The Permit also authorizes the Proposed Coal Plant to emit significant amounts of mercury and other hazardous air pollutants (“HAPs”). These pollutants have been identified as hazardous because the U.S. Congress and U.S. EPA have determined that they may pose a threat of adverse human health or environmental effects through ambient concentrations, bioaccumulation, deposition, or other vectors of exposure. 42 USC 7412(b)(2). For example, mercury is a highly toxic and persistent pollutant that deposits into rivers, lakes, and streams, and then bioaccumulates in the food chain. U.S. EPA, *Regulatory Finding on the Emission of Hazardous Air Pollutants From Electric Utility Steam Generating Units*, 65 FR 79,825, 79,828 (Dec. 20, 2000). Fetuses or young children that are exposed to elevated mercury levels may experience developmental disabilities, including cerebral palsy, reduced neurological test scores, and delays and deficits in learning abilities. *Id.* at 78,929. Other HAPs – such as arsenic, cadmium, chromium, nickel, dioxins, hydrogen chlorides, and hydrogen flourides –have carcinogenic or other adverse health effects. *Id.* at 79,827.
32. The Permit also authorizes the plant to emit 6,024,107 tons of GHGs, including CO₂, per year. CO₂ emissions cause and exacerbate climate change, which the U.S. EPA and numerous scientific studies link directly with significant public health, environmental, economic, and ecological impacts. U.S. EPA, *Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act*, 74 FR 66,496, 66,497-98 (Dec. 15, 2009). Such impacts include direct heat-related effects, extreme weather events, climate-sensitive disease impacts, air quality effects, agricultural effects (and related impacts on nutrition), wildlife and habitat impacts, biodiversity impacts, impacts on marine life, property damage, and social disruption (such as population displacement). *Id.* GHGs became unquestionably subject to regulation under the Clean Air Act, triggering the

requirement for BACT limits for those pollutants, when U.S. EPA's rule regulating GHG emissions from light duty vehicles went into effect on January 2, 2011. See U.S. EPA, *Light Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards: Final Rule*, 75 FR 25,324 (May 7, 2010); Tailoring Rule, 75 FR 31,514, 31,516.

The Permit Application, Draft Permit, and Appeal of Permit Denial

33. Wolverine submitted its initial application for the Permit to MDEQ on September 26, 2007.

34. On September 23, 2008, MDEQ issued the first draft Permit for the Proposed Coal Plant.

35. MDEQ accepted public comments on the first draft permit through January 6, 2009.

36. On January 6, 2009, Petitioners, along with a number of other organizations, filed comments on the first draft Permit with MDEQ. Those comments raised numerous concerns about the draft Permit, including that MDEQ had improperly failed to:

- Evaluate the need for and existence of cleaner alternatives to the Proposed Coal Plant;
- Properly analyze and establish limits representing BACT for the Proposed Coal Plant, including a proper analysis of alternative generative technologies, cleaner fuels, and control technologies to limit emissions of PM, PM₁₀, NO_x, SO₂, CO and other pollutants;
- Directly address and limit PM_{2.5} emissions from the Proposed Coal Plant;
- Establish limits that reflect MACT for emissions of mercury and other HAPs from the Proposed Coal Plant; and
- Properly model the air quality impacts of the Proposed Coal Plants' air pollutant emissions.

Subsequently, on March 25, 2009, Petitioners submitted follow-up comments to MDEQ alerting the agency of new legal authority relevant to MDEQ's consideration of Wolverine's permit application. Among other authorities, Petitioners noted that:

- The Environmental Appeals Board's ("EAB") decision in *In re Northern Michigan University Ripley Heating Plant*, PSD Appeal No 08-02, 14 EAD __; 2009 EPA App Lexis 5 (2009) ("NMU") reinforces MDEQ's duty to engage in a searching and careful

inquiry into what constitutes BACT for a facility, and to fully justify BACT determinations as representing the maximum degree of reduction achievable;

- The *NMU* decision makes clear that MDEQ must consider clean fuels in its BACT analyses for CFB boilers, and that basing limits on fuels cleaner than the applicant's proposed fuel or fuels is not "redefining the source;" and
- The D.C. Circuit's decision in *Sierra Club v. EPA*, 384 US App DC 96; 551 F3d 1019 (2008) makes clear that MDEQ must ensure that MACT requirements are met during periods of SSM, but the emission limits in the proposed permit do not meet those requirements.

