BEFORE THE ADMINISTRATOR

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

In the Matter of an Air Pollution Control Operating Permit for Madison Gas & Electric Company's Blount Street Generation Station in Dane County, Wisconsin.

Source I.D. 113004430

Permit 113004430-P10

Proposed by the Wisconsin Department of Natural Resources on February 9, 2007.

PETITION REQUESTING THAT THE ADMINISTRATOR OBJECT TO ISSUANCE OF THE PROPOSED RENEWAL TITLE V OPERATING PERMIT FOR THE BLOUNT STREET GENERATING STATION IN MADISON, DANE COUNTY, WISCONSIN

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Date: March 30, 2007

Pursuant to Clean Air Act § 505(b)(2) and 40 CFR § 70.8(d), the Sierra Club and Clean Wisconsin hereby petition the Administrator ("the Administrator") of the United States Environmental Protection Agency ("U.S. EPA") to object to proposed renewal Title V Operating Permit for the Blount Street Generating Station in Madison, Dane County, Wisconsin, Permit 113004430-P10 ("Permit"). The Permit was proposed to U.S. EPA by the Wisconsin Department of Natural Resources ("DNR") on February 9, 2007, more than 45 days ago. A copy of the Permit is attached as Exhibit A. Sierra Club and Clean Wisconsin provided written comments to the DNR, as well as oral comments during a public hearing, regarding the draft permit. A true and accurate copy of Sierra Club and Clean Wisconsin's comments is attached at Exhibit B. DNR responded to Sierra Club and Clean Wisconsin's comments through a memorandum, a copy of which is attached as Exhibit C.

This petition is filed within sixty days following the end of U.S. EPA's 45-day review period as required by Clean Air Act ("CAA") § 505(b)(2). The Administrator must grant or deny this petition within sixty days after it is filed. If the Administrator determines that the Permit does not comply with the requirements of the CAA, or fails to include any "applicable requirement," he 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 Prevention of Significant Deterioration ("PSD") requirements, 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; *In re Monroe Electric Generating Plant*, Petition No. 6-99-2 at p. 2 (EPA Adm'r 1999).

I. The Administrator Must Object Because The Permit Contains a Permit Shield Despite the Fact That the WDNR Did Not Review The Applicable Requirements and Fact To Determine That The Requirements Did Not Apply.

The Permit contains a permit shield that states:

> **Permit Shield** Unless precluded by the Administrator of the USEPA, compliance with all emission limitations in this operation permit is considered to be compliance with all emission limitations established under ss. 285.01 to 285.87, Wis. Stats., and emission limitations under the federal clean air act, that are applicable to the source if the permit includes the applicable limitation or if the Department determines that the emission limitations do not apply. The following emission limitations were reviewed in the analysis and preliminary determination and were determined not to apply to this stationary source:
>
> ...
>
> **Boilers B23, B25 and B26** are not subject to the new source performance standards for industrial-commercial-institutional steam generating unit (greater than 100 mmBtu/hr) of s. NR 440.205, Wis. Adm. Code and their federal NSPS counterparts found in 40 C.F.R. Part 60 because they were installed prior to June 19, 1984 and not modified or reconstructed after that date. Boilers B23, B25 and B26 are not subject to the new source performance standards for fossil fuel fired steam generators of ss. NR 440.19 and NR 440.20, Wis. Adm. Code because they were constructed before August 17, 1971and not modified or reconstructed after that date...
>
> **Boilers B27, B28 and B29** are not subject to the new source performance standards for fossil fuel fired steam generators of ss. NR 440.19 and NR 440.20, Wis. Adm. Code because they were constructed before August 17, 1971 and not

> modified or reconstructed after that date. Boilers B27, B28 and B29 are exempt from the requirements of s. NR 445.05, Wis. Adm. Code, pursuant to ss. NR 445.05(1)(c)1., (3)(c)1., (4)(c)1., and (4r)(b)1., Wis. Adm. Code. when firing only group I virgin fossil fuels without any alternate fuels. Boilers B27, B28 and B29 are exempt from the requirements of s. NR 445.05, Wis. Adm. Code, whenever firing only group 2 virgin fossil fuels without any alternate fuels and the emissions are vented from stacks (S14, S15 and S16 respectively) which each have a height approved by the Department, pursuant to ss. NR 445.05(1)(c)2., (3)(c)2., (4)(c)2., and (4r)(b)2., Wis. Adm. Code.
>
> ...
>
> **Boilers B20 through B22** are subject to National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters. Although these units are subject to the NESHAPS for industrial boilers, the Federal Register issued September 13, 2004 does not have specific limitations for new or existing gas or liquid fuel fired units that need to be included in the renewal permit....

Exhibit A, pp. iii-iv. Sierra Club and Clean Wisconsin commented that it was improper for DNR to issue a permit shield that purports to shield the source from New Source Performance Standards (Wis. Admin. Code §§ NR 440.19, 440.20, and 440.205) unless the DNR reviewed all historic changes and projects at the facility and determined that they did not constitute modifications. Further, Sierra Club and Clean Wisconsin commented that a permit shield is not appropriate for standards that actually apply to the source, such as the National Emission Standard for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers ("NESHAP"), but that do not include specific numeric emission limits. Specifically, the comments stated:

> DNR makes no determination in the Analysis and Preliminary Determination ("PD") or public record for the Draft Title V Permit whether the boilers at Blount have been "modified" since 1971, 1978, or 1984. Even if it did, DNR has no basis for such a determination because it has not reviewed all historic physical changes to the facility to determine if any resulted in an emission rate increase. *See* Wis. Admin. Code § NR 440.14(1). Therefore, DNR must either remove the permit shield from the permit or conduct a thorough investigation into all historic physical and operational changes at the facility and determine that none resulted in an emission rate increase. Additionally, the permit shield appears to shield boilers B21 and B22 from the NESHAP for industrial boilers. Draft Permit p. iv. This should be removed. The NESHAP does apply to the boilers, even if the NESHAP does not contain permit limits at this time.

Exhibit B, pp. 2-3.

DNR's response to this comment reaffirms that the DNR did not, in fact, determine that the boilers at issue were not modified since 1971, 1978, or 1984 (the applicable dates for the New Source Performance Standards in NR 440.19, 440.20 and 440.205). Rather, DNR relied on the applicant's generic certification that it is in compliance with "applicable requirements." Specifically, DNR states: "*Response*: The company certifies that its renewal application is true, accurate and complete. The Department relies on this certification for its determination of how the permit shield applies to the company." This is an inadequate basis for a permit shield as to New Source Performance Standards. Moreover, it fails to address Sierra Club and Clean Wisconsin's comment that a permit shield is inappropriate for the NESHAP.

A permit shield in a Title V permit, providing that compliance with the permit is compliance with applicable requirements not included in the permit, is only

appropriate when "the permitting authority in acting on the permit application makes a determination relating to the permittee that such other provisions (which shall be referred to in such determination) are not applicable..." 42 U.S.C. § 7661c(f)(2); 40 C.F.R. § 70.6(f); *see also* Wis. Stat. § 285.62(10)(b); Wis. Admin. Code § NR 407.09(5)(a). U.S. EPA has clarified that "It is important to understand, however, that only those requirements that have been identified *and reviewed* by the permitting authority can be shielded." U.S. EPA, Air Pollution Training Institute, SI:460 Introduction to Permitting, Lesson 5, available at http://yosemite1.epa.gov/oaqps/EOGtrain.nsf/fabbfcfe2fc93dac85256afe00483cc4/eaf2f7914f5f142e85256c0d006bd1e7/$FILE/Lesson%205%20Rcv%20Log%20Appl_F_.pdf.

Moreover, the statement of basis and permit record for the Title V permit should contain the basis, including the factual findings supporting such basis, for the DNR's implicit determination that there have been no modifications to the facility. 40 C.F.R. § 70.7(a)(5). The statement of basis "should include a discussion of the decision-making that went into the development of the title V permit and provide the permitting authority, the public, and U.S. EPA a record of the applicability and technical issues surrounding the issuance of the permit." *In re Onyx Environmental Services* at 14 (U.S. EPA Adm'r, February 1, 2006). DNR's statement of basis lacked any reference to the factual basis for the permit shield. Reliance on the company's generic certification that its application is "accurate and complete" is simply an insufficient basis for finding that a permit shield is appropriate. Additionally, DNR's approach—allowing an applicant's certification that its application is accurate to be the sole basis for a permit shield—

inappropriately puts the applicant in control of whether it wishes a requirement to apply and whether EPA, the state, or citizens can bring an enforcement action.

Lastly, the DNR offers no explanation, nor response, to Sierra Club and Clean Wisconsin's comment that a permit shield cannot apply to a requirement that does apply, but lacks numeric limits. *See* Ex. A at iv ("Boilers B20 through B22 are subject to National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters... [but,] the Federal Register issued September 13, 2004 does not have specific limitations for new or existing gas or liquid fuel fired units that need to be included in the renewal permit..." (emphasis added)). As noted above, a permit shield is only appropriate when "the permitting authority in acting on the permit application makes a determination relating to the permittee that such other provisions... are not applicable..." 42 U.S.C. § 7661c(f)(2) (emphasis added); 40 C.F.R. § 70.6(f); *see also* Wis. Stat. § 285.62(10)(b); Wis. Admin. Code § NR 407.09(5)(a).

For these reasons, the permit shield included in the Permit is in error and results in a deficient permit that could be[1] interpreted to prevent enforcement against Madison Gas & Electric for violations of the New Source Performance Standards and NESHAP. Additionally, the permit shield is unsupported by sufficient factual findings by DNR or in the statement of basis. The Administrator must object to the permit.

[1] There are several reasons why a court should not apply the permit shield. These reasons include the DNR's lack of basis, the fact that Madison Gas & Electric may have falsified its certification that the application was accurate and complete, and that the shield only applies to the limits in Wis. Admin. Code ch. NR 440, and not to EPA's standards in 40 C.F.R. pt. 60.

II. The Permit Illegally Limits Evidence That Can Be Used By Citizens and U.S. EPA To Demonstrate Noncompliance.

Sierra Club and Clean Wisconsin commented to the DNR that numerous provisions in the Permit could be interpreted as limiting the credible evidence that could be used to demonstrate violations of the Permit. Ex. B at 3-6. The DNR agreed that "[t]he credible evidence rule gives EPA and citizens the ability to sue based on evidence they have, independent of the language in the permit." Ex. C at 2. However, inexplicably, the DNR did not modify the Permit. Rather, DNR responded that

> the sentence "Notwithstanding the compliance determination methods which the owner or operator of a source is authorized to use under ch. NR 439, Wis. Adm. Code, the Department may use any relevant information or appropriate method to determine a source's compliance with applicable emission limitations" on Page 3 of the Draft Permit adequately addresses the comments about the credible evidence rule.

Ex. C at p. 2 (emphasis added). As Sierra Club and Clean Wisconsin noted in their comments:

> There are two problems with this apparent attempt to comply with the credible evidence rule:
>
> 1) The sentence refers to the compliance demonstration methods in Wis. Admin. Code ch. 439, rather than those in the permit. It appears that DNR meant to say that "notwithstanding the provisions of this permit, any relevant information may be used to enforce applicable permit limits." In other words, the provision allowing DNR to use any evidence despite NR 439 does not cure the provisions in the permit, itself, which restrict the evidence that can be used to prove violations.
>
> 2) The provision states that "the Department may use any relevant information..." By only noting the

> DNR's ability to use any relevant evidence, the Draft Permit implies that U.S. EPA and citizens do not have the same ability. The credible evidence rule does not allow the DNR to limit EPA or citizens' ability to use any credible evidence. Therefore, the carve-out for DNR enforcement authority fails to cure the credible evidence problems in the permit.

Ex. B at p. 6. In short, DNR's statement that notwithstanding the monitoring required in chapter NR 439 of the Wisconsin Administrative Code, the DNR can use other evidence does not address either of Sierra Club and Clean Wisconsin's comments. Unless the permit specifies that notwithstanding the provisions of the permit, any credible evidence can be used, the permit is subject to misinterpretation that violates the Credible Evidence Rule.

Furthermore, DNR failed to address the comment that the permit omits EPA and citizens from the statement that "any credible evidence" can be used. Instead, it merely states that "the Department [meaning DNR] may use any relevant information." By omission this suggests that the Credible Evidence Rule applies only to DNR, and not to EPA and citizens. This violates the Clean Air Act. 42 U.S.C. § 7413 (providing that EPA can bring an enforcement action "on the basis *of any information available* to the Administrator." (emphasis added)); *see also* 42 U.S.C. § 7604; *Sierra Club v. Pub. Serv. Co. of Colorado, Inc.*, 894 F.Supp. 1455 (D.Colo. 1995) (The Clean Air Act does not limit the evidence that citizen suit plaintiffs can use to demonstrate noncompliance); *Credible Evidence Revisions*, 62 Fed. Reg. 8314 (Feb. 24, 1997); U.S. EPA Region 9 *Title V Permit Review Guidelines*, Sept. 9 1999, p. III-46. Therefore, the Administrator must object to the

permit and require the DNR to amend the preamble to allow the use of any credible evidence by U.S. EPA and citizen suit plaintiffs, in addition to DNR.

III. The Permit Lacks Sufficient Monitoring.

Part 70 and Wisconsin's Part 70 program require a Title V permit to include sufficient monitoring to provide sufficient data showing compliance with all relevant limits during all relevant time periods. 40 C.F.R. § 70.6(a)(3)(B) ("Each permit shall contain... periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit..."); Wis. Admin. Code §§ NR 407.09(1)(c)(1)b. (monitoring must ensure compliance with reliable data for the relevant time period), NR 407.09(4)(a)1. (all operating permits shall contain compliance requirements "sufficient to assure compliance with the terms and conditions of the permit").

> The "periodic monitoring rule," 40 C.F.R. § 70.6(a)(3)(i)(B), requires that "[w]here the applicable requirement does not require periodic testing or instrumental or noninstrumental monitoring (which may consist of record keeping designed to serve as monitoring), [each title V permit must contain] periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit. . . Such monitoring requirements shall assure use of terms, test methods, units, averaging periods, and other statistical conventions consistent with the applicable requirement.

In the Matter of Midwest Generation, LLC, Waukegan Generation Station, Order Responding to Petitioner's Request That the Administrator Object to Issuance of a State Operating Permit at p. 19 (September 22, 2005) (hereinafter "*Waukegan*") (*citing* 69 Fed. Reg. at 3202, 3204 (Jan. 22, 2004)); *see also, Appalachian Power Co. v. EPA*, 208 F.3d 1015 (D.C. Cir.

2000); Carraway, Candace, U.S. EPA Office of Air Quality Planning and Standards, *How Do I Review Each Applicable Requirement for Adequate Periodic Monitoring*? at p. 2 (June 2000).

The Permit contains particulate matter emission limits based on the requirements in Wis. Admin. Code § NR 415.06. *See* Ex. A, p. 6, § I.A.1.a.(1), p. 8, § I.B.1.a.(1), p. 9, § I.C.1.a.(1), p. 18 § I.E.1.a.(1), p. 41 § I.J.1.a.(1), p. 43 § I.K.1.a.(1). The limits in NR 415.06 do not include monitoring requirements. Therefore, the periodic monitoring rule applies and DNR must include sufficient monitoring in the permit to ensure sufficient data to demonstrate compliance during all applicable times. 40 C.F.R. §§ 70.6(a)(3)(i)(B); Wis. Admin. Code § NR 407.09(1)(c)1.b.; *Waukegan* at p. 19. However, the Permit contains no such monitoring.

