BEFORE THE ADMINISTRATOR
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

An Operating Permit for the JP Pulliam Power Plant, Brown County, Wisconsin.

Source I.D. 405031990

Permit No. 405031990-P21

Proposed by the Wisconsin Department of Natural Resources on July 3, 2012.

Petition No. V-2009-_____

PETITION REQUESTING THAT THE ADMINISTRATOR OBJECT TO ISSUANCE OF THE PROPOSED TITLE V OPERATING PERMIT FOR THE JP PULLIAM POWER PLANT

Pursuant to Clean Air Act § 505(b)(2) and 40 CFR § 70.8(d), the Sierra Club hereby petitions the Administrator of the United States Environmental Protection Agency ("U.S. EPA" or "EPA") to object to a proposed Title V Operating Permit revision for the JP Pulliam Power Plant ("Pulliam"), Permit Number 405031990-P21 ("Permit"). The Permit was proposed to U.S. EPA by the Wisconsin Department of Natural Resources ("WDNR") more than 45 days ago. A copy of the proposed Permit is attached as Exhibit 1.

PROCEDURAL HISTORY

The procedural history of the permit revision for Pulliam is long, so Sierra Club summarizes that history here:

On April 30, 2009, WDNR issued a Title V permit for the Pulliam plant, Permit No. 405031990-P20. On June 25, 2009, Sierra Club petitioned the Administrator to object to the issuance of the permit pursuant to CAA § 505(b)(2), 42 U.S.C. § 7661d(b)(2). On June 28, 2010, the Administrator granted Sierra Club's June 25, 2009 petition and objected to the permit.[1] However, following that objection, the WDNR failed to submit a revised permit to address the Administrator's objection within 90 days, thereby triggering the Administrator's obligation to modify, terminate, or revoke the permit under 42 USC § 7761d(b)(3) and 40 C.F.R. §§ 70.7(g) and 70.8(d). When the Administrator did not modify, terminate or revoke the permit, Sierra Club sent the Administrator a Notice of Intent to Sue under 42 USC § 7604(b)(2) on October 18, 2010. On April 29, 2011, more than 60 days after sending the Notice of Intent, Sierra Club sued the Administrator for failing to perform her non-discretionary duty and for unreasonably delaying her action on the permit. That case was brought in the Western District of Wisconsin, *Sierra Club v. Lisa Jackson, Administrator*, Case No. 3:11-cv-315.

On September 23, 2011, while *Sierra Club v. Jackson*, Case 3:11-cv-315 was pending, the WDNR responded to EPA's June 28, 2010 objection by issuing Draft Permit 405031990-P21 for public comment. Sierra Club and EPA submitted comments on the proposed permit on October 21, 2011. 5/9/12 Petition Requesting the Adm'r Object to the Issuance of the Proposed Title V Operating Permit for the

[1] http://www.epa.gov/region7/air/title5/petitiondb/petitions/jp_pulliam_decision2009.pdf.

JP Pulliam Power Plant (hereinafter "5/9/12 Petition"), Exs. B and C.[2] WDNR responded to the comments (5/9/12 Petition, Ex. D) without revising the proposed permit based on the comments.

On February 16, 2012, WDNR submitted the Permit 405031990-P21 to EPA. EPA did not formally object, but sent WDNR a letter requesting various changes. 5/9/12 Petition, Ex. E. On May 9, 2012, within 60 days of EPA's 45-day review period expiring, as required by the CAA § 505(b)(2), Sierra Club timely petitioned to the EPA to object to the proposed permit. 5/9/12 Petition.

On May 11, 2012, EPA and Sierra Club entered a settlement agreement in W.D. Wis. Case No. 3:11-cv-315 (dkt # 23, 5/15/12 Notice of Settlement and Joint Motion to Stay), whereby the case would be stayed pending EPA's response to Sierra Club's May 9, 2012 petition to object to the February 16, 2012, proposed Permit 405031990-P21. Under the settlement agreement, EPA was to issue a response to that petition within 80 days of EPA receiving the petition.

However, before the 80 days expired, on July 3, 2012, WDNR effectively withdrew its proposed Permit 405031990-P21 (which was the permit at issue in the May 9, 2012 petition) by submitting a new version of the permit to the EPA. The new version of the proposed permit 605031990-P21, superseded the February 16, 2012 proposed permit. (Attached as Exhibit1).

On August 2, 2012, EPA and Sierra Club entered a modified settlement agreement that triggered obligations of EPA to respond to Sierra Club's petition on

[2] The May 9, 2012 Petition and its attachments (Exhibits A through CC) are attached to this Petition for reference.

the superseding permit if EPA did not object on its own and Sierra Club timely submitted a petition. (W.D. Wis. Case No. 3:11-cv-315, dkt # 38-1). EPA did not object within 45 days of the superseding permit. Sierra Club now, within 60 days of the 45-day review period expiring, submits this petition to the EPA to object to the superseding permit. This timely-submitted petition triggers EPA's obligation to respond within 80 days under the Modified Settlement Agreement.

ARGUMENT

If the Administrator determines that the Permit does not comply with the requirements of the CAA, or fails to include any "applicable requirement," she must object to issuance of the permit. 42 U.S.C. § 7661b(b); 40 C.F.R. § 70.8(c)(1) ("The [U.S. EPA] Administrator will object to the issuance of any permit determined by the Administrator not to be in compliance with applicable requirements or requirements of this part."). "Applicable requirements" include, *inter alia*, any provision of the Wisconsin State Implementation Plan ("SIP"), including any term or condition of any preconstruction permit, any standard or requirement under Clean Air Act sections 111, 112, 114(a)(3), or 504, acid rain program requirements. 40 C.F.R. § 70.2. Additionally, because this Petition establishes that the Superseding Permit fails to assure compliance with applicable requirements and contains material errors and inaccurate or unclear statements, EPA must reopen and revise the permit pursuant to 42 U.S.C. § 7661d(e) and 40 CFR §§ 70.7(g) and 70.8.

As set forth below, the Administrator should object to the Superseding Permit for two of the four reasons set forth in the May 9, 2012 Petition[3]:

1. The Superseding Permit fails to include applicable requirements. The applicable requirements that should have been included in this permit are either (1) the maximum hourly heat input ratings that WDNR relied upon in issuing preconstruction permits for the larger burners at the Pulliam plant, which are enforceable and must be included in the Superseding Permit, or (2) the Superseding Permit fails to include applicable Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NNSR) requirements. Sierra Club believes that historic minor source construction permits were issued based on limits for heat input to the Pulliam plant boilers. Absent such heat input limits, post-project emissions would not have been capped through enforceable permit limits in a manner that would have prevented PSD and NNSR from applying to the projects to install larger burners. The projects were non-like-kind physical changes and, based on an actual-to-potential test, would have resulted in significant emission increases of at least particulate matter (PM), Nitrogen Oxides (NOx) and Sulfur Dioxide (SO_2). Therefore, the Administrator should object because the Superseding Permit lacks applicable heat input limits. Alternatively, if the heat input limits are not applicable, then the modifications to the Pulliam boilers to add new, larger, burners constituted major modifications triggering other applicable requirements (PSD and NNSR requirements) that are absent from the Superseding Permit.