37. After the first comment period ending January 6, 2009, MDEQ reopened public comment for the Permit several times to accept comments on new information in the record or compliance with new rules.

38. During the second opening of the comment period, which lasted from June 18 until August 17, 2009, Petitioners submitted comments dated August 17, 2009, concerning Wolverine's Electric Generation Alternatives Analysis ("EGAA"). Those comments raised, among other issues, the following concern:

- The EGAA does not demonstrate a need for the Proposed Plant. In fact, the available evidence shows that, in Michigan, energy demand is flat or even decreasing, and that energy efficiency, renewable energy and existing natural gas capacity can satisfy demand. Moreover, even Wolverine claims that it only likely needs 263 MW of additional electricity in 2015, but it nevertheless proposes to build a plant that would provide more than double that capacity: a 600 MW coal-fired power plant.

39. On September 8, 2009, the Michigan Public Service Commission ("MPSC") Staff submitted a report to MDEQ regarding Wolverine's "Electric Generating Alternatives Analysis" for the Proposed Coal Plant. In their comments, the Staff found, among other things, that:

- Wolverine failed to demonstrate the need for the proposed facility as the sole source to meet their projected capacity (Staff Report at 3)
- Wolverine's forecasted demand growth of approximately 2.0% appears questionable, or optimistic (Staff Report at 4)

40. During the third opening of the comment period, which lasted until September 17, 2009,

MDEQ accepted public comments on the proposed PM_{2.5} emission limits and the air quality analysis of PM_{2.5}. Petitioners submitted comments to MDEQ on September 17, 2009, raising, among other issues, the following concerns:

- Wolverine pre-selected its proposed PM_{2.5} BACT limit and underlying control technology. Rather than first proceeding through the appropriate top-down steps and then assessing what emission rates are achievable, Wolverine selected an emission rate that it could meet based on the PM₁₀ emission limit and an estimation of the PM_{2.5} fraction, and then conformed its assessment of control technology to the selected emission rate.
- The BACT analysis for the CFB boiler fails to justify why BACT for PM_{2.5} at the Proposed Plant is not equivalent to the more stringent PM_{2.5} limits imposed at other facilities, including the Highwood plant, the Manitowoc plant, the Plant Washington facility, and the Virginia City Hybrid Center.
- The BACT analysis for PM_{2.5} improperly fails to consider precursor emissions.
- To the extent that MDEQ allows Wolverine to use PM as a surrogate for metallic HAPs in setting any of its MACT limits, the actual Manitowoc plant's PM_{2.5} emission level and the proposed Plant Washington facility's PM_{2.5} limits that are lower than those proposed for the Wolverine plant must be considered as MACT.

41. In late 2009, Wolverine purchased the 340-megawatt Sumpter natural gas peaking plant. In

December 2009, Petitioners submitted supplemental comments to MDEQ noting that the Sumpter plant can be converted to a combined cycle plant to meet Wolverine's future baseload energy needs, at a smaller economic and environmental cost to Wolverine's customers and Michigan residents than the proposed coal plant.

42. On May 21, 2010, after receiving, among other comments, a staff report from the MPSC staff

finding a lack of need for the Proposed Coal Plant, MDEQ denied Wolverine's permit application. MDEQ found that Wolverine "has not demonstrated a need for the proposed facility" and thus, "pursuant to Section 165(a)(2) of the Clean Air Act and Rule 1817(2) of Michigan's Air Pollution Control Rules," denial of the permit application was required.

Letter from G. Vinson Hellwig to Brian L. Warner, May 21, 2010.