As Sierra Club and Clean Wisconsin pointed out in their permit comments, the Permit requires parametric monitoring of a cyclone collector and Electrostatic Precipitator ("ESP") as the method to demonstrate compliance with the permit limits for PM applicable to boilers B27, B28 and B29. Ex. B at 8; *see e.g.*, Ex. A at §§ I.C.1.b.(2), I.E.1.(b)(2). However, the Draft Permit fails to "include a correlation between these measurements and compliance with the PM emission limitations," as required by the periodic monitoring rule. *Waukegan*, supra, p. 20; *see also In Re Port Hudson Operation Georgia Pacific*, Petition No. 6-03-01, at pages 37-40 (May 9, 2003) ("Georgia Pacific"); *In Re Doe Run Company Buick Mill and Mine*, Petition No. VII-1999-001, at pages 24-25 (July 31, 2002) ("Doe Run"). Rather, the permit merely requires that parameters be monitored: as if compliance is self-evident based on parametric readings. It is not. As

EPA has determined in numerous decisions, parametric monitoring used to comply with the periodic monitoring rule must include a provision in the permit that specifies the upper and/or lower range for each parameter that has been shown to correlate to compliance with the PM limit through stack testing. *Waukegan* at pp. 20-21; *In the Matter of Dunkirk Power LLC*, Order Objecting to Proposed Operating Permit No. II-2002-02 at 20 (Adm'r July 31, 2003) ("Once the operating ranges have been established for the ESP operating parameters [based on emission stack tests], operating the ESP outside of any of these ranges would constitute a violation of the title V permit."); *In the Matter of Oxy Vinyls, LP, Louisville, Kentucky*, Objection to Proposed Part 70 Operating Permit No. 212-99-TV (Feb. 1, 2001) ("The permit must specify the parametric range or procedure used to establish that range, as well as the frequency for re-evaluating the range."). For example, EPA determined that a proposed Title V permit for Tampa Electric's F.J. Gannon Station was deficient because, like the Permit in this case, the Gannon permit failed to include a parameter range that correlates to an emission rate:

> 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 (Adm'r July 31, 2003) (same).

The Administrator must object to the Permit because it lacks an enforceable parametric range for particulate matter emissions. Rather than including such range, DNR incorrectly states: "There is no official or legal requirement that parametric values be placed in permits." As noted above, however, DNR is wrong. The periodic monitoring rule, and numerous prior EPA decisions regarding Title V permits clearly require either a parametric range be included in the permit, or a specific process for determining an enforceable parametric range be included in the permit. As a result of DNR's erroneous interpretation of law, the Permit is deficient because it lacks sufficient monitoring.

IV. The Permit Does Not Incorporate, and the Public Was Not Allowed to Review and Comment on the Continuous Assurance Monitoring Plan.

There is no dispute that the Blount Street power plant is subject to the Continuous Assurance Monitoring ("CAM") rule, 40 C.F.R. pt. 64. The plant is a major source that is required to obtain a Part 70 permit, it is subject to emission limits on (among other pollutants) particulate matter, it uses control devices to control particulate matter emissions, and has potential (pre-control) emissions of particulate matter greater than 100 tons per year. 40 C.F.R. § 64.2(a). Therefore, pursuant to the CAM rule, Madison Gas & Electric was required to submit a CAM plan "as part of the application

for the renewable of a part 70... permit." 40 C.F.R. § 64.5(a)(3). It did not do so. Nevertheless, DNR proposed the permit to EPA. In response to Sierra Club and Clean Wisconsin's comment requesting a CAM plan and requesting to be able to review and comment on the plan as part of the Title V process, DNR stated:

> The draft permit requires that the facility submit a compliance assurance monitoring plan for Boilers 7, 8 and 9, for DNR approval, within 180 days of the issuance of this permit renewal. For permitting purposes, the Department recommends that the CAM plan be an attachment or addendum to the permit rather than being incorporated into the permit. This would allow for easier revisions should the need arise. The CAM rule does not require a permitting authority to develop CAM plans if a permit applicant fails to provide an approvable CAM plan. However, the CAM rule requires a permitting authority to provide monitoring that satisfies part 70 requirements and a compliance schedule for providing an approvable CAM plan within 180 days. See section 40 CFR s. 64.6(e). Note that if an owner or operator fails to provide an approvable CAM plan within that 180 day compliance schedule, the owner or operator is not in compliance with 40 CFR part 64. See 40 CFR section 64.6(e)(3).

Ex. C at p. 2.

It appears that DNR misunderstands the requirements of the CAM rule. The provisions that DNR refers to in 40 C.F.R. § 64.6(e) allow a compliance schedule for the applicant to submit a CAM plan after the Title V permit is issued, but it only applies "[i]f the permitting authority disapproves the proposed monitoring..." 40 C.F.R. § 64.6(e). In other words, this provision presumes a CAM plan was submitted with the application, but disapproved by the permitting authority. The rule does not allow DNR

and the applicant to avoid the requirement to submit a CAM plan with the part 70 application entirely.

A complete part 70 permit application must include all "information required by any applicable requirement," which includes the CAM plan requirement. 40 C.F.R. §§ 70.5(c)(3)(vii) (requiring the application to include all information required by any applicable requirement), 70.2 (defining applicable requirement to include monitoring required by CAA §§ 114(a)(3) and 504(b). Most importantly, because the CAM plan is an "applicable requirement," it must be included in the permit or the permit cannot be issued. 40 C.F.R. §§ 70.6(a)(1) and (a)(3)(A) ("Each permit shall contain... All monitoring and analysis procedures or test methods required under applicable monitoring and testing requirements, *including part 64*...").

Furthermore, Madison Gas & Electric was also required to certify compliance with "all applicable requirements," including the requirement of enhanced monitoring such as the CAM rule. 40 C.F.R. § 70.5(c)(9). Clearly, since the application included no CAM plan, MG&E's certification was false.

Perhaps most importantly, the public was never able to review the CAM plan, as a required element of the application. 40 C.F.R. § 70.7(h)(2). Therefore, the Permit cannot be issued because the application and public participation requirements were met, which they were not in this case. 40 C.F.R. § 70.7(a)(1) ("A permit, permit modification, or renewal may be issued only if all of the following conditions have been met... The permitting authority has received a complete application [and]...the

permitting authority has complied with the requirements for public participation under paragraph (h)...").

The Administrator must object because the application did not include a CAM plan, the DNR never reviewed a CAM plan, the public was given no opportunity to review the CAM plan, and the permit does not incorporate the CAM plan for the facility. This results in a deficient permit because the Permit completely omits a critical monitoring requirement and because the public had no opportunity to comment on the sufficiency of the CAM plan.

V. The Permit Does Not Incorporate, and the Public Was Not Allowed To Review And Comment On The Startup, Shutdown, and Malfunction Plans and The Fugitive Dust Control Plans.

When issuing the Permit the DNR relied on the existence and presumed content of a "plan for periodic internal inspections" and "a plan for periodic internal inspection... include[ing] the frequency of the inspections and the items to be inspected." *See e.g.*, Ex. A § I.C.1.b.(4) and (5). However, these plans were not included in the materials available for public inspection, review, and comment. Nor were they included in the permit, or reviewed by DNR prior to issuing the permit. Instead, in response to public comments asking to be able to review and comment on these plans prior to permit issuance, the DNR responded:

> Section NR 439.11, Wis. Adm. Code contains the requirement to prepare a malfunction prevention and abatement plan. This requirement is a general permit condition for direct stationary sources and is located in Part II of all permits. The facility is required to prepare a plan in writing. The Department may order any owner or operator

> to submit the plan for review and approval. The Department may amend the plan if deemed necessary for malfunction prevention or the reduction of excess emissions during malfunctions. There is no requirement that the plan be included as part of the permit.

Ex. C at p. 2.

DNR misses the point. It is not NR 439.11 that requires the plans to be included in the permit, subject to public notice and comment, and DNR pre-permit review-- it is the Title V program which requires these procedures. Because DNR is relying on the inspection plan to ensure compliance with applicable requirements, the plan must be provided in the application. 40 C.F.R. § 70.5(a)(2) (a complete application must contain sufficient information to determine all applicable requirements), 70.5(c) (application cannot "omit information needed to determine the applicability of, or impose, any applicable requirement..."), 70.5(c)(3)(vi) (application must include any "work practice standards"). Moreover, the plans constitute a permit requirement because the source is required to comply with them. Therefore, the plan must be subject to public notice and comment. 40 C.F.R. § 70.7(h); *Waterkeeper Alliance v. EPA*, 399 F.3d 486, 503-04 (2nd Cir. 2005) (invalidating EPA regulation that allowed Nutrient Management Plans to be submitted after public comment and after a NPDES permit was issued); *In re RockGen Energy Center*, 8 E.A.D. at 553-54 (remanding permit requirement for a startup/shutdown plan that was not subject to public notice and review).

Even more disturbing is the fact that DNR is approving the Title V permit without reviewing the plans. DNR must review all relevant materials (including the inspection plan) when making the required finding that the proposed permit assures

compliance with all applicable requirements. 40 C.F.R. §§ 70.6(a)(1), 70.7(a)(iv); *see also Environmental Defense Center, Inc. v. EPA*, 344 F.3d 832, 855-56 (9th Cir.2003) ("[P]rograms that are designed by regulated parties must, in every instance, be subject to meaningful review by an appropriate regulating entity to ensure that each such program [complies with the relevant statutory standard]."); *In re RockGen Energy Center*, 8 E.A.D. 536, 553-54 (EAB 1999) (remanding DNR permit requirement for a startup/shutdown plan that was not reviewed by DNR before permit issuance). In this case DNR purports to rely on the plans to find that the source will comply with "all applicable requirements," but never actually reviewed the plans prior to proposing the Permit to EPA. This results in a deficient permit because there is no assurance that the plans are appropriate, complete, or adequate to ensure that the source complies with all applicable requirements. The Administrator must object.

VI. All Monitoring Data and Recordkeeping Must Be Submitted to DNR; It is Not Sufficient That the Monitoring Results Be Kept At the Source.

The Permit must include all "applicable requirements." 40 C.F.R. §§ 70.2 (defining applicable requirement to include requirements in the state SIP), 70.6(a)(3). One "applicable requirement" is Wis. Admin. Code § NR 439.03(1)(b), which expressly requires the source to "submit the results of monitoring required by the permit... no less often than every 6 months..." (emphasis added). However, the Permit omits this requirement; requiring the permittee to merely maintain monitoring results at the facility. *See e.g.*, Draft Permit § I.A.3.c.(2). The requirement to submit monitoring results is important to Sierra Club and Clean Wisconsin. Unless the permittee submits

monitoring results to the DNR, the results are not publicly available. This means that Sierra Club and Clean Wisconsin are unable to monitor the source's compliance or bring enforcement actions. *See e.g.*, U.S. EPA, *"Effective" Limits on Potential to Emit: Issues and Options*, Jan. 31, 1996 at p. 11.

Although the SIP provides that DNR may require sufficient summary reporting, it does not allow DNR to waive the requirement to submit monitoring records altogether. Wis. Admin. Code §§ NR 407.09(1)(c)3.a., NR 439.03(1)(a)(b). Even when the DNR allows "summary" reporting, the summary must "include sufficient data for the department to determine whether the source is in compliance with the applicable requirements..." *Id.* The Administrator must object.

VII. Conclusion

For the foregoing reasons, the permit fails to meet federal requirements in numerous ways. These deficiencies require that the Administrator object to issuance of the permit pursuant to 40 C.F.R. § 70.8(c)(1). Each of the issues raised by Sierra Club and Clean Wisconsin in this petition result in a deficient permit. Most of the deficiencies result in unlawful emissions of air pollutants that negatively affect the health and welfare of Sierra Club and Clean Wisconsin members. Others result in illegal monitoring and reporting that make it difficult for Sierra Club and Clean Wisconsin to monitor and enforce air pollution limits applicable to the Blount Street Generating Station.

Dated this 30th day of March, 2007.

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BEFORE THE ADMINISTRATOR

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

In the Matter of an Air Pollution Control Operating Permit for Madison Gas & Electric Company's Blount Street Generation Station in Dane County, Wisconsin.

Source I.D. 113004430

Permit 113004430-P10

Proposed by the Wisconsin Department of Natural Resources on February 9, 2007.

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 and Clean Wisconsin's Petition to the United States Environmental Protection Agency regarding the Blount Street Generating Station, via Certified Mail, Return Receipt Requested:

Stephen L. Johnson
US EPA Administrator
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

P. Scott Hassett
Wisconsin Dept. of Natural Resources Secretary

101 S Webster St
PO Box 7921
Madison, WI 53707-7921

Blount Street Generating Station
717 E. Main Street
Madison, WI 53701

Madison Gas & Electric Company
133 S. Blair St.
P.O. Box 1231
Madison, WI 53701-1231

Dated: March 30, 2007

Erik Schneider

Signed and sworn to before me
This 30th day of March, 2007.

Notary Public, State of Wisconsin
My commission is permanent.

PROPOSED AIR POLLUTION CONTROL OPERATION PERMIT RENEWAL

EI FACILITY NO. 113004430 PERMIT NO. 113004430-P10

TYPE: Part 70-Source Operation Permit

In compliance with the provisions of Chapter 285, Wis. Stats., and Chapters NR400 to NR499, Wis. Adm. Code,

Name of Source:	Madison Gas & Electric Co. Blount Street Generating Station
Street Address:	717 E Main Street Madison, Dane County, Wisconsin
Responsible Official, & Title:	Steven A. Schultz Executive Director – Energy Production

is authorized to operate an electric power generation station in conformity with the conditions herein.

THIS OPERATION PERMIT EXPIRES [s. NR 407.09(1)(b)1, Wis. Adm. Code]**DATE WILL BE INSERTED UPON PERMIT ISSUANCE**.

A renewal application must be submitted at least 6 months, but not more than 18 months, prior to this expiration date [ss. 285.66(3)(a), Wis. Stats. and NR 407.04(2), Wis. Adm. Code].

No permittee may continue operation of a source after the operation permit expires, unless the permittee submits a timely and complete application for renewal of the permit [ss.285.66(3), Wis. Stats. and NR 407.04(2), Wis. Adm. Code].

This authorization requires compliance by the permit holder with the emission limitations, monitoring requirements and other terms and conditions set forth in Parts I and II hereof.

Dated at Madison, Wisconsin, Draft.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
For the Secretary

By Draft
Thomas Roushar
Air Program Supervisor
South Central Region

Ex. A

Preamble

An Asterisk "*" throughout this document denotes legal authority, limitations and conditions which are not federally enforceable.

Concurrent Permit Actions Performed as Part of the Review and Issuance of Permit 113004430-P10:

Revised Operation Permits Issued in Conjunction with Permit 113004430-P10 Under ss. NR 407.11, 407.12, 407.13 and/or 407.14, Wis. Adm. Code: 113004430-P01.

