UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

SEP 7 2010

REPLY TO THE ATTENTION OF:
A-18J

John Melby
Director
Bureau of Air Management
Wisconsin Department of Natural Resources
101 South Webster Street
P.O. Box 7921
Madison, Wisconsin 53707

Re: Order responding to the petition on the Alliant Energy Wisconsin Power and Light (WPL) – Edgewater Generating Station Title V renewal permit

Dear Mr. Melby:

Enclosed is a copy of the U.S. Environmental Protection Agency Order responding to the petition submitted by the Sierra Club requesting that the Administrator object to the Title V permit issued by the Wisconsin Department of Natural Resources (WDNR) for the Alliant Energy WPL - Edgewater Generating Station. The Order, which the Administrator issued on August 17, 2010, grants the petition in part. By this letter, EPA transmits the Order to you. WDNR shall have 90 days from the date of this Order to resolve the objections identified within and to terminate, modify, or revoke and reissue the Edgewater Generating Station Title V permit accordingly, consistent with the procedures in 40 C.F.R. §§ 70.7(g)(4) and 70.8(d).

Please let us know if we can provide assistance to you to help respond to the Order. If you have any questions or would like to discuss this matter further, please feel free to contact me, or your staff may contact Pamela Blakley, Chief, Air Permits Section, at (312) 886-4447.

Sincerely,

Cheryl L. Newton
Director
Air and Radiation Division

Enclosure

Recycled/Recyclable • Printed with Vegetable Oil Based Inks on 100% Recycled Paper (50% Postconsumer)

BEFORE THE ADMINISTRATOR
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

IN THE MATTER OF:	)	ORDER RESPONDING TO
	)	PETITIONER'S REQUEST
ALLIANT ENERGY – WPL	)	THAT THE ADMINISTRATOR
EDGEWATER GENERATING	)	OBJECT TO ISSUANCE OF
STATION	)	STATE OPERATING PERMIT
	)	
Permit No. 460033090-P20	)	
Issued by the Wisconsin	)	Petition Number V-2009-02
Department of Natural Resources	)	

ORDER GRANTING IN PART AND DENYING IN PART PETITION FOR OBJECTION TO PERMIT

INTRODUCTION

On August 18, 2009, pursuant to its authority under the state of Wisconsin's implementing statute, Wis. Stat. Ann. 285.62-285.64, and regulations, Wis. Admin. Code NR 407, title V of the Clean Air Act (Act), 42 U.S.C. §§ 7661-7661f, and the U.S. Environmental Protection Agency's (EPA) implementing regulations at 40 C.F.R. Part 70, the Wisconsin Department of Natural Resources (WDNR) issued a proposed title V renewal operating permit to the Alliant Energy – Wisconsin Power and Light Edgewater Generating Station power plant (Edgewater). The Edgewater plant is an electric generation facility that consists of two boilers that burn coal and tire-derived fuel, one coal-fired boiler and other emission units.

On October 3, 2009, David C. Bender of McGillivray Westerberg & Bender LLC submitted to EPA on behalf of the Sierra Club (Petitioner) a petition requesting that EPA object to issuance of the Edgewater title V permit pursuant to section 505(b)(2) of the Act and 40 C.F.R. § 70.8(d). Petitioner alleges that (1) the permit omits maximum gross generation, heat input and fuel usage limits that were contained in preconstruction permit applications; (2) the permit lacks sufficient particulate matter (PM) monitoring and WDNR has not provided sufficient explanation for the permit's monitoring; and (3) certain plans referenced in the permit were relied upon by WDNR in issuing the permit and must be available for public notice and comment. WDNR issued a final permit to the source on October 23, 2009.[1]

EPA has reviewed Petitioner's allegations pursuant to the standard set forth in section 505(b)(2) of the Act, which requires the Administrator to issue an objection if the petitioner demonstrates to the Administrator that the permit is not in compliance with the applicable requirements of the Act. *See also* 40 C.F.R. § 70.8(d); *New York Public Interest Research Group v. Whitman*, 321 F.3d 316, 333 n.11 (2d Cir. 2003).

[1] References to specific provisions of the permit contained herein are to the final permit.