43. On August 9, 2010, Wolverine appealed the denial of its permit application.
44. In late 2010, a Wolverine subsidiary purchased a 6.65 percent participation interest in the output of the Ohio Valley Electric Corporation, which interest represents approximately 150 megawatts of capacity.
45. On January 28, 2011, the Missaukee County Circuit Court reversed MDEQ's denial of the permit application, holding 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 Natural Res. & Env.*, File No. 10-7686-CE, slip op. at 8, 9 (Mich. Cir. Ct. Jan. 28, 2011). Instead, the Court held that Section 165(a)(2) of the CAA "require[s] that there be an evaluation of the need and the alternatives to the need in light of the goals of the Clean Air Act," and ordered MDEQ to reconsider Wolverine's permit application consistent with that requirement within 60 days. *Id.* at 8-10. The Court made clear that DEQ "may . . . deny . . . a permit issued under this act if . . . installation . . . will violate . . . the Clean Air Act" *Id.* at 9 (citing MCL 324.5510).
46. Following the decision of the Missaukee County Circuit Court, MDEQ reissued the draft Permit and reopened public comment until May 19, 2011. On that date, Petitioners submitted supplemental comments to MDEQ in which Petitioners raised, among other issues, the following concerns:
- MDEQ has the responsibility to deny the permit because the Proposed Plant is not needed. Wolverine's 2009 purchase of the Sumpter plant and 2010 purchase of a 6.65 percent participation interest in the Ohio Valley Electric Corporation gave Wolverine a total generating capacity of at least 730 megawatts of power – far more than Wolverine needs. Moreover, the additional, unnecessary 600-megawatt Proposed Coal Plant would have severe negative impacts on air quality, including consuming 65% of the 24 hour PSD increment for SO₂ and 84% of the 24-hour PSD increment for PM₁₀.

- Wolverine failed to demonstrate that the plant would not cause or contribute to a violation of the new 1-hour NAAQS for NO_x because the updates MDEQ made to Wolverine's air quality modeling analysis – purportedly made to verify compliance with the new 1-hour NO_x limit – were highly flawed. Specifically, MDEQ improperly failed to model the maximum short-term NO_x emissions rates from intermittent sources, resulting in a severe underestimate of the short-term NO_x air quality impacts from the plant. If those short-term impacts were modeled properly, the air quality analysis would show that the plant will violate the new 1-hour NO_x standard.

The Final Permit and Response to Comments

47. On June 29, 2011, MDEQ issued the final Permit for the Proposed Coal Plant, which authorizes the construction of the Proposed Coal Plant and sets forth, *inter alia*, emission limits and monitoring, recordkeeping, and reporting requirements for the Plant.
48. The final Permit was issued without proper BACT analyses or determinations, without proper MACT analyses or determinations, without an adequate demonstration that the plant was needed in light of its air quality impacts, and without an adequate demonstration that NO_x pollution from the plant would not violate national air quality standards.
49. Along with the final Permit, MDEQ issued a "Response to Comments" document that purports to address the comments regarding the draft Permit made by the public. The Response to Comments document does not justify MDEQ's almost complete failure to modify the Permit in response to comments submitted by the public or the MPSC Staff.

COUNT I

(Failure to Evaluate Properly the Need for the Plant in Light of Air Quality Impacts)

50. The Petitioners restate and incorporate the preceding allegations.
51. Petitioners, other members of the public, and the MPSC Staff submitted comments questioning the need for the Proposed Coal Plant. Petitioners submitted comments dated

August 17, 2009, concerning Wolverine's Electric Generation Alternatives Analysis

("EGAA"). Those comments raised, among other issues, the following concern:

- The EGAA does not demonstrate a need for the Proposed Plant. In fact, the available evidence shows that, in Michigan, energy demand is flat or even decreasing, and that energy efficiency, renewable energy and existing natural gas capacity can satisfy demand. Moreover, even Wolverine claims that it only likely needs 263 MW of additional electricity in 2015, but it nevertheless proposes to build a plant that would provide more than double that capacity: a 600 MW coal-fired power plant.

52. In Petitioners' May 19, 2011 comments, Petitioners noted specific negative air quality

impacts that the Proposed Plant will have:

- Wolverine failed to demonstrate that the plant would not cause or contribute to a violation of the new 1-hour NAAQS for NO_x because the updates MDEQ made to Wolverine's air quality modeling analysis – purportedly made to verify compliance with the new 1-hour NO_x limit – were highly flawed. Specifically, MDEQ improperly failed to model the maximum short-term NO_x emissions rates from intermittent sources, resulting in a severe underestimate of the short-term NO_x air quality impacts from the plant. If those short-term impacts were modeled properly, the air quality analysis would show that the plant will violate the new 1-hour NO_x standard.