Applicable provisions from the following permits, orders, etc., are adopted, under ss. 285.65(3), Wis. Stats., NR 406.11(1)(c) and (d), NR 407.09(2)(d) and NR 407.15(3) and (4), Wis. Adm. Code, by Permit 113004430-P10 which then becomes the primary enforceable document: Administrative Orders 1A-72-13-03, 1A-72-13-03A, IA-72-13-03B and Operation Permit 113004430-P01.

Stack and Process Index:

Boiler B20, Stack S14 -	**NG/Distillate Fuel Oil Boiler Rated at 175 mmBtu per hour - Installed 1964 (Acid Rain Unit 11)**
Boiler B21, Stack S11 -	**Natural Gas/Distillate Fuel Oil Boiler Rated at 112 mmBtu per hour - Installed 1968**
Boiler B22, Stack S11 -	**Natural Gas/Distillate Fuel Oil Boiler Rated at 112 mmBtu per hour - Installed 1968**
Boiler B23, Stack S12 -	**Natural Gas/Distillate Fuel Oil Boiler Rated at 300 mmBtu per hour - Installed 1968 (Acid Rain Unit 3)**
Boiler B25, Stack S13 -	**NG Boiler Rated at 268.8 mmBtu per hour - Installed 1938 (Acid Rain Unit 5)**
Boiler B26, Stack S13 -	**NG Boiler Rated at 275 mmBtu per hour - Installed 1943 (Acid Rain Unit 6)**
Boiler B27, Stack S14 -	**Natural Gas/Coal Boiler - Rated at 332 mmBtu/hr - Installed 1949 (Acid Rain Unit 7)**
Boiler B28, Stack S15 -	**Natural Gas/Coal Boiler - Rated at 544 mmBtu/hr - Installed 1957 (Acid Rain Unit 8)**
Boiler B29, Stack S16 -	**Natural Gas/Coal Boiler - Rated at 544 mmBtu/hr - Installed 1961 (Acid Rain Unit 9)**
Process P31, Stack S31 -	**Natural Gas/Propane Generator Rated at 1.2 MW Power Output, 18.0 mmBtu per Hour Heat Input - Installed 1969**
Process P32, Stack S32 -	**Alternate Fuel Receiving Building - Installed 1979**
Process P33, Stack S33 -	**Three Natural Gas Generators Total Rating of 787.5 kW Power Output, 11.8 mmBtu per Hour Heat Input - Installed 1987**
Process P34, Stack S34 -	**Emergency Diesel Generator rated at 600 kW- Installed 1999**
Process F01, Fugitive -	**Coal Thawing and Railcar and Truck Unloading - Installed Pre- 1961**
Process P01 Stack S01 -	**Coal Thawing Burners - Maximum Rated Heat Input Capacity 40.0 mmBtu/hr - Installed Pre- 1961**
Process F02, Fugitive -	**Outdoor Coal Storage and Coal Pile Maintenance - Installed Pre 1961**
Process F03, Fugitive -	**Coal Reclaim**
Process F05, Fugitive -	**Ash Silo No. 1 Unloading - Installed Pre-1961**
Process P60, Stack S60 -	**Ash Silo No. 2 Unloading - Installed Pre-1961**
Process P05, Stack S05 -	**Ash Transfer From Boiler House to Ash Silo No. 1 - Installed Pre-1961**
Process P06, Stack S06 -	**Ash Transfer From Boiler House to Ash Silo No. 2 - Installed Pre-1961**
Process F07, Fugitive -	**Facility Wide Solvent Use - Installed 1930**
Process F08, Fugitive -	**Vehicle Traffic Areas**
Process F09, Fugitive -	**Particulate Matter Fallout**

Insignificant Emissions Units:
Maintenance of Grounds, Equipment, and Buildings
Fuel Oil Storage Tanks (< 10,000 gal)
Stockpiled Contaminated Soils
Demineralization and Oxygen Scavenging of Water for Boilers
Purging of Natural Gas Lines
Boiler, Turbine, and HVAC System Maintenance
Pollution Control Equipment Maintenance
Internal Combustion Engines Used for Warehouse and Material Transfer
Fire Control Equipment
Janitorial Services
Office Activities
Convenience Water Heating
Convenience Space Heating (< 5 mil BTU/hr)
Boiler Pulverizer Coal Scale Exhaust Fans
Cold solvent parts cleaners less than 28" x 48"
Maintenance Shop Welding Hood
Maintenance Paint Booth
Laboratory Hood & Chemicals
Misc. Boiler & Turbine Steam Vents and Valves
CEMS Calibration Gases
Coal Dust Suppression Equipment and Chemicals
Combustion of Oil Soaked Adsorbents in Boilers 8 & 9
Power Transformers (< 50 ppm PCB oils)
Electric Substation Circuit Breakers, Capacity
500,000 gallon Fuel Oil Storage Tank
General Office Facility Space and Water Heating (each < 5.0 mmBTU/hour input)
General Print Shop and non Heatset Sheet Printing Operation (MG&E business only)
MG&E Vehicle Compressed Natural Gas Fueling System
Electric Turbine/Generator Set Oil Tank Vents and Vapor Extractors
Small storage piles of sand, gravel, soils and miscellaneous materials
Miscellaneous building HVAC and Exhaust vents
Plumbing vents
Acid and caustic storage tanks for boiler demineralization
Combustion of boiler cleaning wastes
Coal feeder exhaust fans
Generator hydrogen and carbon dioxide venting
Combustion of miscellaneous nonhazardous waste oil and petroleum soaked adsorbents generated on site.
20 KW natural gas fired emergency generator for the CEMS shelter

Permit Shield Unless precluded by the Administrator of the USEPA, compliance with all emission limitations in this operation permit is considered to be compliance with all emission limitations established under ss. 285.01 to 285.87, Wis. Stats., and emission limitations under the federal clean air act, that are applicable to the source if the permit includes the applicable limitation or if the Department determines that the emission limitations do not apply. The following emission limitations were reviewed in the analysis and preliminary determination and were determined not to apply to this stationary source:

Boilers B20, B21 and B22 are not subject to the new source performance standards for fossil fuel fired steam generators of ss. NR 440.19 and NR 440.20, Wis. Adm. Code and their federal NSPS counterparts found in 40 C.F.R. Part 60 because each of their heat input ratings are less than 250 mmBtu per hour and they were constructed before August 17, 1971 and not modified or reconstructed after that date. Boilers B20, B21 and B22 are not subject to the new source performance standards for industrial-commercial-institutional steam generating unit (greater than

100 mmBtu/hr) of s. NR 440.205, Wis. Adm. Code because they were installed prior to June 19, 1984. Boilers B20, B21 and B22 are exempt from the requirements of s. NR 445.05, Wis. Adm. Code, pursuant to ss. NR 445.05(1)(c)1., (3)(c)1., (4)(c)1., and (4r)(b)1., Wis. Adm. Code. because they burn only group I virgin fossil fuels

Boilers B23, B25 and B26 are not subject to the new source performance standards for industrial-commercial-institutional steam generating unit (greater than 100 mmBtu/hr) of s. NR 440.205, Wis. Adm. Code and their federal NSPS counterparts found in 40 C.F.R. Part 60 because they were installed prior to June 19, 1984 and not modified or reconstructed after that date. Boilers B23, B25 and B26 are not subject to the new source performance standards for fossil fuel fired steam generators of ss. NR 440.19 and NR 440.20, Wis. Adm. Code because they were constructed before August 17, 1971and not modified or reconstructed after that date. Boilers B23, B25 and B26 are exempt from the requirements of s. NR 445.05, Wis. Adm. Code, pursuant to ss. NR 445.05(1)(c)1., (3)(c)1., (4)(c)1., and (4r)(b)1., Wis. Adm. Code. because they burn only group I virgin fossil fuels

Boilers B27, B28 and B29 are not subject to the new source performance standards for fossil fuel fired steam generators of ss. NR 440.19 and NR 440.20, Wis. Adm. Code because they were constructed before August 17, 1971 and not modified or reconstructed after that date. Boilers B27, B28 and B29 are exempt from the requirements of s. NR 445.05, Wis. Adm. Code, pursuant to ss. NR 445.05(1)(c)1., (3)(c)1., (4)(c)1., and (4r)(b)1., Wis. Adm. Code. when firing only group I virgin fossil fuels without any alternate fuels. Boilers B27, B28 and B29 are exempt from the requirements of s. NR 445.05, Wis. Adm. Code, whenever firing only group 2 virgin fossil fuels without any alternate fuels and the emissions are vented from stacks (S14, S15 and S16 respectively) which each have a height approved by the Department, pursuant to ss. NR 445.05(1)(c)2., (3)(c)2., (4)(c)2., and (4r)(b)2., Wis. Adm. Code.

Boilers B28 and B29 emissions from combustion by wood only, without any alternate fuel, are exempt from the emission limits for Table 3 of s. NR 445.04 substances, provided the combustion units operate with good combustion technology. Good combustion technology means that technology which provides for a minimization of emissions of hazardous air contaminants listed on Table 3, pursuant to s. NR 445.05(3)(c)6., Wis. Adm. Code.

Boilers B20 through B22 are subject to National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters. Although these units are subject to the NESHAPS for industrial boilers, the Federal Register issued September 13, 2004 does not have specific limitations for new or existing gas or liquid fuel fired units that need to be included in the renewal permit.

Boilers B23 through-B29 are not subject to National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters - Electric utility steam generating units are not subject to the final rule. An electric utility steam generating unit is a fossil fuel-fired combustion unit of more than 25 megawatts that serves a generator that produces electricity for sale. A fossil fuel-fired unit that cogenerates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 megawatts electrical output to any utility power distribution system for sale is considered an electric utility steam generating unit. Non-fossil fuel-fired utility boilers and electric utility steam generating units less than 25 megawatts are covered by the final rule.

Part I The headings for the areas in the permit are defined below. The legal authority for these limitations or methods follows them in [brackets].

Pollutant -- This area will note which pollutant is being regulated by the permit.

Limitations -- This area will list all applicable emission limitations that apply to the source, including case-by-case limitations such as Latest Available Control Techniques (LACT), Best Available Control Technology (BACT), or Lowest Achievable Emission Rate (LAER). It will also list any voluntary restrictions on hours of operation, raw material use, or production rate requested by the permittee to limit potential to emit.

Compliance Demonstration -- The compliance demonstration methods outlined in this area may be used to demonstrate compliance with the associated emission limit or work practice standard listed under the corresponding *Limitations* area. The compliance demonstration area contains limits on parameters or other mechanisms that will be monitored periodically to insure compliance with the limitations. The requirement to

test as well as initial and periodic test schedules, if testing is required, will be stated here. Notwithstanding the compliance determination methods which the owner or operator of a sources is authorized to use under ch. NR 439, Wis. Adm. Code, the Department may use any relevant information or appropriate method to determine a source's compliance with applicable emission limitations.

Reference Test Methods, Recordkeeping, and Monitoring Requirements -- Specific EPA Reference test methods or other approved test methods will be contained in this area and are the methods that must be used whenever testing is required. A reference test method will be listed even if no testing is immediately required. Also included in this area are any recordkeeping requirements and their frequency and reporting requirements. Accuracy of monitoring equipment and frequency of monitoring shall meet, at a minimum, the requirements of ss. NR 439.055(3) and (4), Wis. Adm. Code, as specified in Part II of this permit.

Condition Type -- This column will specify other conditions that are applicable to the entire facility that may not be tied to one specific pollutant.

Conditions -- Specific conditions usually applicable to the entire facility or compliance requirements.

Compliance Demonstration -- This area contains monitoring and testing requirements and methods to demonstrate compliance with the conditions.

PART II -- This section contains the general limitations that the permittee must abide by. These requirements are standard for most sources of air pollutants so they are included in this section with every permit.

PART I
APPLICABLE EMISSION LIMITATIONS AND SPECIFIC PERMIT CONDITIONS

A. B21 and B22/S11 - Natural Gas/Distillate Fuel Oil Boilers Each Rated at 112 mmBtu per hour - Installed 1968
B23/S12 - (Acid Rain Unit 3) - Natural Gas/Distillate Fuel Oil Fired Boiler Rated at 300 mmBtu per hour - Installed 1968
B20/S14 - (Acid Rain Unit 11) - NG/Distillate Fuel Oil Boiler Rated at 175 mmBtu per hour - Installed 1964

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions	**(1)** For each boiler emissions may not exceed the most restrictive of: (a) 0.60 pounds per million Btu heat input; and (b) B20 - 2.48 pounds per hour; B21 - 1.59 pounds per hour; B22 - 1.59 pounds per hour; B23 - 4.26 pounds per hour.[1] [s. NR 415.06(1)(a), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]	**(1)** The permittee shall only fire natural gas and/or distillate fuel oil in these boilers.[2] [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	**(1)** Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5, including condensible backhalf emissions, or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code] **(2)** The permittee shall retain on site, plans and specifications that indicate each boiler's fuel usage design capabilities.[3] [s. NR 439.04(1)(d), Wis. Adm. Code]
2. Visible Emissions	**(1)** No owner or operator of a direct or portable source may cause or allow emissions of shade or density greater than number 2 of the Ringlemann chart or 40% opacity with the following exceptions: When combustion equipment is being cleaned or a new fire started, emissions may exceed number 2 of the Ringlemann chart or 40% opacity but may not exceed number 4 of the Ringlemann chart or 80% opacity for 6 minutes in any one hour. Combustion equipment may not be cleaned nor a fire started more than 3 times per day. [s. NR 431.04(1) and s. NR 431.05(1), Wis. Adm. Code]	**(1)** The permittee shall only fire natural gas and/or distillate fuel oil in these boilers. [4] [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]	**(1)** Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] **(2)** The permittee shall retain on site, plans and specifications that indicate each boilers fuel usage design capabilities.[3] [s. NR 439.04(1)(d), Wis. Adm. Code]

[1] These more restrictive emission limitations are necessary to ensure that the national ambient air quality standards for particulate matter are attained and maintained.

[2] Because the more restrictive limitations are the maximum theoretical emissions while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 2.0 pounds per thousand gallons of distillate fuel oil fired from AP-42, 5th edition, ch. 1.3.

[3] These plans and specifications are sufficient because the boilers are designed to only burn natural gas and/or distillate fuel oil.