EPA objects to a permit that has already been issued, EPA or the permitting authority will modify, terminate, or revoke and reissue the permit consistent with the procedures set forth in 40 C.F.R. §§ 70.7(g)(4), (5)(i) - (ii) and 70.8(d).

BACKGROUND

Alliant Energy submitted to WDNR on July 22, 2008, an application to renew the title V permit for the Edgewater plant. WDNR published the public notice of the draft title V renewal permit on May 21, 2009, and issued the proposed title V renewal permit on August 18, 2009. During the public comment period, WDNR received comments on the draft permit, including comments from Petitioner. EPA did not object to the permit. WDNR issued the final permit on October 23, 2009.

Under the statutory timeframe in section 505(b)(2) of the Act, December 1, 2009, was the deadline to file the petition request that EPA object to the issuance of the final Edgewater permit. Petitioner submitted its petition to object to the issuance of the Edgewater permit to EPA on October 3, 2009. Accordingly, EPA finds that Petitioner timely filed its petition.

ISSUES RAISED BY THE PETITIONER

I. Heat Input, Fuel Usage, and Maximum Gross Generation Limits

Petitioner alleges that heat input, fuel usage, maximum gross generation rates, and hourly emission rates are "applicable requirements" that were required to be included in the Edgewater title V permit issued by WDNR. Petitioner cites a Prevention of Significant Deterioration (PSD) construction permit issued by EPA to the Edgewater facility in 1977 (later revised in 1984) and a WDNR construction permit issued in 1979. The 1977 PSD permit (EPA-5-77-A-3) approved the construction of a 400 megawatt (MW) coal-fired boiler identified as Unit 5. Petitioner cites language in Paragraph 8 of the PSD permit which states:

> Approval to construct a 400 MW electrical generating unit is hereby granted to the Wisconsin Power and Light Company subject to the conditions expressed herein and consistent with the materials and data included in the application filed by the Company. Any departure from the conditions of this approval or the terms expressed in WP&L's application must receive the prior written authorization of U.S. EPA.

Petition at 2-3.

Petitioner also cites the PSD permit application submitted by the facility in 1976. The PSD permit application contains data and information about the facility, including the units proposed for construction and other existing units, the respective size of the units, the amount of power output, and the estimated fuel usage. Further, Petitioner points to an air quality impact modeling analysis, which was submitted by the facility along with the PSD permit application, that contains certain parameters used as the basis for the air quality analysis. The air quality analysis identifies the maximum gross generation rates, heat inputs, stack parameters, gas exit

WDNR Response to Comments # A.3.

Petitioner asserts that despite agreeing with its comments, WDNR failed to revise the draft permit to include these applicable requirements. Thus, Petitioner asserts that the title V permit is deficient. Petition at 13.

EPA Response

Petitioner raised this issue in its public comments on the draft permit. In its response, WDNR agreed that the conditions identified by Petitioner are conditions in a construction permit that do not expire and "remain in effect and enforceable today." WDNR failed, however, to revise the permit in any way to reflect Petitioner's comment and did not explain why it did not do so. I therefore grant the petition on this issue.

The 1977 PSD permit imposes enforceable lb/MMBtu emission limitations and states that approval to construct "is hereby granted to the Wisconsin Power and Light Company subject to the conditions expressed herein and consistent with the materials and data included in the application filed by the Company." PSD Permit EPA-5-77-A-3 § 8. The permit states further that "[t]he air quality analysis relies heavily on the combination of stack parameters, control devices, and emission limitations and any change in those factors could change the results of the air quality analysis. Therefore, design changes in Unit 5 must receive the prior written authorization of U.S. EPA." *Id.* § 7(c).[3] The permit was issued based on the information presented by the applicant at the time of permit issuance. The heat input rate along with other factors appear to have been relied upon when performing the air quality analysis and assessing the project's impacts to air quality. Therefore, it appears that the integrity of the permit's lb/MMBtu emission limitations may depend upon the heat input and other factors used to assess air quality at the time of permit issuance.

Based upon its response to comments, WDNR apparently agrees that the conditions cited by Petitioner are part of a construction permit and that "conditions in a construction permit do not expire and continue to be enforceable unless revised or eliminated through a construction permitting review process." However, WDNR's reference to permit "conditions" is ambiguous as to whether it includes information such as heat input and coal usage rates contained in the permit application rather than the permit. In any event, WDNR failed to make any corresponding changes to the title V permit or to explain why it did not do so.