53. MDEQ's only response concerning the agency's failure to evaluate need for the plant in light

of air quality impacts was the blanket statement that "MDEQ has evaluated the proposal and

has determined that that project meets all applicable state and federal air quality

requirements." Response to Comments at 21.

54. MDEQ's issuance of the Permit, along with MDEQ's failure to address adequately the need

for the Proposed Plant in light of the plant's severe air quality impacts, was arbitrary,

capricious, and not authorized by law because:

- MDEQ failed to adequately consider the need for the Proposed Coal Plant pursuant to CAA 165 and AC Rule 1817;
- MDEQ failed to respond to Petitioners' comments discussing in detail the lack of need for the Proposed Coal Plant and the severe negative air quality impacts the plant will have; and

55. MDEQ's failure to appropriately consider the need for the Proposed Coal Plant in light of its severe negative air quality impacts is contrary to Section 165(a)(2) of the Clean Air Act and 2011 AC, R 1817(2)(e), which require MDEQ to consider the need for the Proposed Plant for satisfying energy needs taking into consideration the plant's air quality impacts.
56. MDEQ's failure to respond to Petitioners' comments clarifying MDEQ's responsibility to deny the permit for lack of need in light of specific, severe negative air quality impacts from the Proposed Coal Plant violates 2011 AC, R 1817(2)(f), which requires MDEQ to consider and respond to all written comments submitted by the public during public comment periods.
57. The violations described above require that this Permit be remanded to the MDEQ so that the evaluation of need required by law can occur.

COUNT II

(Failure to Properly Evaluate Clean Fuels in Determining BACT Limits)

58. The Petitioners restate and incorporate the preceding allegations.
59. The Proposed Plant will be a major new source that will emit significant amounts of numerous pollutants. Therefore, BACT must be evaluated, and BACT emission limits established, for each and every one of those pollutants. 42 USC 7471, 7475(a)(2), (a)(4), 7479(3); 40 CFR 51.166(j),(q); 2011 AC, R 336.2810.
60. Cleaner fuels must be evaluated in determining BACT limits that reflect the maximum degree of pollutant reduction achievable at a facility, and BACT limits must be set that reflect the cleanest fuel that can be used without changing the facility's fundamental purpose. 42 USC 7479(3); Rule 336.2801(f).
61. The emission limits in the Permit fail to satisfy BACT requirements because:
- The Proposed Coal Plant is capable of burning a range of fuels, including but not limited to natural gas, biomass, bituminous and sub-bituminous coal, and petcoke;

- MDEQ failed to properly evaluate, or require proper evaluation of, cleaner fuels in determining BACT limits at the Proposed Plant; and
- Numerous emission limits in the Permit are based on the “worst case” fuel for a particular pollutant, rather than on a maximization of the use of cleaner fuels.

62. MDEQ’s failure to properly evaluate, require proper evaluation of, or establish emission limits on the basis of cleaner fuels is arbitrary, capricious, and not authorized by law.

63. The violations described above require that this Permit be vacated and remanded to MDEQ so that cleaner fuels can be properly evaluated and the Permit’s BACT limits can be established on the basis of the use of cleaner fuels, as required by law.

COUNT III

(Improper Reliance on Outdated BACT analyses)

64. The Petitioners restate and incorporate the preceding allegations.

65. Because the Clean Air Act has a “technology-forcing” objective, BACT limits must reflect what is presently known about a given technology’s effectiveness at reducing pollutant emissions. 42 USC 7479(3); Rule 336.2801(f); *Ala. Power Co. v. Costle*, *supra* at 372; *In re Prairie State Generating Co.*, *supra* at 53.

66. Most of the BACT analyses that MDEQ relied on to set BACT limits in the Permit were included in Wolverine’s PSD Permit application in 2007 and 2008. Only two of Wolverine’s BACT analyses (for PM_{2.5} and GHGs) date from 2009 or later.

67. MDEQ’s failure to require new BACT analyses and MDEQ’s establishment of BACT limits based on over three-year-old BACT analyses violates the Act’s BACT requirements.

68. The violations described above require that this Permit be vacated and remanded to MDEQ so that new BACT analyses can be completed and BACT limits can be established on the basis of those new analyses, as required by law.