[4] Natural gas and distillate fuel oil are clean burning fuels. It is not expected that the visible emission limitation of 40% opacity would be exceeded while firing these fuels. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

A. B21 and B22/S11 - Natural Gas/Distillate Fuel Oil Boilers Each Rated at 112 mmBtu per hour;
B23/S12 - (Acid Rain Unit 3) - Natural Gas/Distillate Fuel Oil Fired Boiler Rated at 300 mmBtu per hour; and
B20/S14 - (Acid Rain Unit 11) - NG/Distillate Fuel Oil Boiler Rated at 175 mmBtu per hour.
- (Continued)

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
3. Sulfur Dioxide	(1) The sulfur content of any distillate fuel oil burned may not exceed the more restrictive of the following: (a) For boiler B20: 0.50 percent by weight. [s. NR 418.03(1)(c), Wis. Adm. Code] (b) For boilers B21, B22 and B23: 0.18 percent by weight.[5] [ss. 285.63(1)(b) and 285.65(7), Wis. Stats] (c) For boilers B20, B21, B22 and B23: 30 ppm. [s. 285.65(7), Wis. Stats. *6]	(1) The permittee shall comply with 40 CFR Part 75, Appendix D, for demonstrating compliance with the sulfur content limit in I.A.3.a.(1) [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]	(1) Reference Test Method for Sulfur Dioxide Emissions: Whenever compliance emission testing is required, US EPA Method 6, 6A, 6B or 6C or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(2)(a), Wis. Adm. Code] (2) The permittee shall keep records of the sulfur content, of distillate fuel oil required under condition I.A.3.b.(1). [s. NR 439.04(1)(d), Wis. Adm. Code]
4. Nitrogen Oxide	(1) The operating hours of each boiler may not exceed the following[7]: (a) B21 - 5100 hours during each 12 consecutive month period; (b) B22 - 5100 hours during each 12 consecutive month period; (c) B23 - 5100 hours during each 12 consecutive month period; [ss. 285.63(1)(b) and 285.65(7), Wis. Stats]	(1) The permittee shall calculate the operating hours for each of boilers B21, B22 and B23, for each 12 consecutive month period by summing the monthly operating hours for each boiler, for the previous 12 consecutive months. The above calculations shall be performed within fifteen business days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]	(1) Reference Test Method for Nitrogen Oxide Emissions: Whenever compliance emission testing is required, US EPA Method 7, 7C, 7D or 7E or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(6), Wis. Adm. Code] (2) The permittee shall keep monthly records of the following for each of boilers B21, B22 and B23: (a) The hours that each boiler was operated during each month; and (b) The operating hours for each boiler, for each 12 consecutive month period as calculated in condition I.A.4.b.(1). [s. NR 439.04(1)(d), Wis. Adm. Code]

[5] This more restrictive limitation is necessary to ensure that the national ambient air quality standards for sulfur dioxide are attained and maintained.

6 This is a state-only requirement based on Condition IV.B.1 and VII.E of the Memorandum of Understanding Between MGE and UW-Madison/DOA and Certain Citizen/Environmental Groups

[7] The operating hour limitations are necessary to ensure that the national ambient air quality standard for nitrogen oxide is attained and maintained.
Note: There are no restrictions on operating hours for boiler B20.

B. B25/S13 - (Acid Rain Unit 5) - NG Boiler Rated at 268.8 mmBtu per hour - Installed 1938
B26/S13 - (Acid Rain Unit 6) - NG Boiler Rated at 275 mmBtu per hour - Installed 1943

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions	**(1)** For each boiler, emissions may not exceed the most restrictive of: (a) 0.60 pounds per million Btu heat input; and (b) B25 - 1.34 pounds per hour; B26 - 1.37 pounds per hour.[8] [s. NR 415.06(1)(a), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]	**(1)** The permittee shall only fire natural gas in these boilers.[9] [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	**(1)** Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5, including condensible backhalf emissions, or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code] **(2)** The permittee shall retain on site, plans and specifications that indicate each boilers fuel usage design capabilities.[10] [s. NR 439.04(1)(d), Wis. Adm. Code]
2. Visible Emissions	**(1)** No owner or operator of a direct or portable source may cause or allow emissions of shade or density greater than number 2 of the Ringlemann chart or 40% opacity with the following exceptions: When combustion equipment is being cleaned or a new fire started, emissions may exceed number 2 of the Ringlemann chart or 40% opacity but may not exceed number 4 of the Ringlemann chart or 80% opacity for 6 minutes in any one hour. Combustion equipment may not be cleaned nor a fire started more than 3 times per day. [s. NR 431.04(1), and s. NR 431.05(1), Wis. Adm. Code]	**(1)** The permittee shall only fire natural gas in these boilers.[11] [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]	**(1)** Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] **(2)** The permittee shall retain on site, plans and specifications that indicate each boilers fuel usage design capabilities.[12] [s. NR 439.04(1)(d), Wis. Adm. Code]

[8] These more restrictive emission limitations are necessary to ensure that the national ambient air quality standards for particulate matter are attained and maintained.

[9] Because the more restrictive emission limitations are the maximum theoretical emissions while firing this fuel, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 5.0 pounds per million cubic feet of natural gas oil fired from AP-42, 5th edition, ch. 1.4.

[10] These plans and specifications are sufficient because the boilers are designed to only burn natural gas.

[11] Natural gas is a clean burning fuel. It is not expected that the visible emission limitation of 40% opacity would be exceeded while firing this fuel. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

[12] These plans and specifications are sufficient because the boilers are designed to only burn natural gas.

C. B27/S14 - (Acid Rain Unit 7) - Natural Gas/Coal Boiler - Rated at 332 mmBtu/hr - Installed 1949

The boiler also has the capacity to fire boiler cleaning waste liquids and waste oil/petroleum contaminated adsorbents. Please see the additional requirements that relate to alternate operating scenarios for the boiler in I.D. of this permit. Note: The requirements and emission limitations outlined in this section apply to the boiler at all times regardless of the fuel being fired.

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions *Continued on Next Page...*	**(1)** Emissions may not exceed 0.60 pounds per million Btu heat input. [s. NR 415.06(1)(a), Wis. Adm. Code] **(2)** The permittee shall only fire: (a) Coal and/or natural gas as primary fuels in the boiler; (b) Boiler cleaning waste liquid as an alternate fuel in the boiler; and (c) Waste oil and petroleum contaminated adsorbents generated at sources owned and operated by the permittee, as an alternate fuel in the boiler.[13] [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.] *See section I.D. for additional requirements that apply while firing boiler cleaning waste liquids in the boiler.*	**(1)** The following compliance emission tests of boiler B27 shall be conducted to demonstrate compliance with the particulate matter emission limit in condition I.C.1.a.(1): (a) Test shall be conducted every 24 months as long as this permit remains valid; (b) Each biennial test shall be performed within 90 days of the anniversary date of the issuance of this permit or within 90 days of an alternate date specified by the Department in writing; (c) The permittee may request and the Department may approve a waiver from the required biennial testing provided the results of the most recently completed test demonstrate that particulate matter emissions are 50 percent or less of the applicable limitations in condition I.C.1.a.(1); (d) This testing shall be conducted in accordance with condition I.AB.3.a.(1). [ss. NR 439.07 and NR 439.075(2)(a)1. and (3)(b), Wis. Adm. Code]	**(1)** Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5, including condensible backhalf emissions, or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code] **(2)** The permittee shall retain copies of the results of the tests required by condition I.C.1.b.(1) at the facility. [s. NR 439.04(1)(a), Wis. Adm. Code] **(3)** The permittee shall keep monthly records of: (a) The type of each fuel fired in the boiler; and (b) The amount of each fuel fired in the boiler. [s. NR 439.04(1)(d), Wis. Adm. Code]

[13] The combustion of this alternate fuel is an insignificant emissions unit.

C. B27/S14 - (Acid Rain Unit 7) - Natural Gas/Coal Boiler - Rated at 332 mmBtu/hr - (Continued)

The boiler also has the capacity to fire boiler cleaning waste liquids and waste oil/petroleum contaminated adsorbents. Please see the additional requirements that relate to alternate operating scenarios for the boiler in I.D. of this permit. Note: The requirements and emission limitations outlined in this section apply to the boiler <u>at all times</u> regardless of the fuel being fired.

POLLUTANT	a.LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions - (Continued)		**(2)** The permittee shall operate a mechanical cyclone collector and electrostatic precipitator control device in series on the boiler to control particulate matter emissions whenever the boiler is in operation except when the boiler is combusting 100% natural gas without any other fuels. [s. 285.63(1)(a), Wis. Stats.] **(3)** The permittee shall monitor the following parameters for each electrostatic precipitator: (a) The spark rate in sparks per minute; (a) The primary voltage in volts; (b) The secondary voltage in volts; (c) The primary current in amps; and (d) The secondary current in amps. [s. NR 439.055(1)(c), Wis. Adm. Code] **(4)** The permittee shall perform periodic internal inspections of the mechanical cyclone collector and the electrostatic precipitator to ensure that the control equipment is operating properly. The time interval between inspections may not exceed 24 months [s. NR 407.09(4)(a)3.b., Wis. Adm. Code] **(5)** The permittee shall prepare, within 60 days of permit issuance, and follow a plan for periodic internal inspection of the boiler. This plan shall include the frequency of these inspections and the items to be inspected. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	**(4)** The permittee shall record the parameters listed in condition I.C.1.b.(3) at least once every 8 hours of operation. [s. NR 439.055(2)(b), Wis. Adm. Code] **(5)** The permittee shall keep annual records of: (a) The date, time and initials of the person performing the inspections required in condition I.C.1.b.(4); (b) A list of the items inspected; and (c) Any maintenance or repairs performed as a result of these inspections. [s. NR 439.04(1)(d), Wis. Adm. Code] **(6)** The permittee shall keep records of: (a) The date, time and initials of the person performing the inspections required in condition I.C.1.b.(5); (b) A list of the items inspected; (c) Any maintenance or repairs performed as a result of these inspections; [s. NR 439.04(1)(d), Wis. Adm. Code]

C. B27/S14 - (Acid Rain Unit 7) - Natural Gas/Coal Boiler - Rated at 332 mmBtu/hr - Continued

The boiler also has the capacity to fire boiler cleaning waste liquids and waste oil/petroleum contaminated adsorbents. Please see the additional requirements that relate to alternate operating scenarios for the boiler in I.D. of this permit. Note: The requirements and emission limitations outlined in this section apply to the boiler at all times regardless of the fuel being fired.

POLLUTANT	a.LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
2. Visible Emissions	**(1)** No owner or operator of a direct or portable source may cause or allow emissions of shade or density greater than number 2 of the Ringlemann chart or 40% opacity with the following exceptions: When combustion equipment is being cleaned or a new fire started, emissions may exceed number 2 of the Ringlemann chart or 40% opacity but may not exceed number 4 of the Ringlemann chart or 80% opacity for 6 minutes in any one hour. Combustion equipment may not be cleaned nor a fire started more than 3 times per day. [s. NR 431.04(1) and s. NR 431.05(1), Wis. Adm. Code]	**(1)** The permittee shall calibrate, maintain and operate a continuous monitoring system which meets the performance specifications of condition I.C.2.b.(3) for the measurement of opacity from stack S14.[14] [s. NR 439.095(1)(f), Wis. Adm. Code] **(2)** The permittee shall calibrate maintain and operate the continuous emission monitor required by condition I.C.2.b.(1) in accordance with the performance specifications in 40 CFR part 75, Appendices A to I and Performance Specification 1 in 40 CFR Part 60, Appendix B. [ss. NR 439.09(1) and NR 439.095(6), Wis. Adm. Code, s. 299.80, Wis. Stats.] **(3)** The continuous emission monitor required by condition I.C.2.b.(1) shall follow a quality control and quality assurance plan, as approved or conditionally approved by the Department. [ss. NR 439.09(8) and NR 439.095(6), Wis. Adm. Code]	**(1)** Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] **(2)** The continuous opacity monitor required by condition I.C.2.b.(1) shall complete one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period. This monitoring requirement is waived when the opacity monitor is being serviced and the boiler is burning only natural gas. [s. NR 439.09(9)(a) and 439.095(5)(a)1., Wis. Adm. Code] **(3)** The permittee shall submit quarterly excess emission reports to the Department within 30 days following the end of each calendar quarter. [s. NR 439.09(10), Wis. Adm. Code] **(4)** Excess emissions for opacity are, any 6 minute period during which the average opacity exceeds the limitation in condition I.C.2.a.(1). [s. NR 439.09(10)(b), Wis. Adm. Code] **(5)** The excess emission reports required by condition I.C.2.c.(3) shall contain the information in condition I.AB.2.a. [s. NR 439.09(10)(a), Wis. Adm. Code]

[14] The permittee is exempt from the biennial opacity compliance tests required by s. NR 439.075(3)(b), Wis. Adm. Code, provided they operate a continuous opacity monitor that meets the performance specification requirements of s. NR 439.09, Wis. Adm. Code, pursuant to s. NR 439.075(4)(a)2., Wis. Adm. Code.

C. B27/S14 - (Acid Rain Unit 7) - Natural Gas/Coal Boiler - Rated at 332 mmBtu/hr - Continued

The boiler also has the capacity to fire boiler cleaning waste liquids and waste oil/petroleum contaminated adsorbents. Please see the additional requirements that relate to alternate operating scenarios for the boiler in I.D. of this permit. Note: The requirements and emission limitations outlined in this section apply to the boiler at all times regardless of the fuel being fired.

POLLUTANT	a.LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
3. Sulfur Dioxide *Continued on Next Page...*	**(1)** Emissions may not exceed 4.25 pounds per million Btu heat input. [s. NR 418.03(1)(b)1., Wis. Adm. Code]	**(1)** The permittee shall calibrate, maintain and operate a continuous monitoring system for the measurement of sulfur dioxide, in accordance with the performance specifications in 40 CFR Part 75, Appendices A to I.[15] [ss. NR 439.09(2) and 439.095(1)(f) and (6), Wis. Adm. Code]	**(1)** Reference Test Method for Sulfur Dioxide Emissions: Whenever compliance emission testing is required, US EPA Method 6, 6A, 6B or 6C or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(2)(a), Wis. Adm. Code] **(2)** The continuous sulfur dioxide monitor required by condition I.C.3.b.(1) shall perform sampling, analyzing and data recording in accordance with the performance specifications in 40 CFR Part 75. [s. NR 439.09(9)(b), Wis. Adm. Code] **(3)** The permittee shall submit quarterly excess emission reports to the Department within 30 days following the end of each calendar quarter. [s. NR 439.09(10), Wis. Adm. Code]

[15] The permittee is exempt from the biennial sulfur dioxide compliance tests required by ss. NR 439.075(2)(a)2., and (3)(b), Wis. Adm. Code, provided they operate a continuous sulfur dioxide emission monitor that meets the performance specification requirements of s. NR 439.09, Wis. Adm. Code, pursuant to s. NR 439.075(4)(a)2., Wis. Adm. Code.

The permittee is exempt from the periodic fuel sampling and analysis requirements of s. NR 439.085(2), Wis. Adm. Code, provided they operate a continuous sulfur dioxide emission monitor that meets the performance specification requirements of s. NR 439.09, Wis. Adm. Code, pursuant to s. NR 439.085(1)(c), Wis. Adm. Code.

C. B27/S14 - (Acid Rain Unit 7) - Natural Gas/Coal Boiler - Rated at 332 mmBtu/hr- Continued

The boiler also has the capacity to fire boiler cleaning waste liquids and waste oil/petroleum contaminated adsorbents. Please see the additional requirements that relate to alternate operating scenarios for the boiler I.D. of this permit. Note: The requirements and emission limitations outlined in this section apply to the boiler at all times regardless of the fuel being fired.