Furthermore, the record is unclear as to the heat input status of the three boilers. For example, in 1976 the applicant presented information regarding the Units 3, 4, and 5 boilers as 816, 2953 and 4200 MMBtu/hr boilers, respectively. While EPA issued a PSD permit in 1977 and an amended permit in 1984, and WDNR issued a construction permit in 1979, EPA is not aware of any permits that addressed any change to the heat input values originally presented in the 1976 application. However, the current title V permits describe Units 3, 4, and 5 boilers as 844, 3529, and 4366 MMBtu/hr boilers, respectively.

[3] The 1984 PSD permit contains the same wording in §§ 7(c) and 8, except for a comma after "herein" in § 8.

deficiency that EPA recently found in another title V permit. Petition at 16-17, quoting *In re WE Energies Oak Creek Power Plant* (June 12, 2009), at 15-16.

Second, Petitioner argues that WDNR failed to explain how monitoring once every eight hours ensures continuous compliance with a PM limit expressed as instantaneous (i.e., no averaging time). Petition at 16.

Third, Petitioner argues that when a parametric monitoring scheme is used, there must be a determination by WDNR that the specific parameter ranges ensure compliance. Where compliance depends on continuous effectiveness of the ESP device, and parameters are reliable indicators of when the ESP is working correctly and achieving adequate emission reductions, the permit must identify the parameter operating ranges in which WDNR is sure that the plant is complying with the applicable limits. Petitioner argues that EPA has rejected the notion that merely watching and recording control device parameters ensures compliance with an emission limit. Petition at 17-18, citing *In re Tampa Electric Co., F.J. Gannon Station* (Sept. 8, 2000) and *In re Huntley Generating Station* (July 31, 2003).

Petitioner raised this issue in its comments on the draft Edgewater title V permit, and WDNR responded as follows:

> The Department has placed the standard monitoring for particulate matter sources controlled by an ESP in the permit. The Department has been using these monitoring methods in both operation and construction permits since the mid-1990's. Recently USEPA has objected to another Title V permit (i.e., WE Energies Oak Creek facility) with similar monitoring requirements. The Department is presently evaluating USEPA's objection to that permit and is planning to address this issue over the next few months with USEPA and stakeholders. Since this issue is much larger than a single permit, the Department will retain the same monitoring requirements in the final proposed permit as were in the draft permit. Depending on the results of the Department's review of these requirements, changes may be made in the future to these permit conditions.

WDNR Response to Comments # A.6.

Petitioner maintains this response is inadequate and WDNR must establish monitoring in the permit now, not at some later date, and provide a sufficient explanation for that monitoring in the Statement of Basis. Petition at 24-25.

EPA's Response

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 in section 504(c) of the Act that "[e]ach permit issued under [title V] shall set forth . . . monitoring . . . requirements to assure compliance with the permit terms and conditions." 42 U.S.C. § 7661c(c). As a general matter, authorities must take three steps to satisfy the monitoring requirements in part 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

B. Monitoring of PM Emissions from Other Emission Sources

Petitioner argues that other emission sources at Edgewater also have deficient PM and visible emissions (VE) monitoring, specifically the coal unit rail car dumping system, the flyash handling system, and the coal pile storage and conveying system.[4]

To ensure compliance with the PM limits for the coal unit rail car dumping system, the Edgewater title V permit requires that the baghouse and dry fogger system that are part of this process "shall be operated and maintained in conformance with good engineering practices to minimize the possibility for the exceedance of any emission limitations." Permit § I.J.1.b. In addition, the pressure across the liquid inlet to the fogger system is to be monitored to ensure the nozzles are not plugged. Permit § I.J.1.b. The permittee is required to visually inspect the baghouse and record the status of its operations and record the pressure across the inlet to the dry fogger system once per day, per train. Permit § I.J.1.c. Petitioner maintains that it is unclear "whether [WDNR] concludes that the mere use of these controls always (under any conditions) results in compliance, or, more likely, whether these controls must achieve a minimum control efficiency to meet the pound-per-hour [PM] and opacity limits." Petition at 19. If minimum control efficiency is required, Petitioner argues that WDNR must require the source to implement "all necessary steps" to meet the minimum control and to also monitor those steps. Specific parameters must be established in the permit, according to Petitioner, and these parameters must be enforceable and monitored. Petition at 19-20.