COUNT IV

(Failure to Perform Proper BACT Analyses and Set BACT Based on Those Analyses)

69. The Petitioners restate and incorporate the preceding allegations.
70. The Proposed Coal Plant is a major new source of air pollution that would emit numerous pollutants, including PM, PM₁₀, PM_{2.5}, SO₂, NO_x, CO, VOCs, H₂SO₄, and GHGs, in significant amounts. 40 CFR 51.166(b)(23)(i); Rule 336.2801(qq)(i); Tailoring Rule, 75 FR 31514, 31516.
71. BACT must be properly evaluated, and BACT limits properly set, for each of those pollutants. 42 USC 7471, 7475(a)(2), 7479(3); 40 CFR 51.166(j),(q); 2011 AC, R 336.2810.
72. The BACT analyses performed by Wolverine and MDEQ, and the BACT limits established by MDEQ based on those analyses, do not comply with BACT requirements because:
- Wolverine and MDEQ improperly excluded numerous combustion techniques and control technologies from the BACT analyses based on factors that may not be considered, or were improperly considered, in determining BACT;
 - Wolverine and MDEQ improperly pre-selected BACT limits and then worked backwards to draft “analyses” justifying those pre-selected BACT limits, rather than determining BACT based on proper, reasonably-justified analyses consistent with the Act’s purpose.
73. MDEQ’s failure to properly analyze BACT, failure to require Wolverine to properly analyze BACT, and establishment of BACT limits based on flawed BACT analyses was arbitrary, capricious, and not authorized by law.
74. The violations described above require that this Permit be vacated and remanded to MDEQ so proper BACT analyses can be completed and proper BACT limits established on the basis of those analyses, as required by law.

COUNT V

(Failure to Justify Why More Stringent BACT Limits Are Not Achievable)

75. The Petitioners restate and incorporate the preceding allegations.
76. In their comments, Petitioners noted that several PSD permits have established more stringent BACT emission limits than those set by MDEQ.
77. MDEQ is required to respond to comments made in the permitting record. 2011 AC, R 1817(2)(f).
78. 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.” *In re Mississippi Lime Co.*, PSD Appeal No. 11-01, 15 EAD __; 2011 EPA App Lexis 24, *43-*44 (2011) (internal quotations and brackets omitted).
79. 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.
80. MDEQ entirely failed to examine, or inadequately examined, whether the more stringent BACT limits included in certain other permits referenced in comments by Petitioners can be achieved at the Proposed Coal Plant.
81. MDEQ’s failure to respond to Petitioners’ comments and failure to examine whether the more stringent BACT limits that Petitioners brought to its attention can be achieved at the Proposed Coal Plant was arbitrary, capricious, and not authorized by law.
82. The violations described above require that this Permit be vacated and remanded to MDEQ for MDEQ to properly examine whether the more stringent BACT limits that Petitioners

brought to MDEQ's attention can be achieved at Wolverine, and so that such more stringent BACT limits may be established, if appropriate, on the basis of those examinations.

COUNT VI

(Failure to Establish MACT Limits for Hazardous Air Pollutants)

83. The Petitioners restate and incorporate the preceding allegations:
84. The Proposed Coal Plant would be a major source of HAPs, including mercury, hydrogen chloride ("HCl"), and hydrogen fluoride ("HF").
85. For major new sources of HAPs, the Act and federal and state regulations implementing the Act require the imposition of emissions limits that reflect "the maximum degree of reduction in emissions that the permitting authority . . . determines is achievable by the constructed [] major source," which limits must be "not less stringent than the emission limitation achieved in practice by the best controlled similar source. . . ." 42 USC 7412(d), (g)(2)(B); 40 CFR 63.41; Rule 336.1299(e); see also 40 CFR 63.43(d) and 61 FR 68,384 (Dec. 27, 1996).
86. The emission limits in the Permit fail to satisfy MACT requirements because:
- MDEQ failed to establish MACT limits that reflect the emission reductions achieved by the best controlled similar source;
 - MDEQ improperly excluded fuel source as a control technology in identifying the MACT floor;
 - In determining MACT limits, MDEQ did not properly consider 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);
 - MDEQ did not properly evaluate beyond-the-floor controls; and
 - MDEQ improperly set an alternate emission limit for organic HAPs during periods of startup and shutdown.