2. The Permit lacks sufficient monitoring for particulate matter emissions from the boilers. By concluding that the only parametric monitoring for particulate matter in the permit (opacity monitoring ranges) cannot be used to determine an emission rate, and therefore to determine compliance with numeric emission rates in the permit, and by failing to include any additional or alternative particulate matter monitoring sufficient to provide reliable data sufficient to determine compliance on a continuous basis, WDNR failed to meet the minimum monitoring requirements under Title V and Part 70.

[3] The Superseding Permit addresses Sierra Club's prior concerns with the New Source Performance Standards. Thus, those issues are not now before the Administrator by this petition.

I. THE PERMIT MUST INCLUDE HEAT INPUT CAPS FROM PRIOR CONSTRUCTION PERMITS (FOR REPLACEMENT OF OIL BURNERS WITH LARGER NATURAL GAS BURNERS) OR PSD AND NNSR IS APPLICABLE AND MUST BE INCLUDED.

In a June 28, 2010, order, the Administrator objected to a prior version of the Pulliam plant permit at issue. *See In re Wis. Public Service Corp.'s J.P. Pulliam Power Plant*, Petition No. V-2009-01, Order Granting Petition for Objection to Permit (Adm'r, June 28, 2010) (hereinafter "2010 Order").[4] One of the bases for the Administrator's objection was the WDNR's failure to make a determination of whether heat input values contained in a pre-construction permit application by the plant were incorporated into a resulting permit or whether Wis. Admin. Code § NR 406.10 incorporates contents of permit applications as enforceable provisions. 2010 Order at 7-8. Specifically, the Administrator directed WDNR to address the following:

- Whether Wisconsin SIP NR 406.10 and/or the provision in Permit 027 described above incorporate the contents (including heat input rates) of a preconstruction permit application into the Wisconsin SIP and/or preconstruction permit, thus making the contents of the permit application part of these applicable requirements.
- Whether WDNR had relied on the heat input rates in issuing Permit 027 and/or making the permitting decision described in the September 7, 1993, letter, and, if so, whether the heat input rates must be included in the title V permit to assure compliance with Permit 027.

2010 Order at 8.

In responding to the Administrator's 2010 objection through the February 16, 2012 Proposed Permit action, WDNR concluded that the heat input limits are not

[4] http://www.epa.gov/region7/air/title5/petitiondb/petitions/jp_pulliam_decision2009.pdf.

incorporated into the permit or into the Wisconsin SIP because "the total boiler heat inputs were not relied on in making rule applicability decisions for the construction permit." Analysis and Preliminary Determination for the Significant Revision of Operation Permit 405031990-P21 (hereinafter "2011 PD") (5/9/12 Petition, Exhibit F) at 16 (emphasis added). This is both irrelevant and incorrect. The test for whether the heat input limits are applicable is not whether they "were relied on" but whether they were in the application, which was made enforceable in the permit and through the SIP. Moreover, even if the limits must have been "relied on" to be applicable, the record shows that the DNR clearly did rely on them, since otherwise PSD and NNSR would have been triggered.

A. The Heat Input Limits Are Applicable Requirements Because They Were In the Application.

As the Title I construction permits for the Pulliam plant and the SIP make clear, the permittee was required to construct and operate in accordance with its application. The construction permits incorporate by reference the permittee's "plans and specifications"—its application—into the permit:

> Wisconsin Public Service Corporation is authorized to construct and operate a series of natural gas-fired burners for Pulliam Units 7 and 8 as described in plans and specifications dated October 14, 1988; October 28, 1988; November 3, 1988; November 21, 1988; and December 5, 1988, in conformity with the following emission limits, monitoring, recordkeeping and reporting requirements and specific and general conditions.

WDNR, Permit No. 88-AJH-101 (5/9/12 Petition, Exhibit H) Findings of Fact Conclusions of Law and Decision, at 4. *See also id.* at 5 (authorizing construction and operation of natural gas-fired burners for Pulliam units 7 and 8 "described in

the plans and specifications dated October 14, 1988; October 28, 1988; November 3, 1988; November 21, 1988; and December 5, 1998"). Similar language is contained in Permit No. 87-AJH-027, which authorized construction of natural gas-fired burners for units 3, 4, 5, and 6 at the Pulliam power plant "as described in the plans and specifications dated April 7, 1987, May 7, 1987, and June 8, 1987." WDNR, Permit No. 87-AJH-027 (5/9/12 Petition, Ex. G), at 000003. *See also* 88-AJH-101A Permit Revision (5/9/12 Petition, Exhibit W), at 5 (authorizing construction and operation of Pulliam units 7 and 8 "in conformity with the plans and specifications as approved by the Department."). Likewise, the Wisconsin SIP is clear:

> Any owner or operator who fails to construct a stationary sources in accordance with the application as approved by the department . . . shall be considered in violation of s. 285.60, Stats.

Wis. Admin. Code § NR 406.10 (emphasis added).

Heat rates are applicable requirements because they are in the permit applications approved by the WDNR. For example, the November 21, 1988 plans and specifications for the Title 1 construction permit—the application—includes a maximum heat rate of 801.9 mmBtu/hr for unit 7 and a maximum heat rate of 1288 mmBtu/hr for unit 8. Application for 88-AJH-101 (5/9/12 Petition, Exhibit J) at WP2-8-00213 and -00214. Similarly, the April 7, 1987 construction permit application includes a maximum heat rate for unit 5 of 569.0 mmBtu/hr and for unit 6 of 745.9 mmBtu/hr. Application for 87-AJH-027 (5/9/12 Petition, Ex. I) at WP2-8-00113 to -00114. Neither the permit nor the SIP contains a caveat that if WDNR

does not "rely on" a provision within the application then the permittee is free to construct and operate in deviation from the application.

B. WDNR Relied On The Heat Input Limits.

Even if WDNR was correct and the plain language of the permits and SIP could be read to incorporate heat input representations made in permit applications only if WDNR "relies on in making rule applicability decisions," it is clear that WDNR did rely on the maximum heat input representations made in the applications for 87-AJH-027 and 88-AJH-101.

As Sierra Club specifically set forth in its comments on the revised Permit, the project to replace oil burners with larger natural gas burners (the subject of permit # 87-AJH-027 and permit #88-AJH-101[5]) were physical changes to the boilers, as WDNR also concluded. *See* Sierra Club's Comments (5/9/12 Petition, Exhibit B) at p. 2; 2011 PD (5/9/12 Petition, Exhibit F) at 12-15. The replacement natural gas burners were significantly larger in capacity than the oil burners that were replaced. The oil burners in units 5 and 6 (B24 and B25) were 62.1 mmbtu/hour and 58 mmbtu/hour, respectively, while the replacement natural gas burners were rated at 228 mmbtu/hour, each. 2011 PD at pp. 12-13. The oil burners in units 7 and 8 (B26 and B27) were 113.9 mmbtu/hour and 110 mmbtu/hour, respectively, and the replacement natural gas burners were 228

[5] Permit 88-AJH-101A allowed the permittee to increase the amount of natural gas burned annually and increased the maximum heat input for unit 7 from 801.9 MMBtu/hour to 999 MMBtu/hour and for unit 8 from 1288 MMBtu/hour to 1510 MMBtu/hour. *See* Permit 88-AJH-101A (5/9/12 Petition, Exhibit W).

mmbtu/hour, each. *Id.* As a result, the total heat input to the boilers would increase (and therefore also the emissions, based on the emission calculations done by WDNR) unless overall heat input was capped. *See* 5/9/12 Petition, Ex. B at 2-4 n.2, 3, 4.