POLLUTANT	a.LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
3. Sulfur Dioxide - (Continued)		(2) The continuous emission monitor required by condition I.C.3.b.(1) shall follow a quality control and quality assurance plan, as approved or conditionally approved by the Department. [ss. NR 439.09(8) and NR 439.095(6), Wis. Adm. Code]	(4) Excess emissions for sulfur dioxide are, any 24 hour rolling average during which the average sulfur dioxide emissions exceed the limitation in condition I.C.3.a.(1).[16] [s. NR 439.09(10)(b), Wis. Adm. Code] (5) For purposes of reporting exceedances on the basis of a 24-hour rolling average, any hourly average may be included in only one 24 hour period. An exceedance shall be based on at least 18 and not more than 24 valid recordings of hourly average emission rates in any 24 hour period. [s. NR 439.09(10)(c), Wis. Adm. Code.] (6) The excess emission reports required by condition I.C.3.c.(3) shall contain the information in condition I.AB.2.a. [s. NR 439.09(10)(a), Wis. Adm. Code]

[16] Excess emission are defined as any 24 hour rolling average during which average sulfur dioxide emission exceed the limitation. The permittee may keep records in terms of hourly averages. If none of the hourly averages exceed the emission limitations, it can be assumed that the 24 hour rolling average emissions do not exceed the limitation.

C. B27/S14 - (Acid Rain Unit 7) - Natural Gas/Coal Boiler - Rated at 332 mmBtu/hr - Continued

The boiler also has the capacity to fire boiler cleaning waste liquids and waste oil/petroleum contaminated adsorbents. Please see the additional requirements that relate to alternate operating scenarios for the boiler in I.D. of this permit. Note: The requirements and emission limitations outlined in this section apply to the boiler at all times regardless of the fuel being fired.

POLLUTANT	a.LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
4. Nitrogen Oxides	(1) The permittee shall calibrate, maintain and operate a continuous monitoring system for the measurement of nitrogen oxides in accordance with the performance specifications in 40 CFR part 75, Appendices A to I.[17] [ss. NR 439.09(2) and NR 439.095(1)(f) and (6), Wis. Adm. Code]	(1) The continuous emission monitor required by condition I.C.4.a.(1) shall follow a quality control and quality assurance plan, as approved or conditionally approved by the Department. [ss. NR 439.09(8) and NR 439.095(6), Wis. Adm. Code]	(1) Reference Test Method for Nitrogen Oxide Emissions: Whenever compliance emission testing is required, US EPA Method 7, 7A, 7C, 7D, and 7E, or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(6), Wis. Adm. Code] (2) The continuous nitrogen oxides monitor required by condition I.C.4.a.(1) shall perform sampling, analyzing and data recording in accordance with the performance specifications in 40 CFR Part 75. [s. NR 439.09(9)(b), Wis. Adm. Code] (3) The permittee shall submit quarterly excess emission reports to the Department within 30 days following the end of each calendar quarter.[18] [s. NR 439.09(10), Wis. Adm. Code] (4) The excess emission reports required by condition I.C.4.c.(3) shall contain the information in condition I.AB.2.a. [s. NR 439.09(10)(a), Wis. Adm. Code]

[17] Note: As of January 1, 2000 the permittee will be subject to a nitrogen oxide emission limitation of 0.68 pounds per mmBtu as outlined in the acid rain portion of this operation permit.

[18] Note: The quarterly excess emission reports required here may be combined with the quarterly excess emission reports indicating compliance status with Phase II of the Acid Rain Program.

C. B27/S14 - (Acid Rain Unit 7) - Natural Gas/Coal Boiler - Rated at 332 mmBtu/hr - Continued

The boiler also has the capacity to fire boiler cleaning waste liquids and waste oil/petroleum contaminated adsorbents. Please see the additional requirements that relate to alternate operating scenarios for the boiler in I.D. of this permit. Note: The requirements and emission limitations outlined in this section apply to the boiler <u>at all times</u> regardless of the fuel being fired.

POLLUTANT	a.LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
5. Carbon Dioxide	**(1)** The permittee shall calibrate, maintain and operate a continuous monitoring system for the measurement of carbon dioxide in accordance with the performance specifications in 40 CFR Part 75, Appendices A to I. [ss. NR 439.09(3), NR 439.095(1)(f) and NR 439.095(6), Wis. Adm. Code]	**(1)** The continuous emission monitor required by condition I.C.5.a.(1) shall follow a quality control and quality assurance plan, as approved or conditionally approved by the Department. [ss. NR 439.09(8) and NR 439.095(6), Wis. Adm. Code]	**(1)** The continuous carbon dioxide monitor required by condition I.C.5.a.(1) shall perform sampling, analyzing and data recording in accordance with the performance specifications in 40 CFR Part 75. [s. NR 439.09(9)(b), Wis. Adm. Code] **(2)** The continuous carbon dioxide monitor required by condition I.C.5.a.(1) shall be used to convert either sulfur dioxide or nitrogen oxide continuous emission monitoring data, or both, to units of the applicable emission limitations. [s. NR 439.095(5)(f), Wis. Adm. Code]
6. Stack Flow Rate	**(1)** The permittee shall calibrate, maintain and operate a continuous monitoring system for the measurement of the stack flow rate in accordance with the performance specifications in 40 CFR part 75, Appendices A to I. [ss. NR 439.095(1)(f) and NR 439.095(6), Wis. Adm. Code]	**(1)** The continuous emission monitor required by condition I.C.6.a.(1) shall follow a quality control and quality assurance plan, as approved or conditionally approved by the Department. [ss. NR 439.09(8) and NR 439.095(6), Wis. Adm. Code]	**(1)** The continuous stack flow rate monitor required by condition I.C.6.a.(1) shall be used to convert either sulfur dioxide or nitrogen oxide continuous emission monitoring data, or both, to units of the applicable emission limitations. [s. NR 439.095(5)(f), Wis. Adm. Code]

D. ***ALTERNATE OPERATING SCENARIO #1:*** **S14/B27 - (Acid Rain Unit 7) - Boiler Rated at 332 mmBtu per hour**

Additional Applicable Requirements While Firing Boiler Cleaning Waste Liquids:[19]

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Hazardous Air Pollutants * *Continued on Next Page...*	**(1)** The permittee shall only combust boiler cleaning waste liquids that have trace metal contents below the TCLP regulatory levels in NR 605.08, Table I, Wis. Adm. Code. [20]: [s. NR 445.05(1), (3) and (4), Wis. Adm. Code] * **(2)** Boiler cleaning waste liquid may not be fired with any other alternate fuel. [s. NR 445.05(1), (3) and (4), Wis. Adm. Code] *	**(1)** To demonstrate compliance with I.D.1.a.(1), the permittee shall analyze all boiler cleaning waste liquids that will be fired in the boilers to determine the concentration of each compounds listed in I.D.1.a.(1). [s. NR 407.09(4)(a)1., Wis. Adm. Code] * **(2)** To demonstrate compliance with I.D.1.a.(2), the permittee shall keep the records required by I.D.1.c.(2)(c). [s. NR 407.09(4)(a)1., Wis. Adm. Code] * **(3)** To demonstrate compliance with I.D.1.a.(3), the permittee shall calculate the gallons of boiler cleaning waste liquid fired in boilers B27, B28 and B29 over each 12 consecutive month period, by totaling the amount of boiler cleaning waste liquid fired in boilers B27, B28 and B29 for the previous 12 months. The permittee shall perform this calculation within fifteen business days of combusting boiler cleaning waste liquid in any of boilers B27, B28 and B29. [s. NR 407.09(4)(a)1., Wis. Adm. Code] *	**(1)** The permittee shall use the test methods listed in s. NR 605.11, Wis. Adm. Code, or 40 CFR Part 261, Appendix II to determine the concentration of the compounds listed in I.D.1.a.(1), in all boiler cleaning waste liquid to be burned in the boilers. [s. NR 439.06(8), Wis. Adm. Code] * **(2)** The permittee shall keep records of: (a) The date that any boiler cleaning waste liquids are burned in the boiler; (b) The analysis required by I.D.1.b.(1) for all boiler cleaning waste liquids burned in the boiler; (c) All other fuels burned at the time of firing boiler cleaning waste liquids in the boiler; (d) A list of the boilers which are firing boiler cleaning waste liquids at the same time; (e) The amount of boiler cleaning waste liquid fired in each boiler, firing boiler cleaning waste liquid at the same time, in gallons; (f) The flow rate of boiler cleaning waste liquid feed to each boiler firing boiler cleaning waste liquid at the same time, in gallons per hour; (g) The total amount of boiler cleaning waste liquid fired in boilers B27, B28 and B29 combined over each 12 month period, as calculated in I.D.1.b.(3); and (h) The total amount of boiler cleaning waste liquid feed to boilers B27, B28 and B29 combined, at any one time, in gallons per hour, as calculated in I.D.1.b.(4). [s. NR 439.04(1)(d), Wis. Adm. Code] *

[19] The requirements outlined in section I.C. of this permit apply to the boiler at all times regardless of the type of fuel fired.

[20] These concentrations are the TCLP regulation action levels (Table I, ch. NR 605, Wis. Adm. Code) that are used to determine if a material is a hazardous waste.

D. *ALTERNATE OPERATING SCENARIO #1:* S14/B27 - (Acid Rain Unit 7) - Boiler Rated at 332 mmBtu per hour - (Continued)

Additional Applicable Requirements While Firing Boiler Cleaning Waste Liquids:[21]

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Hazardous Air Pollutants - (Continued) *	**(3)** The total amount of boiler cleaning waste liquid fired in boilers B27, B28 and B29 combined, in any 12 month period may not exceed 96,000 gallons.[22] [s. NR 445.05(1), (3) and (4), Wis. Adm. Code] * **(4)** The total flow rate of boiler cleaning waste liquid fired in boilers B27, B28 and B29 combined may not exceed 2700 gallons per hour. [s. NR 445.05(1), (3) and (4), Wis. Adm. Code] *	**(4)** To demonstrate compliance with I.D.1.a.(4), the permittee shall calculate the total amount of boiler cleaning waste liquid feed to boilers B27, B28 and B29 combined, at any one time, in gallons per hour. [s. NR 407.09(4)(a)1., Wis. Adm. Code] *	

[21] The requirements outlined in section I.C. of this permit apply to the boiler at all times regardless of the type of fuel fired.

[22] This limitation along with the limitations on the amount of paper/poly waste used, see conditions I.G.3.a.(1) - (3), limit the potential emission rates of each of the ch. NR 445, Wis. Adm. Code, Table 3 hazardous air pollutants to less than the corresponding table values.

E. B28/S15 - (Acid Rain Unit 8) - Natural Gas/Coal Boiler - Rated at 544 mmBtu/hr - Installed 1957
B29/S16 - (Acid Rain Unit 9) - Natural Gas/Coal Boiler - Rated at 544 mmBtu/hr - Installed 1959

The boilers also have the capacity to fire biomass/wood fuel, industrial paper/poly wastes, biomass/switch grass, boiler cleaning waste liquids and waste oil/petroleum contaminated adsorbents. Please see the additional requirements that relate to alternate operating scenarios for the boilers in I.F., I.G., I.H., and I.I. of this permit. Note: The requirements and emission limitations outlined in this section apply to the boilers at all times regardless of the fuel being fired.

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions *Continued on Next Page...*	**(1)** Emissions may not exceed 0.60 pounds per million Btu heat input. [s. NR 415.06(1)(a), Wis. Adm. Code] **(2)** The permittee shall only fire: (a) Coal and/or natural gas as primary fuels in the boilers; and (b) Biomass/wood fuel and switch grass, industrial paper/poly waste, and boiler cleaning waste liquid, as alternate fuels in the boilers. (c) Waste oil and petroleum contaminated adsorbents generated at sources owned and operated by the permittee, as an alternate fuel in the boilers.[23] [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.] *See section I.F. for additional requirements that apply while firing biomass/wood fuel in the boilers. See section I.G. for additional requirements that apply while firing industrial paper/poly waste in the boilers. See section I.H. for additional requirements that apply while firing biomass/switch grass in the boilers. See section I.I. for additional requirements that apply while firing boiler cleaning waste liquid in the boilers.*	**(1)** The following compliance emission tests of boiler B28 and B29 shall be conducted to demonstrate compliance with the particulate matter emission limit in condition I.E.1.a.(1): (a) Test shall be conducted every 24 months as long as this permit remains valid; (b) Each biennial test shall be performed within 90 days of the anniversary date of the issuance of this permit or within 90 days of an alternate date specified by the Department in writing; (c) The permittee may request in writing and the Department may approve a waiver from the required biennial testing provided the results of the most recently completed test demonstrate that particulate matter emissions are 50 percent or less of the applicable limitations in condition I.E.1.a.(1); (d) This testing shall be conducted in accordance with condition I.AB.3.a.(1). [ss. NR 439.07 and NR 439.075(2)(a)1. and (3)(b), Wis. Adm. Code]	**(1)** Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5, including condensible backhalf emissions, or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code] **(2)** The permittee shall retain copies of the results of the tests required by condition I.E.1.b.(1) at the facility. [s. NR 439.04(1)(a), Wis. Adm. Code] **(3)** The permittee shall keep monthly records of: (a) The type of each fuel fired in each boiler; and (b) The amount of each fuel fired in each boiler. [s. NR 439.04(1)(d), Wis. Adm. Code]

[23] The combustion of this alternate fuel is an insignificant emissions unit.

E. B28/S15 and B29/S16 - (Acid Rain Units 8 and 9) - Natural Gas/Coal Boilers - Each Rated at 544 mmBtu/hr - (Continued)

The boilers also have the capacity to fire biomass/wood fuel, industrial paper/poly wastes, biomass/switch grass, boiler cleaning waste liquid, and waste oil/petroleum contaminated adsorbents. Please see the additional requirements that relate to alternate operating scenarios for the boilers in I.F., I.G., I.H., and I.I. of this permit. Note: The requirements and emission limitations outlined in this section apply to the boilers <u>at all times</u> regardless of the fuel being fired.

POLLUTANT	a.LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions - (Continued) *Continued on Next Page...*		**(2)** The permittee shall operate a mechanical cyclone collector and electrostatic precipitator control device in series on each boiler to control particulate matter emissions whenever either boiler is in operation except when combusting 100% natural gas without any other fuels. [s. 285.63(1)(a), Wis. Stats.] **(3)** The permittee shall monitor the following parameters for each electrostatic precipitator: (a) The spark rate in sparks per minute; (b) The primary voltage in volts; (c) The secondary voltage in volts; (d) The primary current in amps; and (e) The secondary current in amps. [s. NR 439.055(1)(c), Wis. Adm. Code] **(4)** The permittee shall perform periodic internal inspections of the mechanical cyclone collector and electrostatic precipitator to ensure that the control equipment is operating properly. The time interval between inspections may not exceed 24 months. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code] **(5)** The permittee shall prepare and follow a plan for periodic internal inspection of the boiler. This plan shall include the frequency of these inspections and the items to be inspected. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	**(4)** The permittee shall record the parameters listed in condition I.E.1.b.(3) at least once every 8 hours of operation. [s. NR 439.055(2)(b), Wis. Adm. Code] **(5)** The permittee shall keep annual records of: (a) The date, time and initials of the person performing the inspections required in condition I.E.1.b.(4); (b) A list of the items inspected; and (c) Any maintenance or repairs performed as a result of these inspections. [s. NR 439.04(1)(d), Wis. Adm. Code] **(6)** The permittee shall keep records of: (a) The date, time and initials of the person performing the inspections required in condition I.E.1.b.(5); (b) A list of the items inspected; (c) Any maintenance or repairs performed as a result of these inspections; [s. NR 439.04(1)(d), Wis. Adm. Code]

E. B28/S15 and B29/S16 - (Acid Rain Units 8 and 9) - Natural Gas/Coal Boilers - Each Rated at 544 mmBtu/hr - (Continued)

The boilers also have the capacity to fire biomass/wood fuel, industrial paper/poly wastes, biomass/switch grass, boiler cleaning waste liquid, and waste oil/petroleum contaminated adsorbents. Please see the additional requirements that relate to alternate operating scenarios for the boilers in I.F., I.G., I.H., and I.I.of this permit. Note: The requirements and emission limitations outlined in this section apply to the boilers at all times regardless of the fuel being fired.