87. The violations described above require that this Permit be vacated and remanded to MDEQ so that the agency can establish limits for HAP emissions from the Proposed Coal Plant that satisfy the Clean Air Act's MACT requirements.

COUNT VII

(Failure to Ensure Compliance with NO_x NAAQS)

88. The Petitioners restate and incorporate the preceding allegations.
89. The Proposed Coal Plant would emit significant amounts of NO_x emissions.
90. The U.S. EPA's 1-hour NO_x NAAQS was in effect on April 12, 2010, prior to the date that MDEQ issued the Permit. *1-hour NO_x NAAQS*, 75 FR 6474.
91. The Clean Air Act and federal and state regulations require that MDEQ ensure that a new major source of air pollution will not cause or contribute to a violation of any NAAQS prior to issuing a PSD permit. 42 USC 7475(a)(3); 40 CFR 51.166(k); Rule 336.2811.
92. MDEQ failed to ensure compliance with the 1-hour NAAQS for NO_x by modeling annual average NO_x emissions instead of hourly maximum NO_x emissions.
93. MDEQ's failure to properly evaluate the impacts of the Proposed Coal Plant's NO_x emissions on compliance with the 1-hour NO_x NAAQS was arbitrary, capricious, and not authorized by law.
94. The violations described above require that this Permit be vacated and remanded to MDEQ so that the impact of the Proposed Coal Plant's NO_x emissions on compliance with the NO_x NAAQS can be properly assessed, as required by law.

COUNT VIII

(The Permit Limits Do Not Ensure Compliance with the NO_x and SO₂ NAAQS)

95. The Petitioners restate and incorporate the preceding allegations.

96. The Proposed Coal Plant would emit significant amounts of NO_x and SO₂ emissions.
97. The U.S. EPA's 1-hour NO_x NAAQS was in effect on April 12, 2010, prior to the date that MDEQ issued the Permit. *1-hour NO_x NAAQS*, 75 FR 6474.
98. The U.S. EPA's 1-hour SO₂ NAAQS was in effect on August 23, 2010, prior to the date that MDEQ issued the Permit. *1-hour SO₂ NAAQS*, 75 FR 35,520.
99. PSD Permits must be enforceable; i.e., they must include conditions ensuring that the facility will comply with all applicable Clean Air Act requirements. See e.g. 73 FR 1,570, 1,573 (Jan. 9, 2008); Rule 336.1205.
100. Compliance with the SO₂ emission limits in the Permit is measured over a rolling 30-day averaging period, a 24-hour rolling averaging period, and a 12-month rolling averaging period. Permit at 26. Compliance with the NO_x emission limits in the Permit is measured over a rolling 30-day averaging period and a 24-hour rolling averaging period. *Id.* Nowhere does the Permit include SO₂ or NO_x emission limits that are measured over a 1-hour averaging period.
101. Because the Permit does not contain emission limits for SO₂ or NO_x that are measured over a 1-hour averaging period, the Permit does not ensure that SO₂ or NO_x emissions from the Proposed Coal Plant will not exceed the new 1-hour NAAQS for SO₂ and NO_x.
102. MDEQ's failure to include emission limits for SO₂ or NO_x that are measured over a 1-hour averaging period renders the permit unenforceable, and thus is arbitrary, capricious, and not authorized by law.
103. The violations described above require that this Permit be vacated and remanded to MDEQ so that emission limits for SO₂ or NO_x measured over a 1-hour averaging period can

be added to the Permit to ensure that the Permit contains enforceable conditions to comply with Clean Air Act requirements, as required by law.

REQUEST FOR RELIEF

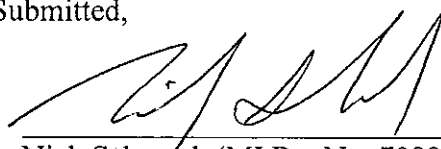
104. For the reasons stated above, Petitioners respectfully request that the Court:

- a. Declare that the MDEQ's issuance of the Permit was arbitrary, capricious, and not authorized by law;
- b. Vacate the Permit and remand this matter to MDEQ;
- c. Grant the Petitioners cost and attorneys fees as authorized by law; and
- d. Grant the Petitioners such other relief as may be required under the circumstances, including all other relief that is reasonable, equitable, and just.

Respectfully Submitted,

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