WDNR did not require compliance with PSD in Permits 87-AJH-027 or 88-AJH-101, however, because WDNR calculated that hourly emissions would decrease as a result of the project. That determination was based on calculations that clearly assumed that the increase in natural gas capacity (i.e., larger burners) would necessarily reduce the amount of coal burned on a 1-for-1 basis. 2011 PD (5/9/12 Petition, Exhibit F) at Appendices A, B. Therefore, while WDNR's calculations showed that gas burners would emit more NOx and PM than the smaller oil burners that were being replaced, DNR's analysis assumed that those increases would be off-set by a reduction in coal combustion and, therefore, emissions from coal combustion. *Id.* The following are from WDNR's justification/statement of basis documents for the permits:

Unit 5, Maximum Heat Input = 569.0 MMBTU/hr

Old Configuration: 450 gal/hr × 138,000 BTU/gal = 62.1 MMBTU/hr ✓
45,255 lbs coal/hr × 11,201 BTU/lb* = 506.9 MMBTU/hr ✓

New Configuration: 228,000 ft³/hr × 1000 BTU/ft³ = 228 MMBTU/hr ✓
30,444 lbs coal/hr × 11,201 BTU/lb* = 341 MMBTU/hr ✓

Unit 6. Maximum Heat Input = 745.9 MMBTU/hr

Old Configuration : 420 gal/hr × 138,000 BTU/gal = 57.96 MMBTU/hr
61,425 lbs coal/hr × 11,200 BTU/lb* = 687.96 MMBTU/hr

New Configuration : 228,000 ft³/hr × 1000 BTU/ft³ = 228 MMBTU/hr
46,243 lbs coal/hr × 11,200 BTU/lb* = 517.9 MMBTU/hr

Unit 7. Maximum Heat Input = 801.9 MMBTU/hr (from application)

Old Configuration : 826 gal/hr × 138,000 $\frac{BTU}{gal}$ = 113.99 MMBTU/hr
62,566 lbs coal/hr × 10,995 $\frac{BTU}{lb}$ = 687.91 MMBTU/hr ✓

New Configuration : 228,000 ft³/hr × 1000 $\frac{BTU}{ft^3}$ = 228.0 MMBTU/hr ✓
52,196 lbs coal/hr × 10,995 $\frac{BTU}{lb}$ = 573.9 MMBTU/hr ✓

Unit 8. Maximum Heat Input = 1288 MMBTU/hr

Old Configuration : 800 gal #2 oil/hr × 138,000 $\frac{BTU}{gal}$ = 110.4 MMBTU/hr
107,103 lbs coal/hr × 10,995 $\frac{BTU}{lb}$ = 1177.6 MMBTU/hr

New Configuration : 228,000 ft³/hr × 1000 $\frac{BTU}{ft^3}$ = 228 MMBTU/hr ✓
96,407 lbs coal/hr × 10,995 $\frac{BTU}{lb}$ = 1060 MMBTU/hr ✓

2011 PD (5/9/12 Petition, Exhibit F) at 39-40, 64-65. As can be seen in these calculations, DNR's analysis assumed that as the heat input from the non-coal fuel (oil or natural gas) increases when the larger gas-fired burners replaced the smaller oil-fired burners, overall heat input does not increase because the heat input from coal decreases by the equivalent amount. It is only because DNR holds the "maximum heat input" from the application constant that DNR concluded that no emission increase would occur. Indeed, the permit applications submitted by WPSC represented that the boiler rated heat input would operate as a cap and that coal

consumption would decrease proportionately to any increase in gas heat input. *See e.g.*, Application for Permit 87-AJH-027 (5/9/12 Petition, Exhibit I) at pp. WP2-8-00151-152.

What is also clear is that if the maximum heat input was not held constant, the increased heat input from the larger gas burners, the gas burner projects would increase the boiler size and emissions and require additional applicable requirements. *See* Memo from Allen Hubbard to File (Nov. 11, 1993) (5/9/12 Petition, Exhibit X) ("Clearly DNR has some need to involve capacity in the permit since changes to the physical size or method of operation that increase emissions are *modification*s under state and federal law... WPSC must be able to show the Department (and anyone else who's interested) that the result of the proposed low-NOx burner project is not 'bigger' boilers at Pulliam." (emphasis original)).

Despite the explicit assumption in WDNR's permitting analysis that larger gas burners—and their higher emissions compared to the smaller oil burners—would be off-set by reduced coal combustion, WDNR's permits did not cap coal heat input. Instead, they only capped natural gas input on an annual basis in order to keep emission from gas combustion (and only gas combustion) to under the Prevention of Significant Deterioration significant emission rates (40 TPY). *See* Permit 87-AJH-027 n.2 (limiting NOx emissions from natural gas to 39.9 TPY) (5/9/12 Petition, Exhibit G); Permit 88-AJH-101 (5/9/12 Petition, Exhibit H), Specific Permit Conditions at p. 3. Therefore, WDNR relied on the "maximum hourly heat

input" from the application and those hourly heat input values are enforceable, applicable requirements that must be in the Permit.

The Administrator must object because the Permit lacks applicable requirements. The heat rate assumed in the applications and permitting actions for the increased burner size and fuel change are enforceable limits.

C. If The Heat Rate Caps Are Not Enforceable, The Gas Burner Modifications Resulted In PSD/NNSR Applicability.

If the heat input limits assumed in WDNR's permitting actions for 87-AJH-027 and 88-AJH-101 are not enforceable limits (and therefore applicable requirements), then the boilers are modified and subject to PSD and NNSR applicable requirements. As Sierra Club's comments pointed out, (5/9/12 Petition, Ex. B at 5-7), there were no emission limits that capped the Pulliam plant's annual emissions so that post-project emissions did not exceed the threshold for NNSR/PSD applicability. Specifically, there were no emission limits that caped emissions at the baseline emission rate ("actual emissions" before the project) plus no more than 40 tons for SO_2 and NOx and plus no more than 25 tons for PM or 15 tons for PM10. 40 C.F.R. § 52.21(b)(23)(i). Rather, the limits were set only so that emissions from one fuel—natural gas—did not exceed the 40 TPY threshold for NOx. This is obviously insufficient to constitute a synthetic minor permit for purposes of NNSR/PSD, however, because a determination of whether a "major modification" occurs is based on the source (or, at the smallest, the unit) and not fuel by fuel. WDNR's own contemporaneous documents confirm this. *See* Letter from Donald Theiler, WDNR, to E.R. Mathews, WPSC (April 17, 1986) (5/9/12 Petition, Exhibit

K) (explaining that NNSR and PSD apply based on a plant-wide actual-to-potential analysis of emissions and calculating annual caps necessary to avoid NNSR/PSD).