With regard to the flyash handling system, the compliance demonstration method in the permit consists of a requirement that the baghouses "be operated and maintained in conformance with good engineering practices to minimize the possibility for the exceedance of any emission limitations." Permit § I.K.1.b.(1). The permittee is required to visually inspect the operation of the baghouses once every 24 hours and record the status of their operation. Permit § I.K.1.c.(1).

For the coal pile storage and conveying system, the PM limitation in the permit is to take "precautions" as set forth in the Wisconsin SIP to prevent PM from becoming airborne. Permit § I.M.1.a.(1). The compliance demonstration method in the permit is to "keep the records required by condition M.1.c.(1)." Permit condition I.M.1.c.(1) requires the permittee to "maintain records which demonstrate compliance with condition I.M.1.a.(1)."

Petitioner argues that the "same deficient monitoring" exists for these two material handling processes. Petitioner states that the permit requires the facility to keep and maintain records "which demonstrate compliance with condition I.M.1.a.(1)," but "there is no indication what records are sufficient to show compliance and, more importantly, how the mere keeping of records ensures compliance with the PM limits.... " Petition at 20.

Petitioner raised these issues with respect to these three emissions sources during the public comment period and WDNR responded as described above in our discussion of Issue II.A.

[4] The same compliance demonstration and monitoring requirements apply to both PM and VE limits for the three emissions sources.

In conjunction with its arguments that PM monitoring in the Edgewater permit is deficient, Petitioner maintains that EPA should order WDNR to require the use of continuous emission monitoring systems (CEMS) to monitor PM emissions. Petitioner states that PM CEMS provide a better indication of PM emissions than the measures currently required in the Edgewater permit and that CEMS "are the preferred method for determining compliance with PM limits" citing to 40 C.F.R. § 60.42. Petition at 21 n.7. Petitioner cites Plaintiffs' Proposed Findings of Fact (Remedy Phase) in *United States v. Cinergy Corp.*, No. 1:99-cv-01693-LJM-JMS (S.D. Ind.), as additional support for its argument. Petitioner raised this issue during the public comment period and WDNR responded as noted above in our discussion of Issue II.A.

EPA Response

The title V permit must contain sufficient monitoring to assure compliance with the terms and conditions of the permit. 40 C.F.R. § 70.6(c)(1); *see also* 40 C.F.R. § 70.6(a)(3)(i). While CEMS may be a preferred type of monitoring in some instances, it is not always required. As section 504(b) of the Act provides, "continuous emissions monitoring need not be required if alternative methods are available that provide sufficiently reliable and timely information for determining compliance." 42 U.S.C. § 7661c(b).

WDNR did not directly address Petitioner's comment that PM CEMS should be required to measure compliance with the PM limits of the permit. WDNR has been ordered, however, to explain how the Edgewater permit provides adequate monitoring or modify the permit accordingly to ensure that it contains monitoring sufficient to assure compliance with the PM limits for the boilers. *See* II.A. above. Petitioner has not identified an applicable requirement that compels the use of PM CEMS. Nor has Petitioner demonstrated that PM CEMS is the only monitoring that can assure compliance with the PM limit. I therefore deny the claim in the petition seeking an order to WDNR to require the use of PM CEMS.[5]

III: Whether Plans Referenced in the Permit Must Be Incorporated in the Permit and Made Available for Public Comment

Petitioner alleges that in the Edgewater title V permit WDNR made the same error regarding references to plans not contained in the permit that it committed in *WE Energies Oak Creek*. Petitioner cites four "plans" that it states WDNR references in the permit and "appears to rely on" to conclude that the Edgewater plant will comply with applicable requirements. These plans are:

- Startup and Shutdown Plan (SSP)
- Quality Control and Quality Assurance Plan (QCQAP)