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions - (Continued)	**(3)** The total heat input supplied from alternate fuels derived from solid wastes may not exceed 30 percent heat input supplied to the boiler (see note). [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.] *NOTE: This limit has been included so that the boilers may not be considered as an "Incinerator" under the solid waste management definition in NR 500.03, Wis. Adm. Code.*	**(6)** To demonstrate compliance with condition I.E.1.a.(3), the permittee shall, for each boiler, total the monthly average percentage (by heat input supplied to the boiler) of each alternate fuel derived from solid waste used (**P**) as calculated in conditions I.F.1.b.(2), I.G.1.b.(2), and I.H.1.b.(2), whenever more than one alternate fuel is used at a time. [s. NR 407.09(1)(c)1.a., Wis. Adm. Code]	**(7)** The permittee shall keep monthly records of the **total** average percentage of heat input (**P**) that was supplied to each boiler from all alternate fuels derived from solid waste combined, as calculated in condition I.E.1.b.(6). [s. NR 439.04(1)(d), Wis. Adm. Code]

E. B28/S15 and B29/S16 - (Acid Rain Units 8 and 9) - Natural Gas/Coal Boilers - Each Rated at 544 mmBtu/hr - (Continued)

The boilers also have the capacity to fire biomass/wood fuel, industrial paper/poly wastes, biomass/switch grass, boiler cleaning waste liquid, and waste oil/petroleum contaminated adsorbents. Please see the additional requirements that relate to alternate operating scenarios for the boilers in I.F., I.G., I.H., and I.I. of this permit. Note: The requirements and emission limitations outlined in this section apply to the boilers at all times regardless of the fuel being fired.

POLLUTANT	a.LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
2. Visible Emissions	**(1)** No owner or operator of a direct or portable source may cause or allow emissions of shade or density greater than number 2 of the Ringlemann chart or 40% opacity with the following exceptions: When combustion equipment is being cleaned or a new fire started, emissions may exceed number 2 of the Ringlemann chart or 40% opacity but may not exceed number 4 of the Ringlemann chart or 80% opacity for 6 minutes in any one hour. Combustion equipment may not be cleaned nor a fire started more than 3 times per day. [s. NR 431.04(1) and s. NR 431.05(1), Wis. Adm. Code]	**(1)** The permittee shall calibrate, maintain and operate continuous monitoring systems for the measurement of opacity from each of stack S15 and S16, in accordance with the performance specifications in 40 CFR part 75, Appendices A to I and Performance Specification 1 in 40 CFR part 60, Appendix B.[24] [ss. NR 439.09(1) and NR 439.095(1)(f) and (6), Wis. Adm. Code] **(2)** The continuous emission monitors required by condition I.E.2.b.(1) shall follow a quality control and quality assurance plan, as approved or conditionally approved in writing by the Department. [ss. NR 439.09(8) and NR 439.095(6), Wis. Adm. Code]	**(1)** Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] **(2)** The continuous opacity monitors required by condition I.E.2.b.(1) shall complete one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period. This monitoring requirement is waived when the opacity monitor is being serviced and the boiler is burning only natural gas. [s. NR 439.09(9)(a), and 439.095(5)(a)1., Wis. Adm. Code, and s. 299.80, Wis. Stats.] **(3)** The permittee shall submit quarterly excess emission reports to the Department within 30 days following the end of each calendar quarter. [s. NR 439.09(10), Wis. Adm. Code] **(4)** Excess emissions for opacity are, any 6 minute period during which the average opacity exceeds the limitation in condition I.E.2.a.(1). [s. NR 439.09(10)(b), Wis. Adm. Code] **(5)** The excess emission reports required by condition I.E.2.c.(3) shall contain the information in condition I.AB.2.a. [s. NR 439.09(10)(a), Wis. Adm. Code]

[24] The permittee is exempt from the biennial opacity compliance tests required by s. NR 439.075(3)(b), Wis. Adm. Code, provided they operate a continuous opacity monitor that meets the performance specification requirements of s. NR 439.09, Wis. Adm. Code, pursuant to s. NR 439.075(4)(a)2., Wis. Adm. Code.

E. B28/S15 and B29/S16 - (Acid Rain Units 8 and 9) - Natural Gas/Coal Boilers - Each Rated at 544 mmBtu/hr - (Continued)

The boilers also have the capacity to fire biomass/wood fuel, industrial paper/poly wastes, biomass/switch grass, boiler cleaning waste liquid, and waste oil/petroleum contaminated adsorbents. Please see the additional requirements that relate to alternate operating scenarios for the boilers in I.F., I.G., I.H., and I.I. of this permit. Note: The requirements and emission limitations outlined in this section apply to the boilers at all times regardless of the fuel being fired.

POLLUTANT	a.LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
3. Sulfur Dioxide	**(1)** Emissions may not exceed 4.25 pounds per million Btu heat input. [s. NR 418.03(1)(b)1., Wis. Adm. Code]	**(1)** The permittee shall calibrate, maintain and operate continuous monitoring systems for the measurement of sulfur dioxide from each of stack S15 and S16 in accordance with the performance specifications in 40 CFR part 75, Appendices A to I.[25] [ss. NR 439.09(2) and NR 439.095(1)(f) and (6), Wis. Adm. Code] **(2)** The continuous emission monitors required by condition I.E.3.b.(1) shall follow a quality control and quality assurance plan, as approved or conditionally approved by the Department. [ss. NR 439.09(8) and NR 439.095(6), Wis. Adm. Code]	**(1)** Reference Test Method for Sulfur Dioxide Emissions: Whenever compliance emission testing is required, US EPA Method 6, 6A, 6B, 6C, or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(2)(a), Wis. Adm. Code] **(2)** The continuous sulfur dioxide monitors required by condition I.E.3.b.(1) shall perform sampling, analyzing and data recording in accordance with the performance specifications in 40 CFR Part 75. [s. NR 439.09(9)(b), Wis. Adm. Code] **(3)** The permittee shall submit quarterly excess emission reports to the Department within 30 days following the end of each calendar quarter. [s. NR 439.09(10), Wis. Adm. Code] **(4)** Excess emissions for sulfur dioxide are, any 24 hour rolling average during which the average sulfur dioxide emissions exceed the limitation in condition I.E.3.a.(1).[26] [s. NR 439.09(10)(b), Wis. Adm. Code] **(5)** For purposes of reporting exceedances on the basis of a 24-hour rolling average, any hourly average may be included in only one 24 hour period. An exceedance shall be based on at least 18 and not more than 24 valid recordings of hourly average emission rates in any 24 hour period. [s. NR 439.09(10)(c), Wis. Adm. Code.] **(6)** The excess emission reports required by condition I.E.3.c.(3) shall contain the information in condition I.AB.2.a. [s. NR 439.09(10)(a), Wis. Adm. Code]

[25] The permittee is exempt from the biennial sulfur dioxide compliance tests required by ss. NR 439.075(2)(a)2., and (3)(b), Wis. Adm. Code, provided they operate a continuous sulfur dioxide emission monitor that meets the performance specification requirements of s. NR 439.09, Wis. Adm. Code, pursuant to s. NR 439.075(4)(a)2., Wis. Adm. Code.

The permittee is exempt from the periodic fuel sampling and analysis requirements of s. NR 439.085(2), Wis. Adm. Code, provided they operate a continuous sulfur dioxide emission monitor that meets the performance specification requirements of s. NR 439.09, Wis. Adm. Code, pursuant to s. NR 439.085(1)(c), Wis. Adm. Code.

[26] Excess emission are defined as any 24 hour rolling average during which average sulfur dioxide emission exceed the limitation. The permittee may keep records in terms of hourly averages. If none of the hourly averages exceed the emission limitations, it can be assumed that the 24 hour rolling average emissions do not exceed the limitation.

E. B28/S15 and B29/S16 - (Acid Rain Units 8 and 9) - Natural Gas/Coal Boilers - Each Rated at 544 mmBtu/hr - (Continued)

The boilers also have the capacity to fire biomass/wood fuel, industrial paper/poly wastes, biomass/switch grass, boiler cleaning waste liquid, and waste oil/petroleum contaminated adsorbents. Please see the additional requirements that relate to alternate operating scenarios for the boilers in I.F., I.G., I.H., and I.I. of this permit. Note: The requirements and emission limitations outlined in this section apply to the boilers at all times regardless of the fuel being fired.

POLLUTANT	a.LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
4. Nitrogen Oxides	**(1)** The permittee shall calibrate, maintain and operate a continuous monitoring systems for the measurement of nitrogen oxides from each of stacks S15 and S16, in accordance with the performance specifications in 40 CFR Part 75, Appendices A to I.[27] [ss. NR 439.09(2) and NR 439.095(1)(f) and (6), Wis. Adm. Code]	**(1)** The continuous emission monitors required by condition I.E.4.a.(1) shall follow a quality control and quality assurance plan, as approved or conditionally approved by the Department. [ss. NR 439.09(8) and NR 439.095(6), Wis. Adm. Code]	**(1)** Reference Test Method for Nitrogen Oxide Emissions: Whenever compliance emission testing is required, US EPA Method 7, 7A, 7C, 7D, 7E, or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(6), Wis. Adm. Code] **(2)** The continuous nitrogen oxides monitors required by condition I.E.4.a.(1) shall perform sampling, analyzing and data recording in accordance with the performance specifications in 40 CFR Part 75. [s. NR 439.09(9)(b), Wis. Adm. Code] **(3)** The permittee shall submit quarterly excess emission reports to the Department within 30 days following the end of each calendar quarter.[28] [s. NR 439.09(10), Wis. Adm. Code] **(4)** The excess emission reports required by condition I.E.4.c.(3) shall contain the information in condition I.AB.2.a. [s. NR 439.09(10)(a), Wis. Adm. Code]

[27] Note: The permittee has elected and the boilers are subject to an early election nitrogen oxide emission limitation of 0.50 pounds per mmBtu as outlined in the acid rain portion of this operation permit. The early election period under the acid rain program began no later than January 1, 1997, and ends no later than December 31, 2007.

[28] The quarterly excess emission reports required here may be combined with the quarterly excess emission reports indicating compliance status with the early nitrogen oxide emission limitation elected by the permittee as part of the Phase II of the Acid Rain Program.

E. B28/S15 and B29/S16 - (Acid Rain Units 8 and 9) - Natural Gas/Coal Boilers - Each Rated at 544 mmBtu/hr - (Continued)

The boilers also have the capacity to fire biomass/wood fuel, industrial paper/poly wastes, biomass/switch grass, boiler cleaning waste liquid, and waste oil/petroleum contaminated adsorbents. Please see the additional requirements that relate to alternate operating scenarios for the boilers in I.F., I.G., I.H., and I.I. of this permit. Note: The requirements and emission limitations outlined in this section apply to the boilers at all times regardless of the fuel being fired.

POLLUTANT	a.LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
5. Carbon Dioxide	(1) The permittee shall calibrate, maintain and operate continuous monitoring systems for the measurement of carbon dioxide from each of stacks S15 and S16 in accordance with the performance specifications in 40 CFR part 75, Appendices A to I. [ss. NR 439.09(3), NR 439.095(1)(f) and NR 439.095(6), Wis. Adm. Code]	(1) The continuous emission monitors required by condition I.E.5.a.(1) shall follow a quality control and quality assurance plan, as approved or conditionally approved by the Department. [ss. NR 439.09(8) and NR 439.095(6), Wis. Adm. Code]	(1) The continuous carbon dioxide monitors required by condition I.E.5.a.(1) shall perform sampling, analyzing and data recording in accordance with the performance specifications in 40 CFR Part 75. [s. NR 439.09(9)(b), Wis. Adm. Code] (2) The continuous carbon dioxide monitors required by condition I.E.5.a.(1) shall be used to convert either sulfur dioxide or nitrogen oxide continuous emission monitoring data, or both, to units of the applicable emission limitations. [s. NR 439.095(5)(f), Wis. Adm. Code]
6. Stack Flow Rate	(1) The permittee shall calibrate, maintain and operate continuous monitoring systems for the measurement of the stack flow rate from each of stacks S15 and S16 in accordance with the performance specifications in 40 CFR part 75, Appendices A to I. [ss. NR 439.095(1)(f) and NR 439.095(6), Wis. Adm. Code]	(1) The continuous emission monitors required by condition I.E.6.a.(1) shall follow a quality control and quality assurance plan, as approved or conditionally approved by the Department. [ss. NR 439.09(8) and NR 439.095(6), Wis. Adm. Code]	(1) The continuous stack flow rate monitors required by condition I.E.6.a.(1) shall be used to convert either sulfur dioxide or nitrogen oxide continuous emission monitoring data, or both, to units of the applicable emission limitations. [s. NR 439.095(5)(f), Wis. Adm. Code]

F. ***ALTERNATE OPERATING SCENARIO #1:*** **S15/B28 and S16/B29 - (Acid Rain Units 8 & 9) - Two Boilers Each Rated at 544 mmBtu per hour**

Additional Applicable Requirements While Firing Biomass/Wood Fuel:[29]

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions *Continued on Next Page...*	**(1)** Wood fuel may not be burned in the boilers in quantities greater than the lesser of the following: (a) 30 percent heat input supplied to each boiler[30]; or (b) the percentage, in heat input, supplied by wood fuel during the most recent stack test, performed in accordance with I.F.1.b.(1), that demonstrated compliance with the particulate matter emission limitation in condition I.E.1.a.(1). [s. 285.63(1)(a), Wis. Stats.]	**(1)** The following compliance emission tests while burning wood fuel in combination with other fuels in each of the boilers, shall be conducted to demonstrate compliance with the particulate matter emission limit in conditions I.E.1.a.(1): (a) A particulate matter emission test shall be conducted within 90 days of the first time wood fuels are used in each boiler after the date this permit is issued; AND (b) Within 90 days of increasing the maximum hourly percentage of wood fuels used by more than 5 percent. (c) This testing shall be conducted in accordance with condition I.AB.3.a.(1). (d) The permittee may use compliance emission test results from another boiler owned by the permittee with similar design specification, in lieu of the compliance testing required above, provided the permittee receives prior written approval from the Department. The permittee shall submit requests for this approval to the Department in writing. [ss. NR 439.07 and NR 439.075(2)(a)1. and (3)(b), Wis. Adm. Code]	**(1)** Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5, including condensible backhalf emissions, or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code] **(2)** The permittee shall keep the following records for each boiler on a monthly basis: (b) The average heat content (expressed in Btu per pound for solid fuels and Btu per million cubic feet for gaseous fuel) of each fuel used during each month that wood fuel is used; (c) The amount (expressed in pounds or tons for solid fuels or million cubic feet for gaseous fuel) of each fuel used during each month that wood fuel is used; and (d) The monthly average percentage of heat input (**P**) that was supplied to the boiler from all alternate fuels (**P**, expressed in heat input to the boiler), as calculated using the equation in condition I.F.1.b.(2). [s. NR 439.04(1)(d), Wis. Adm. Code]

[29] The requirements outlined in section I.E. of this permit apply to the boilers at all times regardless of the type of fuel fired.