Sierra Club's public comments noted that based on the applicable emission-increase test under the NNSR and PSD programs, the natural gas burner installations were major modifications that triggered applicable requirements that must be included in the Superseding Permit. *See* Comments (5/9/12 Petition, Ex. B) at 5-7. WDNR has determined that by adding the gas burners, the boilers were modified. *See e.g.*, 2011 PD (5/9/12 Petition, Ex. F) at 13-14. Therefore, whether that modification was a "major modification," triggering applicability of PSD/NNSR, depends on whether it resulted in a "significant net emissions increase." *In re Monroe Elec. Gen. Plant, Entergy Louisiana, Inc.*, Petition No. 6-99-2 (Adm'r, June 11, 1999); *see also In re Wis. Power and Light Columbia Generation Station*, Petition No. V-2008-1, Order Granting in Part and Denying in Part Petition for Objection to Permit at 6 (Adm'r Oct. 8, 2009).

Sierra Club's comments calculated the baseline emissions based on the average emissions[6] during the highest two years prior to the burner installation projects and compared it to the potential to emit after the project to determine whether an emission increase occurred. Comments (5/9/12 Petition, Ex. B) at 5-7. That analysis gives the facility the benefit of the doubt where it is unclear from the current record when construction commenced on the modification (i.e., using the

[6] Emissions are from the facility's annual emission reporting for the Wisconsin inventory. The reports were attached to the 5/9/12 Petition as Exhibits L through V for reference.

specific date that construction commenced would show a larger emission increase). There are also no "creditable" decreases anywhere in the record—that is, there is no evidence in any of the permit files of any decreases that occurred within the "contemporaneous" period and that were made enforceable. *See* 40 C.F.R. § 52.21(b)(3)(i)(b), (ii), (iii), (vi)(b). Therefore, the analysis does not include any creditable decreases in calculating the net emissions increase.

The analysis shows the following:

Particulate Matter					Maximum possible pre-change "actual emissions"[7]	PTE[8]	Creditable Decrease?	**Net Emission Increase**
Year	**1985**	**1986**	**1987**	**1988**				
B24 (Unit 5)	13.62	49.84	9.83	27.62	31.73	547.9	No	**516+ TPY**
B25 (Unit 6)	21.46	46.59	62.9	70.27	66.5	750.5	No	**714+ TPY**
B26 (Unit 7)	192.76	546.05	282.67	326.23	415	854	No	**438+ TPY**
B27 (Unit 8)	76.55	974.28	106.67	112.22	540.5	1493	No	**952+TPY**

[7] Giving WPSC the benefit of the doubt and using the highest 2-year average during the period 1985 through 1988 because it is unclear based on the current record when construction actually commenced.

[8] Conservatively assumed, based on DNR's calculations in 2011 PD Appx A and B (New Potential (lb/hr)) multiplied by 8760 hours/year. Note that it appears the facility later exceeded the DNR's assumed maximum heat input, so the real potential to emit is much higher. Using these PTE values favors WPSC for this demonstration, but still shows significant increases.

Sulfur Dioxide					Maximum possible pre-change "actual emissions"[9]	PTE[10]	Creditable Decrease?	Net Emission Increase
Year	**1985**	**1986**	**1987**	**1988**				
B24 (Unit 5)	1917.38	2223.03	1188.79	3568.14	2379	8335	No	**5956+TPY**
B25 (Unit 6)	1762.96	2807.88	4885.26	5314.58	5100	12658	No	**7558+TPY**
B26 (Unit 7)	6835.81	7610.73	9324.37	10062.51	9694	14027	No	**4333+TPY**
B27 (Unit 8)	10445.74	12275.18	14301.68	14908.42	14605	25907	No	**11302+TPY**

Nitrogen Oxides					Maximum possible pre-change "actual emissions"[11]	PTE[12]	Creditable Decrease?	Net Emission Increase
Year	**1985**	**1986**	**1987**	**1988**				
B24 (Unit 5)	448.89	556.75	265.61	711.6	503	1587	No	**1084+TPY**
B25 (Unit 6)	412.73	703.23	985.22	1100.65	1043	2275	No	**1232+ TPY**
B26 (Unit 7)	1600.36	1906.09	1901.82	2257.62	2080	2950	No	**870+ TPY**
B27 (Unit 8)	2445.49	3074.28	2873.47	2995.38	2974	4983	No	**2009+ TPY**

As Sierra Club's comments noted, and the tables above demonstrate, the projects resulted in a significant net emissions increase under the appropriate emission increase test. Sierra Club Comments (5/9/12 Petition, Ex. B) at 5; 40

[9] Giving WPSC the benefit of the doubt and using the highest 2-year average during the period 1985 through 1988 because it is unclear based on the current record when construction actually commenced.

[10] Conservatively assumed, based on DNR's calculations in 2011 PD Appx A and B (New Potential (lb/hr)) multiplied by 8760 hours/year. Note that it appears the facility exceeded the DNR's assumed maximum heat input, so the real potential to emit is much higher. Using these PTE values favors WPSC for this demonstration, but still shows significant increases.

[11] Giving WPSC the benefit of the doubt and using the highest 2-year average during the period 1985 through 1988 because it is unclear based on the current record when construction actually commenced.

[12] Conservatively assumed, based on DNR's calculations in 2011 PD (5/9/12 Petition, Ex. F) Appx A and B (New Potential (lb/hr)) multiplied by 8760 hours/year. Note that it appears the facility exceeded the DNR's assumed maximum heat input, so the real potential to emit is much higher. Using these PTE values favors WPSC for this demonstration, but still shows significant increases.

C.F.R. § 52.21(b)(23)(i) ("significant" is 25 tons of PM, 40 tons of SO_2, and 40 tons of NOx); Wis. Admin. Code § NR 408.02(32) (same under Wisconsin's NNSR program).

In WDNR's response to comments, the agency asserts that PSD applicability is not "germane" to the permit action. Response to Comments (5/9/12 Petition, Ex. D) at 7-8, 10. However, this is inconsistent with WDNR's Preliminary Determination document issued in support of the draft permit, which specifically discusses applicability of PSD and NNSR. *See* 2011 PD (5/9/12 Petition, Ex. F) at 16. Moreover, WDNR and U.S. EPA must reopen the permit if any material error exists in the permit—which means that even if NNSR/PSD applicability was not germane to WDNR's draft permit analysis, correction of the permit to include NNSR and PSD requirements would be required.. 42 U.S.C. § 7661d(e) and 40 CFR §§ 70.7(g) and 70.8. Nonetheless, apparently recognizing that NNSR/PSD applicability is, in fact, "germane" to its decision, WDNR purports to address Sierra Club's comments. WDNR agreed that the burner replacement projects were "non-exempt physical change[s]," and that if NNSR or PSD applies, additional requirements (like Best Available Control Technology or BACT limits for PSD) would apply. Response to Comments (5/9/12 Petition, Ex. D) at 8, 10. However, WDNR refused to include NNSR/PSD applicable requirements in the Permit, as required by law, *see Entergy*, supra, based on WDNR's incorrect assumption that there was no emissions increase. *Id.*

1) The WEPCO caselaw does not apply to projects that are not like-kind replacements.