[5] Petitioner raises one additional issue regarding PM monitoring. The petition states that WDNR has "inexplicably exempted the plant from operating the ESP devices during periods of startup and shutdown, despite the fact that the underlying, instantaneous, SIP limits on PM emissions apply at all times, including startup and shutdown." Petition at 22. Petitioner cites provisions of the proposed permit that exempted startup and shutdown periods from the requirement to operate the ESPs. *See* proposed permit §§ I.A.1.b(2), I.I.1.b(2). The final permit issued after the petition was submitted no longer contains those exemptions. *See* final permit §§ I.A.1.b.(2), I.I.1.b.(2) Thus, this issue is moot.

granting the petition, but on different grounds as explained below. Finally, EPA agrees that WDNR's response, which was essentially that it would review the issue and, depending on the results of its review, possibly change these permit conditions in the future, failed to provide a substantive response to Petitioner's comments. Thus, I grant the petition on this issue with respect to all four plans because the response to comments was inadequate.

SSP: The Edgewater permit provides that the permittee shall prepare a SSP for each of the boilers that "shall define normal start-up and shut-down procedures, including the normal duration of start-up and shut-down periods." Permit §§ I.A.2.b(4), I.I.2.b.(4). The permit appears to provide that specific permit limits for visible emissions do not apply when the combustion equipment is being started. Permit §§ I.A.2.a.(1), I.I.2.a.(1). In addition, the permit's limit for carbon monoxide is calculated over a 12-month average excluding startup and shutdown periods. Permit § I.I.8.a.(1).[6] Thus, the information in the SSP is necessary to determine the applicability of, or exemption from, specific permit limits. Because the SSP contains information needed to determine and impose these limits, it must be included in the permit application and the permit pursuant to 40 C.F.R. §§ 70.5(a)(2), (c), and 70.6(a)(1). Finally, as part of the permit application and permit, the plan must be available for review during the title V public comment process. 40 C.F.R. § 70.7(h)(2). For these reasons, I grant the petition on this issue as it pertains to the SSP.

QCQAP: The Edgewater permit requires the maintenance and operation of a continuous opacity monitoring system to demonstrate compliance with the VE limits in the permit applicable to the boilers. Permit §§ I.A.2.b.(1), I.I.2.b.(1). The facility is further required by the permit to "follow a quality control and quality assurance plan, as approved by [WDNR]." Permit §§ I.A.2.b.(3), I.I.2.b.(3). The permit cites the Wisconsin SIP NR 439.09(8) and NR 439.095(6) as authority for these requirements. NR 439.09(8) requires that "[t]he owner or operator of a continuous emissions monitoring system shall comply with the quality control and quality assurance plan submitted by the owner or operator of the source and approved by the department." NR 439.095(6) requires, in part, that "[t]he owner or operator of the source shall submit a quality control and quality assurance plan for approval by the department. The monitor shall follow the plan, as approved by the department."

The content of the QCQAP is information necessary to impose these applicable requirements of the Wisconsin SIP, i.e., the facility must submit and comply with an approved QCQAP. Therefore, the QCQAP must be in the Edgewater title V permit application pursuant to 40 C.F.R. 70.5(c). Furthermore, because the Wisconsin SIP requires compliance with a WDNR-approved QCQAP, the QCQAP must be included in the permit pursuant to 40 C.F.R. 70.6(a)(1). Moreover, because the WDNR-approved QCQAP must be included in the permit application as well as the permit, it must be available for review during the title V public comment process. 40 CFR § 70.7(h)(2). For these reasons, I grant the petition on this issue as it pertains to the QCQAP.

ESP inspection plan: The Edgewater permit requires the facility to "prepare and follow a plan for periodic internal inspections of each [ESP] to ensure that the control equipment is

[6] The permit also contains an hourly CO limit that applies at all times (including periods of startup and shutdown) and a requirement to operate a continuous emission monitor for CO. Permit § I.I.8.a.(2-3).

CONCLUSION

For the reasons set forth above, and pursuant to section 505(b)(2) of the Clean Air Act and 40 C.F.R. § 70.8(d), I hereby grant in part and deny in part the petition filed by David C. Bender on behalf of the Sierra Club. WDNR shall have 90 days from the receipt of this Order to resolve the objections identified above and to terminate, modify, or revoke and reissue the Edgewater title V renewal permit accordingly.

Dated: AUG 17 2010

Lisa P. Jackson
Administrator