30 This limit has been included so that the boilers may not be considered as an "Incinerator" under the solid waste management definition in NR 500.03, Wis. Adm. Code

F. ***ALTERNATE OPERATING SCENARIO #1:*** **S15/B28 and S16/B29 - Two Boilers Each Rated at 544 mmBtu per hour - (Continued)**

Additional Applicable Requirements While Firing Biomass/Wood Fuel:[31]

POLLUTANT	a.LIMITS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions - (Continued)		**(2)** To demonstrate compliance with condition I.F.1.a.(1), the permittee shall calculate the percentage of wood fuel heat input to each boiler using the following calculation: $P = \frac{HC_w \times Q_w}{\sum_{i=1}^{n}(HC_i \times Q_i)} \times 100$ where: **P** is the monthly average percentage heat input supplied to the boiler of wood fuel; $\mathbf{HC_w}$ is the average heat content of the wood fuel used during the month (expressed in Btu per pound or mmBtu per ton); $\mathbf{Q_w}$ is the amount of wood fuel used (expressed in pounds or tons) during the month; **n** is the total number of other fuels co-fired with the wood fuel during the month; **i** represents each fuel fired during the month; $\mathbf{HC_i}$ is the heat content of the wood fuel fired and each fuel co-fired with wood fuel during the month (expressed as Btu per pound or mmBtu per ton for solid fuels or Btu per million cubic feet for gaseous fuels); and $\mathbf{Q_i}$ is the amount of each fuel co-fired with wood during the month (expressed in pounds or tons for solid fuels or million cubic feet for gaseous fuels). The permittee shall perform these calculations for the preceding calendar month no later than the end of the fifteenth business day of the month. [s. NR 407.09(1)(c)1.a., Wis. Adm. Code] **(3)** The permittee shall use one of the following to determine the heat content of the fuels used: (a) certified supplier information; (b) representative data; or (c) the results of the sampling and analysis required by condition I.AB.4.a.(1)(d). If there is a discrepancy in these values, the results of the sampling and analysis required by condition I.AB.4.a.(1)(d) shall govern. [s. NR 407.09(4)(a), Wis. Adm. Code]	

[31] The requirements outlined in section I.E. of this permit apply to the boilers at all times regardless of the type of fuel fired.

F. ***ALTERNATE OPERATING SCENARIO #1:*** **S15/B28 and S16/B29 - Two Boilers Each Rated at 544 mmBtu per hour - (Continued)**

Additional Applicable Requirements While Firing Biomass/Wood Fuel:[32]

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
2. Chapter NR 445, Wis. Adm., Code, Table 3, Hazardous Air Contaminants *	**(1)** Good Combustion Technology for Wood:[33] (a) The permittee shall only burn wood fuels in the boiler. Wood fuels are defined as bark, sawdust, scrap lumber, wood chips and plain wood. (b) The permittee may not burn wood fuels in the boiler which are glued, treated, or coated in any way. (c) The permittee may burn a wood fuel containing up to 5 percent (by weight) of other materials in the boiler, provided written approval is obtained from the Department prior to burning the wood fuel. The permittee shall submit a written request to the Department for this approval. (d) The temperature of the exhaust gas exiting the furnace shall be maintained at a minimum of 1250 degrees Fahrenheit. (e) The residence time of the combustion gases in the boiler shall be a minimum of 1 second. (f) The 8-hour average carbon monoxide concentration of the exhaust gas exiting the boiler may not exceed a maximum of 500 ppmdv, at 12% carbon dioxide (CO_2). [s. NR 445.05(3)(c)6., Wis. Adm. Code] *	**(1)** The following compliance emission tests of each boiler shall be performed to demonstrate compliance with the carbon monoxide emission limitation in condition I.F.2.a.(1)(f): (a) The tests shall be conducted within 90 days of initially burning wood fuel in the boilers; AND (b) Within 90 days of increasing the maximum hourly percentage of wood fuels used by more than 5 percent. (c) This testing shall be conducted using the reference test method outlined in condition I.F.2.c.(1)(a); and (d) The tests shall be conducted in accordance with condition I.AB.3.a.(1). [s. NR 439.07, Wis. Adm. Code] *	**(1)** Reference Test Method for Carbon Monoxide Emissions: * (a) US EPA Method 10 or another test method approved by the Department in writing shall be used. [s. NR 439.06(4)(a), Wis. Adm. Code] * (b) The permittee shall receive written approval from the Department for the method used to monitor the carbon monoxide concentration required by condition I.F.2.b.(4)(b) prior to burning wood in the boiler. The permittee shall submit a written request to the Department for this approval. [s. NR 439.06(8), Wis. Adm. Code] * **(2)** The permittee shall keep the following records for each shipment of wood fuel received: (a) The name of the supplier that provided the shipment; (b) The type of wood fuel received as defined in condition I.F.2.a.(1)(a); and (c) The type and content (in weight percent) of any materials contained in the wood fuel that are not listed in condition I.F.2.a.(1)(a), including emission estimates that demonstrate the burning of this product will not cause an exceedance of the National Ambient Air Quality Standards; and emission estimates that demonstrate the burning of this product will not cause an exceedance of any regulatory threshold under ch.NR 445, Wis. Adm. Code. [s. NR 439.04(1)(d), Wis. Adm. Code] *

Continued on Next Page...

[32] The requirements outlined in section I.E. of this permit apply to the boilers at all times regardless of the type of fuel fired.

[33] Section NR 445.05(3)(c)6., Wis. Adm. Code, exempts wood combustion units which operate with good combustion technology from the hazardous air contaminant emission limits of s. NR 445.05(3), Wis. Adm. Code. Good combustion technology means that technology which provides for a minimization of emissions of hazardous air contaminants listed in Table 3, of s. NR 445.04, Wis. Adm. Code. The requirements outlined here were determined by the Department to be good combustion technology for wood.

F. ***ALTERNATE OPERATING SCENARIO #1:*** **S15/B28 and S16/B29 - Two Boilers Each Rated at 544 mmBtu per hour - (Continued)**

Additional Applicable Requirements While Firing Biomass/Wood Fuel:[34]

POLLUTANT	a. LIMITS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
2. Chapter NR 445, Wis. Adm., Code, Table 3, Hazardous Air Contaminants - (continued) *		**(2)** To demonstrate compliance with condition I.F.2.a.(1)(a), (b) and (c), the permittee shall keep the records required by condition I.F.2.c.(2). [s. NR 407.09(1)(c)1.a., Wis. Adm. Code] * **(3)** Prior to initially burning wood fuel in the boilers, the permittee shall submit the following information to the Department: (a) The design residence time of the boiler; and (b) The design temperature of the exhaust gas exiting the furnace portion of the boiler. [s. NR 407.09(1)(c)1.a., Wis. Adm. Code] * **(4)** To demonstrate compliance with conditions I.F.2.a.(1)(d) and (f), the permittee shall continuously monitor the following parameters:[35] (a) The temperature of the exhaust gas exiting the furnace; and (b) The carbon monoxide concentration[36] of the exhaust gas exiting the boiler. [s. NR 407.09(1)(c)1.a., Wis. Adm. Code] * **(5)** The permittee may submit an alternate compliance demonstration plan for the boilers to the Department in writing. If the Department approves the alternate plan in writing, the permittee shall follow the plan to demonstrate compliance with the Good Combustion Technology requirements of condition I.F.2.a.(1) while firing wood in the boiler, in lieu of the compliance demonstration methods outlined in conditions I.F.2.b.(2) and (3). [s. NR 407.09(4)(a)3.b., Wis. Adm. Code] *	**(3)** The permittee shall continuously record: (a) The temperature of the exhaust gas exiting the furnace; and (b) The carbon monoxide concentration of the exhaust gas exiting the boiler. [s. NR 439.04(1)(d), Wis. Adm. Code] * **(4)** If the permittee received written approval from the Department for an alternate compliance demonstration plan submitted under condition I.F.2.b.(5), the permittee shall keep records of compliance demonstration variables according to the frequency outlined in the Department approved compliance demonstration plan. [s. NR 439.04(1)(d), Wis. Adm. Code] *

[34] The requirements outlined in section I.E. of this permit apply to the boilers at all times regardless of the type of fuel fired.

[35] The permittee is not required to install the equipment to continuously monitor and record the temperature and the carbon monoxide concentration of the exhaust gas exiting the boiler until they begin using this alternate fuel.

[36] The carbon monoxide concentration of the exhaust gas exiting the boilers shall be monitored by the method approved by the Department per condition I.F.2.c.(1)(b).

F. ***ALTERNATE OPERATING SCENARIO #1:*** **S15/B28 and S16/B29 - Two Boilers Each Rated at 544 mmBtu per hour - (Continued)**

Additional Applicable Requirements While Firing Biomass/Wood Fuel:[37]

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
3. Visible Emissions	**(1)** Wood fuel may not be burned in the boiler in quantities greater than the lesser of the following: (a) 30 percent heat input supplied to each boiler; or (b) the percentages, in heat input, supplied by wood fuel during the most recent stack test, performed in accordance with I.F.3.b.(1), that demonstrated compliance with the visible emission limitation in condition I.E.2.a.(1). [s. 285.63(1)(a), Wis. Stats.]	**(1)** The following compliance emission tests while firing wood fuel in combination with other fuels, shall be conducted for each boiler to demonstrate compliance with the visible emission limit in condition I.E.2.a.(1): (a) A test shall be conducted within 90 days of the first time wood fuels are used in each boiler after the date this permit is issued; AND (b) Within 90 days of increasing the maximum hourly percentage of wood fuel used by more than 5 percent. (c) This testing shall be conducted in accordance with condition I.AB.3.a.(1). (d) The permittee may use compliance emission test results from another boiler owned by the permittee with similar design specification, in lieu of the compliance testing required above, provided the permittee receives prior written approval from the Department. The permittee shall submit requests for this approval to the Department in writing. [s. NR 439.07, Wis. Adm. Code]	**(1)** Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] **(2)** The recordkeeping requirements for particulate matter emissions outlined in condition I.F.1.c.(2) also serve as recordkeeping requirements for visible emissions. [s. NR 439.04(1)(d), Wis. Adm. Code]

[37] The requirements outlined in section I.E. of this permit apply to the boilers at all times regardless of the type of fuel fired.

G. ***ALTERNATE OPERATING SCENARIO #2:*** **S15/B28 and S16/B29 - Two Boilers Each Rated at 544 mmBtu per hour - (Continued)**
Additional Applicable Requirements While Firing Industrial Paper/Poly Waste (paper derived fuel or PDF):[40]

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions (continued)	**(2)** The permittee shall only use industrial paper/poly waste in the boilers that is manufactured from preconsumer industrial waste. [s. 285.63(1)(a), Wis. Stats.] **(3)** The permittee may not use municipal solid waste [41] in the boilers. [s. 285.63(1)(a), Wis. Stats.]	**(3)** To demonstrate compliance with condition I.G.1.a.(2) and (3) the permittee shall keep the records required by condition I.G.1.c.(5). [s. NR 407.09(1)(c)1.a., Wis. Adm. Code, s. 299.80, Wis. Stats.]. **(4)** To obtain approval from the Department to utilize other materials in condition I.G.1.a.(3), the permittee shall provide the Department with a written request for approval to burn any non-industrial waste. Each request shall include the following: (a) Description of waste; (b) Uniformity of waste including potential contaminants; (c) Source(s) of waste; (d) Describe, if any, changes in ash disposal required by burning the solid waste; (e) Bulk chemical analysis [42]; (f) Lab analysis for heat input that demonstrates that the burning of this product will not cause an exceedance of the heat input limitation in condition I.G.2.a.(2); (g) Emission estimates that demonstrate the burning of this product will not cause an exceedance of the National Ambient Air Quality Standards; and, (h) Emission estimates that demonstrate the burning of this product will not cause an exceedance of any regulatory threshold under ch. NR 445, Wis. Adm. Code. (i) Proposed usage rate expressed in percent heat input; and, (j) Any additional information requested by the Department. [s. NR 407.09(1)(c)1.a., Wis. Adm. Code, s. 299.80, Wis. Stats.] **(5)** The permittee shall continuously monitor the weight or volume (depending on heat content basis) input of fuels. If the permittee provides emission test data to the Department demonstrating that particulate matter emissions when cofiring PDF are equal to or less than when firing coal, then this monitoring requirement may be changed to monthly with written notice from the Department. [s. NR 407.09(1)(c)1.a., Wis. Adm. Code, s. 299.80, Wis. Stats.]	**(3)** The permittee shall keep records of the total amount of industrial paper/poly waste used during each month. [s. NR 439.04(1)(d)., Wis. Adm. Code] **(4)** The permittee shall keep the following records for each batch[43] of industrial paper/poly waste: (a) The name of the supplier that provided the fuel; (b) The source of the raw materials used to produce the industrial paper/poly waste; (c) A representative laboratory analysis of the industrial paper/poly waste used. [s. NR 439.04(1)(d), Wis. Adm. Code] **(5)** The permittee shall maintain records of parameters identified in I.G.1.b.(2) and (5). [s. NR 439.04(1)(d), Wis. Adm. Code]

[40] The requirements outlined in section I.E. of this permit apply to the boilers at all times regardless of the type of fuel fired.

[41] Municipal solid waste is defined in s. NR 500.03, Wis. Adm. Code.

[42] The bulk chemical analysis shall include proximate and ultimate fuel analyses and an analysis of the analytical concentrations of the following substances: antimony, arsenic, barium, beryllium, cadmium, chlorine, chromium, cobalt, copper, fluorine, lead, manganese, mercury, molybdenum, nickel, selenium, silver, vanadium, thallium, uranium, zinc.

[43] The records and samples for each batch of industrial paper/poly waste shall be collected for either: (1) each shipment of industrial paper/poly waste received from a single supplier that consists of waste generated by a single production method (i.e. as received); OR (2) each batch of industrial paper/poly waste fed to the boiler(s) (i.e. as combusted).