WDNR's dismisses Sierra Club's analysis of emission increases and concludes that "based on the available information," the project would not lead to additional use of the boiler or increased emissions. WDNR's decision is premised on its incorrect interpretation of the Seventh Circuit's *WEPCO* decision. Response to Comments (5/9/12 Petition, Ex. D) at 8 ("In the WEPCO decision, the court stated that WDNR needs to make a more reasonable projection of future emission for utility boilers... there is no reason to think the court would have viewed the program, as applied to utility boilers, differently than it did in the later WEPCO decision."), 10 (same). WDNR's interpretation of the *WEPCO* case fails to recognize the important distinction in that case between like-kind and non-like-kind modifications.

The CAA's definition of "modification" does not define how to calculate increases in emissions. *New York v. EPA,* 413 F.3d 3, 22 (D.C. Cir. 2005) ("*New York I*"). Therefore, the applicable definitions were developed through EPA rules. In response to the decision in *Alabama Power Co. v. Costle,* 636 F.2d 323 (D.C. Cir. 1979), the EPA revised its PSD regulations in 1980 and defined an emission increase, for purposes of determining when PSD applies to changes at existing sources, as "any increase in actual emissions from a particular physical change or change in method of operation." 45 Fed. Reg. at 52,735. Under that definition, determining whether a physical or operational change constitutes a "major

modification" requires a comparison of the "actual emissions," before and after the project. 40 C.F.R. § 52.21(b)(3)(i)(a) (1980-2002).

Under the original PSD regulations promulgated by EPA in 1980, and which applied to the Pulliam plant during the period at issue here, "actual emissions" were defined as:

> [T]he actual rate of emissions of a pollutant from an emissions unit, as determined in accordance with paragraphs (ii) – (iv) below.
>
> (ii) In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the unit actually emitted the pollutant during a two-year period which preced[]es the particular date and which is representative of normal source operations... calculated using the unit's actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period.
>
> (iii) The Administrator may presume that source-specific allowable emissions for the unit are equivalent to the actual emissions of the unit.
>
> (iv) For any emissions unit which has not begun normal operations on the particular date, actual emissions shall equal the potential to emit of the unit on that date.

45 Fed. Reg. at 52,737 (promulgating 40 C.F.R. § 52.21(b)(21) (1980)).

Thus, under 40 C.F.R. § 52.21(b)(21)(ii), *pre-project* emissions are determined based on the two years of emissions data preceding the modification. However, *post-project* emissions, by definition, do not exist when the determination of PSD applicability must be made: before the project. This requires some form of

regulatory presumption or projection of future emissions. EPA's definition of post-project "actual emissions" contained such a presumption in 40 C.F.R. 52.21(b)(21)(iii) and (iv) (1980). EPA made clear that a pollution source undergoing a non-routine modification will rarely be considered to have "begun normal operations," triggering the potential-to-emit definition of "actual emissions" for post-project emissions in 40 C.F.R. § 52.21(b)(21). EPA explained that, unless exempt as "routine," changes at a facility are presumed to alter the facility sufficiently such that a modified plant cannot be said to have "begun normal operations":

> [U]nder the current regulations, changes to a unit at a major stationary source that are non-routine or not subject to one of the other major source [PSD] exemptions are deemed to be of such significance that pre-change emissions for the affected units should not be relied on in projecting post-change emissions. For such units, 'normal operations' are deemed not to have begun following the change, and are treated like new units. Put another way, the regulatory provision for units which have 'not begun normal operations' reflects an initial presumption that a unit that has undergone a non-routine physical or operational change will operate at its full capacity year-round.

63 Fed. Reg. 39,857, 39,858 (July 24, 1998); *see also* 56 Fed. Reg. 27,630, 27,633 (June 14, 1991) (explaining that the use of potential emissions is appropriate as a proxy because the pollution source's future emissions are "difficult to predict"). Thus, because the pre-change emissions are not reliable in predicting future emissions after a major modification, "the source owner must quantify the amount of the proposed emissions increase. This amount will generally be the potential to

emit of the new or modified unit." 45 Fed. Reg. at 52,677. That is, implicit in the "potential to emit" test is the presumption that a modification "results in" an increase up to the unit's full capacity, unless the unit owner accepts enforceable emission limits.[13] As the EPA explained:

> The regulations initially presume that such units will operate year-round at full capacity, but a source owner is free to overcome the presumption by agreeing to limit its potential to emit to any level desired through enforceable restrictions on operations or the use of pollution controls. For example, if limiting the potential to emit results in an insignificant change in emissions...

Letter from Francis X. Lyons, EPA, to Henry Nickel, Counsel for Detroit Edison Co., Enclosure at 18 n.14 (May 23, 2000) ("Detroit Edison Letter"). Therefore, while the actual-to-potential test for NNSR/PSD applicability contains a rebuttable assumption about future operations and emissions,[14] at bottom, it is still a projection of the post-change emissions. 63 Fed. Reg. at 39,858 ("The term 'actual-to-potential' is somewhat of a misnomer, because in practice this methodology involves a determination of future actual emissions to the atmosphere."). The "actual-to-potential" test was upheld by the First Circuit Court of Appeals as a reasonable interpretation of the regulations and consistent with their intent, especially because future emissions are difficult to predict. *Puerto Rican Cement*

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[13] Even if a plant undergoing a non-routine change could be deemed to have nevertheless "begun normal operations," the only applicable definition for its post-project "actual emissions" under § 52.21(b)(21) is subsection (iii), which provides that EPA can use the plant's "allowable emissions" as its post-project "actual emissions." This is the functional equivalent to the actual-to-potential test.

[14] A source owner may rebut the initial presumption that the unit will operate at its full potential "by agreeing to limit its [potential to emit] through enforceable restrictions." 63 Fed. Reg. at 39,858.

Co. Inc. v. EPA, 889 F.2d 292, 296-99 (1st Cir. 1989) (citing the 1980 preamble and holding that "EPA's application of its [actual-to-potential] regulation to the facts of this case complies with the expressed intent of the regulation's writers.").

In 1990, the Seventh Circuit issued an opinion in the *WEPCO* case that rejected the application of the "actual-to-potential" test for certain projects the court deemed to be "like-kind replacements." *WEPCO,* 893 F.2d at 916-18. Instead of the actual-to-potential test, the *WEPCO* court suggested a projection of future operations that did not contain an implicit assumption that operations would increase up to the permitted levels, but instead used a lower projection of future operating hours and emission rates, based on past operations, for "like-kind replacements." *Id.*

Critical to the *WEPCO* court's analysis—but what WDNR's Response to Comments failed to recognize—is the fact that the projects in the *WEPCO* case were "like-kind" replacements. The relevant regulatory standard is the phrase "begun normal operations." *WEPCO*, 893 F.2d at 917. Only units undergoing "like-kind replacements" can be said to have "begun normal operation" before the modification and therefore avoid the actual-to-potential analysis. In fact, the *WEPCO* court's entire analysis was premised on its equating of units undergoing only "like-kind replacements" with units that had "begun normal operation." *Id.* at 917-18; *see also U.S. v. Murphy Oil USA*, 143 F.Supp.2d 1054, 1103-04 (W.D. Wis. 2001) (holding that the WEPCO case only applies to "like-kind replacements"); *U.S. v. Westvaco Corp.*, 2010 U.S. Dist. LEXIS 112222 (D.Md., Sept. 1, 2010) (same).

2) The burner upgrade and replacement projects were not "like-kind."

WDNR ignored the limited applicability of the *WEPCO* decision to "like-kind replacements." Here, it is clear that installing new burners that burn a different fuel and are two or more times the size of the burners they are replacing is not a "like-kind replacement." A "like-kind replacement" is one that "does not change "the design, nor the function" of a facility. *WEPCO*, 893 F.2d at 908; *Murphy Oil*, 143 F.Supp.2d at 1103-04 (defining "like-kind replacements" as "replacing deteriorated generating systems... with similar new equipment without changing the original design of the systems," but excluding changes that increase capacity or making changes to the original equipment design (emphasis added)).[15]

There is no question that the burner replacement projects at issue were not "like-kind replacements"—they involved changing the design to not only burn a new fuel that was not previously burned, but also significantly increase the burner size compared to the oil burners that were previously in the boilers. The oil burners in units 5 and 6 (B24 and B25) were 62.1 mmbtu/hour and 58 mmbtu/hour, respectively, while the replacement natural gas burners were rated at 228 mmbtu/hour, each. 2011 PD at pp. 12-13 (Ex. F). The oil burners in units 7 and 8

[15] EPA has interpreted "begun normal operations" to also include replacements that are exempt from the definition of "major modification" because they are *de minimis*, such as routine maintenance projects. 63 Fed. Reg. 39,857, 39,858 (July 24, 1998) (interpreting "begun normal operation" to mean that the facility has not undergone a non-exempt (i.e., not "routine maintenance") change); *In re Monroe Elec. Gen. Plant*, Petition No. 6-99-2, Order at 15 n. 15 (EPA Adm'r, June 11, 1999) (64 Fed. Reg. 44009 (Aug. 12, 1999)) ("begun normal operations" excludes units "which have undertaken a non-routine physical or operational change"). There is no assertion by the permittee or WDNR here (and no basis for any such assertion) that the projects to install larger burners were exempt from the definition of a modification (i.e., they are not routine repair or replacements).

(B26 and B27) were 113.9 mmbtu/hour and 110 mmbtu/hour, respectively, and the replacement natural gas burners were 228 mmbtu/hour, each. *Id.* at 12-15. This is obviously a change from the plant's original design. It is also not an exempt (routine maintenance) project. Furthermore, EPA has previously concluded that installing burners and burning natural gas in a boiler that previously did not burn that fuel is a change subject to the actual-to-potential test for emission increases. *See* Letter from Gerald A. Emison, EPA OAQPS, to Morton Sterling, Detroit Edison Co. (Jan. 18, 1990) ("Where, as here, the source has not yet begun operations firing natural gas, 'actual emissions' after the change to natural gas firing are deemed to be the source's 'potential to emit' for that fuel [see 40 CFR 52.21(b)(21)(iv)] . . . . The fact that current annual 'allowable emissions' for the Greenwood Plant when firing oil may greatly exceed future allowable (or potential) emissions when firing natural gas is not relevant for PSD applicability purposes.").[16] In short, the burner expansion and replacement project was not "like-kind," so the actual-to-potential test and not the projected-actual emission test applies. As set forth in Sierra Club's comments, (5/9/12 Petition, Ex. B) at 5-6, and above, under that test, the projects triggered requirements under NNSR and PSD that must be included in the Permit. WDNR's failure to do so requires that the Administrator object.

3) WDNR's conclusion that emissions would not increase is unsupported by any analysis or the permit record.

Even if the *WEPCO* case's projected-actual emission test applied, WDNR has not conducted that analysis. Rather, WDNR's Response to Comments makes an

[16] Available at http://www.epa.gov/region7/air/nsr/nsrmemos/majormod.pdf.

unsupported conclusory assertion that it is not aware of anything showing that emissions would increase. 5/9/12 Petition, Ex. D at pp. 8, 10. The permit record here, however, contains a projection showing that emissions will, in fact, increase on an annual basis. *See* Air Permit Review Calculation Sheet, A.J. Hubbard (July 23, 1993) (5/9/12 Petition, Exhibit Y) (projecting an emission increase of 151.8 tons of NOx per year if heat rate is not capped).[17] That analysis contains its own errors, since after correctly projecting annual emission increases due to increased usage, it does not cap annual emissions below the history baseline plus "significant increase" rate of 40 tons per year. *Id.* However, despite this error, the record shows that WDNR did expect the natural gas burners to increase utilization and emissions on an annual basis. In any event, the applicable test for non-like-kind replacements is the actual-to-potential test and there is no dispute that under that test, NNSR/PSD was triggered.

For the foregoing reasons, the heat input represented by the applicant for permits 87-AJH-027 and 88-AJH-101 were and continue to be enforceable applicable requirements that must be included in the permit. Because they were not included, the Administrator must object. Moreover, if the heat input limits are not enforceable requirements, nothing in 87-AJH-027 or 88-AJH-101 was sufficient to avoid applicability of PSD and NNSR because by installing the larger burners without requiring an off-setting reduction in coal heat input resulted in significant

[17] This analysis was in support of Permit 88-AJH-101A, which relaxed limits imposed by 88-AJH-101. Pursuant to 40 C.F.R. § 52.21 and Wis. Admin. Code § NR 405.16(2) and NR 408.10(4), the relaxation of those limits required the Department to re-determine applicability based on the initial gas burner installations.

net emission increases. Therefore, if the Administrator determines that the heat input limits are not enforceable, the Administrator must object because the permit lacks PSD and NNSR applicable requirements.

II. THE PERMIT'S PARTICULATE MATTER SURROGATE MONITORING FAILS TO SATISFY THE REQUIREMENTS OF PART 70, WHICH REQUIRES MONITORING THE PROVIDES DATA SUFFICIENT TO DETERMINE COMPLIANCE.

The Administrator has objected to a number of Title V permits issued by the WDNR for failing to include adequate monitoring, especially for particulate matter, where there are no continuous monitors for particulate emissions. *See e.g.*, 2010 Order (Pulliam); *In re Alliant Energy- WPL Edgewater Generating Station*, Petition No. V-2009-02, Order Granting in Part and Denying in Part Petition for Objection to Permit at 6-10 (EPA Adm'r, Aug. 17, 2010); *In re We Energies Oak Creek Power Plant*, Order Responding to the Petitioner's Request That The Administrator Object at 15-16 (EPA Adm'r, July 12, 2009). The current Permit at issue in this Petition is a revision of a permit that the Administrator previously objected to because the permit did not include adequate monitoring:

> EPA's part 70 monitoring rules (40 C.F.R. §§ 70.6(a)(3)(i)(A) and B() and 70.6(c)(1)) are designed to satisfy the statutory requirement that "[e]ach permit issued under [title V] shall set forth... monitoring... requirements to assure compliance." Section 504(c) of the Act, 42 U.S.C. § 7661c(c). As a general matter, authorities must take three steps to satisfy the monitoring requirements in party 70 regulations. First, under 40 C.F.R. § 70.6(a)(3)(i)(A), permitting authorities must ensure that monitoring requirements contained in applicable requirements are properly incorporated into the title V permit. Second, if the applicable requirement contains no periodic monitoring, permitting authorities

> must add "periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit." 40 C.F.R. § 70.6(a)(3)(i)(B). Third, if there is some periodic monitoring in the applicable requirement, but the monitoring is not sufficient to assure compliance with permit terms and conditions, permitting authorities must supplement monitoring to assure such compliance. 40 C.F.R. § 70.6(c)(1). In all cases, the rationale for the selected monitoring requirements must be clear and documented in the permit record. 40 C.F.R. § 70.7(a)(5).
>
> ...
>
> WDNR must explain how the permit provides adequate monitoring or modify the permit as necessary to ensure that it contains monitoring sufficient to assure compliance with the PM limits in the permit for the boilers.

2010 Order at 10-11.

In the Preliminary Determination document for the Permit (5/9/12 Petition, Ex. F), WDNR adopted a correlation between opacity emissions "as indicators of compliance [with PM limits] for the facility's boilers." 2011 PD (5/9/12 Petition, Ex. F) at 25. Specifically, from a stack test submitted by the permittee, WDNR determined the opacity emission rate that "correlated with a particulate matter emission rate that is 95% of the 0.1 lb/mmbtu emission limit." *Id.* Those opacity rates are as follows:

Stack and Boiler	Opacity level correlating with 0.095 lb/mmbtu emission rate (95% of emission limit)
S12, B24	24%
S12, B25	20%
S13, B26	17%
S14, B27	19%

Id. WDNR established these opacity correlations based on a 1-hour averaging period. *Id.* WDNR further added another sub-set of the opacity surrogacy analysis. Because the boilers for units 5 (B24) and 6 (B25) share a common flue and opacity monitor, WDNR identified the number of ESP TR-sets in service as a "secondary indicator" of the unit's emissions in order to assign an opacity range exceedance to the correct unit on the shared flue and monitor. *Id.* at 25-26.

Sierra Club's comments pointed out that WDNR's references to the Continuous Assurance Monitoring (CAM) rule and to emission "excursions" in the same discussion as monitoring pursuant to 40 C.F.R. § 70.6(a)(3)(i)(B) and (c)(1) had the potential to cause confusion. 5/9/12 Petition, Ex. B at 8-9. As Sierra Club's comments pointed out, Part 70 monitoring must provide data representative of the source's compliance with the underlying permit limits, 40 C.F.R. § 70.6(a)(3)(i)(B), (c)(1), whereas CAM indicator ranges and "excursion" levels are set to ensure that controls are operating, but are not necessarily based on values that represent compliance. 5/9/12 Petition, Ex. B at 8-9; see also 62 Fed. Reg. at 54,918-19, 54,926. Put another way, CAM plans' "excursion" indicator ranges, alone, are not necessarily sufficient monitoring to satisfy Part 70 because the Part 64 CAM indicator ranges are not required to be, and may not be, correlated to emission rates sufficient to determine whether emissions are below or above the permit's numeric emission limits. *Compare* 40 C.F.R. § 70.6(a)(3)(i)(B) (requiring monitoring that "yield[s] reliable data... representative of the source's compliance with the permit") and (c)(1) (requiring monitoring and reporting to "assure compliance with the terms

and conditions of the permit") *with* 62 Fed. Reg. at 54,907 (noting that Part 64 ranges may be set at emission rates too far below the applicable limit for the range to allow a "firm inference" about compliance), 54,919 (CAM indicator range does not necessarily provide data to show that operation outside the range shows non-compliance with the limit). Unless the monitoring range being used for Part 70 monitoring purposes provided data that are representative of "compliance with the permit," it does not satisfy Part 70 requirements. Nor does it meet the Wisconsin State Implementation Plan's requirement that the facility submit monitoring results, including "sufficient data for the [WDNR] to determine whether the source is in compliance with the applicable requirements to which the monitoring relates." Wis. Admin. Code § 439.03(1)(b).[18] That is, it is not enough for the source to merely submit data indicative of control device performance, rather the data must allow a conclusion about whether the source is complying with applicable requirements.

Furthermore, caselaw on the use of monitoring one pollutant as a surrogate for another pollutant's compliance with emission limits confirms that it is only reasonable (and therefore lawful) to do so where: (1) the limited pollutant is invariably present when the monitored pollutant is present; (2) the technology that captures the monitored pollutant indiscriminately captures the limited pollutant; and (3) no other inputs or factors would decrease the limited pollutant without also

[18] The responsible official must also certify under oath whether the facility was in compliance or not, and must promptly report deviations. 40 C.F.R. § 70.6(a)(3)(iii)(A), (B). If a surrogate range is not sufficiently correlated to a numeric emission rate-- allowing it to be compared to the numeric emission limits—the monitoring does not allow the responsible official to rely on the surrogate monitoring as the basis for a compliance certification or to satisfy the obligation to promptly report all deviations.

limiting the monitored pollutant (or vice versa). *Nat'l Lime Assoc. v. EPA*, 233 F.3d 625, 639 (D.C.Cir. 2000); *see also Sierra Club v. EPA*, 353 F.3d 976, 984 (D.C.Cir. 2004). While Petitioner believes that opacity can meet this standard as a surrogate for PM, in the case of the permit at issue in this petition, WDNR contends that opacity cannot be used to directly equate to PM emission rates—and therefore comparison to the applicable PM limit to assess compliance or detect violations. Based on that contention, WDNR has no basis to then conclude that opacity surrogacy meets the minimum requirements for Part 70 monitoring. Specifically, based on WDNR's contention that opacity rates are affected by factors other than PM emission rates, opacity would fail the third criteria in the *National Lime Association* case. *Id.* (requiring EPA to ensure that fuel switches or "other inputs" do not impact a surrogacy analysis because "[the monitored pollutant] might not be an appropriate surrogate for [the limited pollutant] if switching fuels would decrease [the limited pollutant] emissions without causing a corresponding reduction in [the monitored pollutant] emissions.").

Moreover, EPA has already interpreted Part 70 to require an explicit correlation in the permit between a surrogate monitoring range and an emission rate sufficient to determine directly from the surrogate whether emissions are complying or violating the numeric emission limit. In fact, EPA has required that the surrogate range be established and made enforceable in the permit. In objecting to a permit for a Florida plant that, like the Pulliam permit at issue here,

used opacity as a surrogate but failed to establish an enforceable opacity rate equivalent to the enforceable PM emission rate, EPA stated:

> While the permit does include parametric monitoring of emission unit and control equipment operations in the O & M plans for these units... the parametric monitoring scheme that has been specified is not adequate. The parameters to be monitored and the frequency of monitoring have been specified in the permit, but the parameters have not been set as enforceable limits. In order to make the parametric monitoring conditions enforceable, a correlation needs to be developed between the control equipment parameter(s) to be monitored and the pollutant emission levels. The source needs to provide an adequate demonstration (historical data, performance test, etc.) to support the approach used. In addition, an acceptable performance range for each parameter that is to be monitored should be established.

In the Matter of Tampa Electric Co., F.J. Gannon Station, Objection to Proposed Part 70 Operating Permit No. 0570040-002-AV (Sept. 8, 2000) (emphasis added); *see also In the Matter of the Huntley Generating Station*, Order Objecting to Operating Permit No. II-2002-01 at 21-22 (July 31, 2003) ("the title V permit must include a specific opacity limit [in the PM limit sections of the permit] that would correlate to the PM limit [in the permit]."). Therefore, EPA has been explicit that if parameter ranges are used, as they are in the permit at issue here, the permit must identify the upper and/or lower end of the parameter range that corresponds to compliance with the underlying limit. *See e.g. In re Dunkirk Power LLC*, Order at p. 20 (EPA Adm'r July 31, 2003) (holding that operating outside of the parameter range constitutes a violation of the permit); *In re Oxy Vinyls* (EPA Adm'r Feb 1, 2001); *In*

re Huntly Generating Station, supra, Order at 21-22; *In the Matter of Midwest Generation, LLC, Waukegan Generation Station*, Order at p. 20 (EPA Adm'r, September 22, 2005) (requiring that opacity used as a surrogate for PM to satisfy Part 70 monitoring requirements must "include a correlation between th[ose] measurements and compliance with the PM emission limitations.") In fact, EPA has required that the correlation be set so that it provides direct evidence of compliance or non-compliance with the permit. *In re Dunkirk Power LLC*, Petition No. II-2002-02, Order at 19-20 (Adm'r, July 31, 2003) ("Once operating ranges have been established for the ESP operating parameters, operating the ESP outside of any of these ranges would constitute a violation of the title V permit." (emphasis added)).

Despite this established interpretation by EPA, WDNR's response to comments asserts that, while there is "good evidence of a correlation between opacity and particulate matter," opacity monitoring results outside of the established correlated range "do not by themselves indicate violation of an emission limit." Response to Comments (5/9/12 Petition, Ex. D) at 11. WDNR then notes that there are occasions when opacity exceeded the established range, but stack testing results are below the permit limit—so that the opacity range is not actually indicative of compliance with the permit limit. *Id.* ("An examination of the data used to determine the indicator ranges shows that there were some test runs where the average opacity was greater than the chosen indicator range, but particulate matter emissions were less than the emission limit.") WDNR's interpretation of the Part 70 monitoring requirements—that surrogate monitoring need not provide data

sufficient to determine if the underlying limit is being violated—is untenable and inconsistent with the regulations and EPA's interpretations. *See e.g., In re F.J. Gannon Station*, supra; *In re Huntley*, supra; *In re Dunkirk*, supra; *In re Waukegan*, supra. Surrogate opacity monitoring cannot satisfy the requirements of 40 C.F.R. § 70.6(a)(3)(i)(B) and (c)(1), which require data representative of compliance with the permit limits, if opacity is not actually indicative of compliance with the permit limits as WDNR contends. Response to Comments (5/9/12 Petition, Ex. D) at 11. WDNR must either set the opacity surrogate range to be enforceable, as prior EPA orders have required, or WDNR must develop monitoring that is sufficient to yield data representative of compliance with the permit limits.

Here, WDNR contends that opacity ranges are not "by themselves" sufficient to determine that emissions are above, or below, the permit limits. *Id.* If this is true, then the ranges "by themselves" do not satisfy Part 70.[19] To the extent that opacity ranges combined with other continuous surrogate monitoring (i.e., not "by

[19] WDNR also asserts that the opacity data cannot be used to determine compliance with the instantaneous particulate matter limits over a time period less than an hour. Response to Comments (5/9/12 Petition, Ex. D) at 12. Thus, the opacity surrogate also does not yield data sufficient to assure compliance with the instantaneous limits in the permit. *See In re Petition for Review of Construction Permit No. 02-RV-032-R2 and Operation Permit No. 405031990-P20 issued to Wisconsin Public Service Corporation for the Pulliam Facility*, Case No. IH-09-05, Findings of Fact, Conclusions of Law and Order (Wis.Div.Hrg.App. Dec. 7, 2011) (5/9/12 Petition, Exhibit AA) (holding that the PM limits in the Pulliam permit do not contain averaging periods, that is, are instantaneous). It is widely recognized that monitoring that does not correlate to the applicable time frame in an emission limit is of no value in determining continuous compliance with the limit. *E.g., Sierra Club v. EPA*, 536 F.3d 673, 675 (D.C.Cir. 2008) (giving example of annual monitoring to assess compliance with an hourly limit as being insufficient); *U.S. v. Cinergy Corp.*, 618 F.Supp.2d 942, 970 (S.D.Ind. 2009) (infrequent stack testing does not account for, or provide evidence of, compliance during times when stack testing is not being performed).

themselves") could be sufficient, WDNR has not identified what that other continuous monitoring is.[20]

Therefore, because WDNR asserts that the opacity ranges it is relying upon to satisfy Part 70 monitoring requirements for PM are not capable of providing sufficient data "by themselves" to determine whether the underlying PM emission limit in the Permit is met, and no other monitoring is provided to ensure continuous compliance, the monitoring fails to comply with Part 70 and the Act and the Administrator must object. Moreover, because WDNR refuses to establish an enforceable opacity range in the permit, as required by numerous prior Administrator orders, *In re F.J. Gannon Station*, supra; *In re Huntley*, supra; *In re Dunkirk*, supra; *In re Waukegan*, supra, the Administrator must object for that reason too.

CONCLUSION

For the foregoing reasons, the permit fails to meet federal requirements. These deficiencies require that the Administrator object to issuance of the permit pursuant to 40 C.F.R. § 70.8(c)(1). Additionally, each of the reasons for objection, above, also constitutes a basis for mandatory reopening and revision of the permit pursuant to 42 U.S.C. § 7661d(e), 40 C.F.R. § 70.7(g) and 70.8. Each of the issues raised by Sierra Club in this petition result in a deficient permit. Most of the deficiencies result in unlawful emissions of air pollutants that negatively affect the

[20] At most, WDNR provide "secondary" ESP TR-set monitoring, but that monitoring is only used to assign opacity range excursions to the appropriate units when multiple units share an opacity monitoring. Response to Comments (5/9/12 Petition, Ex. D) at 11-12, 13.

health and welfare of Sierra Club members. Others result in illegal monitoring and reporting that make it difficult for Sierra Club to monitor and enforce air pollution limits applicable to the plant.

Dated this 2nd day of October, 2012.

Attorneys for Sierra Club
McGILLIVRAY WESTERBERG & BENDER LLC

David C. Bender
Pamela R. McGillivray

CERTIFICATE OF SERVICE

STATE OF WISCONSIN)
) ss
COUNTY OF DANE)

I make this statement under oath and based on personal knowledge. On this day I caused to be served upon the following persons a copy of Sierra Club's Petition to the United States Environmental Protection Agency regarding the Pulliam Power Plant, Permit No. 405031990-P21 (proposed by WDNR on July 3, 2012), as well as a CD containing: Exhibit 1, the proposed permit; Sierra Club's May 9, 2012 Petition regarding Pulliam; and Exhibits A through CC to the May 9, 2012 Petition.

To Administrator Jackson via electronic mail (without attachments) to:
jackson.lisa@epa.gov
And via Certified Mail, Return Receipt Requested to:

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Dated: October 2, 2012.

Pamela R. McGillivray

Signed and sworn to before me
This 2nd day of October, 2012.

Notary Public, State of Wisconsin
My commission is permanent.

JAMES N. SAUL
NOTARY PUBLIC
STATE OF WISCONSIN