G. *ALTERNATE OPERATING SCENARIO #2:* S15/B28 and S16/B29 - Two Boilers Each Rated at 544 mmBtu per hour - (Continued)

Additional Applicable Requirements While Firing Industrial Paper/Poly Waste (paper derived fuel or PDF):[44]

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
2. Hydrogen Chloride *	**(1)** The chlorine content of the industrial paper/poly waste burned may not exceed 18,800 parts per million parts of industrial paper/poly waste, by weight.[45] [s. NR 445.05(1)(b), Wis. Adm. Code] *	**(1)** To demonstrate compliance with condition I.G.2.a.(1), the permittee shall: (a) Sample the industrial paper/poly waste batches[46] as outlined in condition I.G.2.c.(2)(a) through (e); and (b) Obtain, for every month industrial paper/poly waste are fired in the boilers, analytical lab information that contains the: (i) Chlorine content of the industrial paper/poly waste (expressed as parts per million parts of industrial paper/poly waste by weight); and (ii) The test method used to determine the chlorine content [s. NR 407.09(1)(c)1.a., Wis. Adm. Code] *	**(1)** Reference Test Method for Hydrogen Chloride Emissions: Whenever compliance emission testing is required, US EPA Method 26 or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(8), Wis. Adm. Code] * **(2)** Reference Test Method for Determining the Chloride Content of Industrial paper/poly waste: Whenever the chloride content of industrial paper/poly waste is required, the following periodic sampling and analysis procedure shall be used to demonstrate compliance: (a) Collect a representative sample of each batch[43] of industrial paper/poly waste according to condition AB.4.a.(1)(k). (b) Prepare industrial paper/poly waste samples for analysis according to ASTM D2013-86, Standard Method of Preparing Coal Samples for Analysis. (c) Composite each representative sample collected during a week into a single sample (weekly composite sample) according to condition AB.4.a.(1)(k). (d) Composite each weekly composite sample collected during a month into a single sample (monthly composite sample) according to condition AB.4.a.(1)(k). (e) Determine the chlorine content of the monthly composite sample according to ASTM D4208, Standard Method for Total Chlorine Content in Coal by Oxygen Combustion. [s. NR 439.06(8), Wis. Adm. Code] * **(3)** The permittee shall keep monthly records of the certified information required by condition I.G.2.b.(1)(b). [s. NR 439.04(1)(d), Wis. Adm. Code] *
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[44] The requirements outlined in section I.E. of this permit apply to the boilers at all times regardless of the type of fuel fired.

[45] These requirements are necessary to ensure that the emissions of hydrogen chloride from industrial paper/poly waste combustion do not cause or contribute to exceedances of the acceptable ambient concentration as outlined in s. NR 445.05(1)(b), Wis. Adm. Code.

[46] The records and samples for each batch of industrial paper/poly waste shall be collected for either: (1) each shipment of industrial paper/poly waste received from a single supplier that consists of waste generated by a single production method (i.e. as received); OR (2) each batch of industrial paper/poly waste fed to the boiler(s) (i.e. as combusted).

G. *ALTERNATE OPERATING SCENARIO #2:* S15/B28 and S16/B29 - Two Boilers Each Rated at 544 mmBtu per hour - (Continued)
Additional Applicable Requirements While Firing Industrial Paper/Poly Waste (paper derived fuel or PDF):[47]

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
2. Hydrogen Chloride - (continued) *	**(2)** The heat content of the industrial paper/poly waste burned shall be greater than or equal to 5500 Btu per pound of industrial paper/poly waste.[48] [s. NR 445.05(1)(b), Wis. Adm. Code] *	**(2)** To demonstrate compliance with condition I.G.2.a.(2), the permittee shall: (a) Sample the industrial paper/poly waste batches[49] as outlined in condition I.G.2.c.(4)(a) through (d); and (b) Obtain, for every week industrial paper/poly waste are fired in the boilers, analytical lab information that certifies the: (i) heat content of the industrial paper/poly waste (expressed as Btu per pound of industrial paper/poly waste), and (ii) the test method used to determine the heat content of the industrial paper/poly waste [s. NR 407.09(1)(c)1.a., Wis. Adm. Code] *	**(4)** Reference Test Method for Determining the Heat Content of Industrial paper/poly waste: Whenever heat content testing of industrial paper/poly waste is required, the following periodic sampling and analysis procedure shall be used to demonstrate compliance: (a) Collect a representative sample of each batch[46] of industrial paper/poly waste according to condition AB.4.a.(1)(k). (b) Prepare industrial paper/poly waste samples for analysis according to ASTM D2013-86, Standard Method of Preparing Coal Samples for Analysis. (c) Composite each representative sample collected during a week into a single sample (weekly composite sample) according to condition AB.4.a.(1)(k). (d) Determine the heat content of each weekly composite sample according to ASTM D5865, Standard Test Method for Gross Calorific Value of Coal and Coke. [s. NR 439.06(8), Wis. Adm. Code] * **(5)** The permittee shall keep weekly records of the certified information required by condition I.G.2.b.(2)(b). [s. NR 439.04(1)(d), Wis. Adm. Code] * **(6)** The permittee shall keep monthly records of: (a) The chlorine content for each monthly composite sample (expressed in parts per million parts of industrial paper/poly waste); and (b) The heat content for each composite sample (expressed in Btu per pound of industrial paper/poly waste). [s. NR 439.03(1), Wis. Adm. Code] *

[47] The requirements outlined in section I.E. of this permit apply to the boilers at all times regardless of the type of fuel fired.

[48] These requirements are necessary to ensure that the emissions of hydrogen chloride from industrial paper/poly waste combustion do not cause or contribute to exceedances of the acceptable ambient concentration as outlined in s. NR 445.05(1)(b), Wis. Adm. Code.

[49] The records and samples for each batch of industrial paper/poly waste shall be collected for either: (1) each shipment of industrial paper/poly waste received from a single supplier that consists of waste generated by a single production method (i.e. as received); OR (2) each batch of industrial paper/poly waste fed to the boiler(s) (i.e. as combusted).

G. *ALTERNATE OPERATING SCENARIO #2:* S15/B28 and S16/B29 - Two Boilers Each Rated at 544 mmBtu per hour - (Continued)

Additional Applicable Requirements While Firing Industrial Paper/Poly Waste (paper derived fuel or PDF):[50]

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
3. Chapter NR 445, Wis Adm. Code Table 3 Hazardous Air Pollutants (Nickel) * *Continued on Next Page...*	**(1)** The control equipment required by condition I.E.1.b.(2) shall be operated whenever industrial paper/poly wastes are combusted in either boiler B28 or B29.[48] [ss. NR 445.05(3), Wis. Adm. Code and 285.63(1)(a), Wis. Stats.] * **(2)** The total amount of industrial paper/poly wastes (PDF) used in boilers B28, and B29 <u>combined</u> may not exceed 1229 tons per month averaged over each consecutive 12 month period.[51] [ss. NR 445.05(3), Wis. Adm. Code and 285.63(1)(a), Wis. Stats.] * **(3)** The concentration of nickel in the industrial paper/poly wastes used may not exceed 150 ppm (by weight).[48] [ss. NR 445.05(3), Wis. Adm. Code and 285.63(1)(a), Wis. Stats.] *	**(1)** The compliance demonstration methods of conditions I.E.1.b.(3) and (4) shall also serve to demonstrate compliance with condition I.G.3.a.(1). [ss. NR 439.055(1)(c) and NR 439.055(1)(c), Wis. Adm. Code] * **(2)** To demonstrate compliance with condition I.G.3.a.(2), the permittee shallcalculate the total tons of industrial paper/poly waste used in B28 and B29 combined averaged over each 12 consecutive month period by dividing the total tons of industrial paper/poly waste used during each consecutive 12 month period by 12. This calculation shall be performed within fifteen business days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code] * **(3)** To demonstrate compliance with condition I.G.3.a.(2), the permittee shall: (a) Sample the industrial paper/poly waste batches[52] as outlined in condition I.G.3.c.(4)(a) through (e); and (b) Obtain, for every month industrial paper/poly wastes are fired in the boilers, analytical lab information that certifies the: (i) Nickel content of the industrial paper/poly waste (expressed as parts per million parts of industrial paper/poly waste); and (ii) The test methods used to determine the nickel content. [s. NR 407.09(1)(c)1.a., Wis. Adm. Code] *	**(1)** <u>Reference Test Method for Nickel Emissions:</u> Whenever compliance emission testing is required, US EPA Method 0012 or an alternate method approved in writing by the Department shall be used. [s. NR 439.06(8), Wis. Adm. Code] * **(2)** The record keeping requirements outlined in conditions I.E.1.c.(4) and (5) shall also serve as record keeping requirements for nickel. [ss. NR 439.055(2)(b) and NR 439.04(1)(d), Wis. Adm. Code] * **(3)** The permittee shall keep monthly records of: (a) The total tons of industrial paper/poly waste used in boilers B28 and B29 combined; (b) The tons of industrial paper/poly waste used in boilers B28 and B29 combined averaged over each 12 consecutive month period as calculated in condition I.G.3.b.(2). [s. NR 439.04(1)(d), Wis. Adm. Code] *

[50] The requirements outlined in section I.E. of this permit apply to the boilers <u>at all times</u> regardless of the type of fuel fired.

[51] These limitations along with the limitations on the amount of boiler cleaning waste liquid fired, see conditions I.E.1.a.(1) - (4) and I.I.1.a.(1) - (4), limit the potential emission rates of each of the ch. NR 445, Wis. Adm. Code, Table 3 hazardous air pollutants to less than the corresponding table values.

[52] The records and samples for each batch of industrial paper/poly waste shall be collected for either: (1) each shipment of industrial paper/poly waste received from a single supplier that consists of waste generated by a single production method (i.e. as received); OR (2) each batch of industrial paper/poly waste fed to the boiler(s) (i.e. as combusted).

G. *ALTERNATE OPERATING SCENARIO #2:* S15/B28 and S16/B29 - Two Boilers Each Rated at 544 mmBtu per hour - (Continued)

Additional Applicable Requirements While Firing Industrial Paper/Poly Waste (paper derived fuel or PDF):[53]

POLLUTANT	a. LIMITS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
3. Chapter NR 445, Wis Adm. Code Table 3 Hazardous Air Pollutants (Nickel) - (Continued)			**(4)** Reference Test Method for Determining the Nickel Content of Industrial Paper/Poly Waste: Whenever the nickel content of industrial paper/poly waste is required, the following periodic sampling and analysis procedure shall be used to demonstrate compliance: (a) Collect a representative sample of each batch[50] of industrial paper/poly waste according to condition AB.4.a.(1)(k). (b) Prepare industrial paper/poly waste samples for analysis according to condition AB.4.a.(1)(k). (c) Composite each representative sample collected during a week into a single sample (weekly composite sample) according to condition AB.4.a.(1)(k). (d) Composite each weekly composite sample collected during a month into a single sample (monthly composite sample) according to condition AB.4.a.(1)(k). (e) Determine the nickel content of the monthly composite sample according to a test method approved by the Department. [s. NR 439.06(8), Wis. Adm. Code] * **(5)** The permittee shall keep monthly records of the certified information required by condition I.G.3.b.(3)(b). [s. NR 439.04(1)(d), Wis. Adm. Code] *

[53] The requirements outlined in section I.E. of this permit apply to the boilers at all times regardless of the type of fuel fired.

G. *ALTERNATE OPERATING SCENARIO #2:* S15/B28 and S16/B29 - Two Boilers Each Rated at 544 mmBtu per hour - (Continued)

Additional Applicable Requirements While Firing Industrial Paper/Poly Waste (paper derived fuel or PDF):[54]

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
4. Visible Emissions	**(1)** Industrial paper/poly waste may not be used in each boiler in percentages (in heat input supplied to the boiler) quantities greater than the lower of: (a) 30 percent heat input (see note) or (b) The percentage of industrial paper/poly waste heat input used during the most recent stack test, performed in accordance with I.G.4.b.(1), that demonstrated compliance with the visible emission limitation in condition I.E.2.a.(1). [s. 285.63(1)(a), Wis. Stats.] *NOTE: This limit has been included so that the boilers may not be considered as an "Incinerator" under the solid waste management definition in NR 500.03, Wis. Adm. Code.*	**(1)** The following compliance emission tests of boilers B28 and B29, while firing industrial paper/poly waste alone or in combination with other fuels, shall be conducted to demonstrate compliance with the visible emission limit in condition I.E.2.a.(1): (a) Within 90 days of increasing the maximum hourly percentage of industrial paper/poly waste used by more than 5 percent. (b) These tests shall be conducted in accordance with condition I.AB.3.a.(1). (c) The permittee may use compliance emission test results from another boiler owned by the permittee with similar design specifications, in lieu of the compliance testing required above, provided the permittee receives prior written approval from the Department. The permittee shall submit a written request for this approval to the Department. [s. NR 439.07, Wis. Adm. Code] **(2)** The compliance demonstration method for particulate matter emissions outlined in conditions I.G.1.b.(2) and (3) and I.E.2.b.(1) through (4) also serves as a compliance demonstration method for visible emissions. [s. NR 407.09(1)(c)1.a., Wis. Adm. Code]	**(1)** Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] **(2)** The recordkeeping requirements for particulate matter emissions outlined in condition I.G.1.c.(2) through (5) also serve as recordkeeping requirements for visible emissions. [s. NR 439.04(1)(d), Wis. Adm. Code]

[54] The requirements outlined in section I.E. of this permit apply to the boilers at all times regardless of the type of fuel fired.

H. *ALTERNATE OPERATING SCENARIO #3:* S15/B28 and S16/B29 - (Acid Rain Units 8 & 9) - Two Boilers Each Rated at 544 mmBtu per hour

Additional Applicable Requirements While Firing Biomass/Switch Grass:[55]

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions *Continued on Next Page...*	**(1)** Biomass/switch grass may not be burned in the boilers in quantities greater than the lesser of the following: (a) 30 percent heat input supplied to each boiler (see note); or (b) the percentage, in heat input, supplied by biomass/switch grass during the most recent stack test, performed in accordance with I.H.1.b.(1), that demonstrated compliance with the particulate matter emission limitation in condition I.E.1.a.(1). [s. 285.63(1)(a), Wis. Stats.] *NOTE: This limit has been included so that the boilers may not be considered as an "Incinerator" under the solid waste management definition in NR 500.03, Wis. Adm. Code.*	**(1)** The following compliance emission tests while burning biomass/switch grass in combination with other fuels in each of the boilers, shall be conducted to demonstrate compliance with the particulate matter emission limit in conditions I.E.1.a.(1): (a) A particulate matter emission test shall be conducted within 90 days of the first time switch grass is used in each boiler after the date this permit is issued; AND (b) Within 90 days of increasing the maximum hourly percentage of switch grass used by more than 5 percent. (c) This testing shall be conducted in accordance with condition I.AB.3.a.(1). (d) The permittee may use compliance emission test results from another boiler owned by the permittee with similar design specification, in lieu of the compliance testing required above, provided the permittee receives prior written approval from the Department. The permittee shall submit requests for this approval to the Department in writing. [ss. NR 439.07 and NR 439.075(2)(a)1. and (3)(b), Wis. Adm. Code]	**(1)** Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5, including condensible backhalf emissions, or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code] **(2)** The permittee shall keep the following records for each boiler on a monthly basis: (a) The type of fuels used during each day that biomass/switch grass is used; (b) The average heat content (expressed in Btu per pound or mmBtu per ton for solid fuels and Btu per million cubic feet for gaseous fuel) of each fuel used during each month that biomass/switch grass is used; (c) The amount (expressed in pounds or tons for solid fuels or million cubic feet for gaseous fuel) of each fuel used during each month that biomass/switch grass is used; and (d) The monthly average percentage of heat input (**P**) that was supplied to the boiler from all alternate fuels, (**P**, expressed in heat input to the boiler), as calculated using the equation in condition I.F.1.b.(2). [s. NR 439.04(1)(d), Wis. Adm. Code]

[55] The requirements outlined in section I.E. of this permit apply to the boilers at all times regardless of the type of fuel fired.

H. ***ALTERNATE OPERATING SCENARIO #3:*** **S15/B28 and S16/B29 - Two Boilers Each Rated at 544 mmBtu per hour - (Continued)**

Additional Applicable Requirements While Firing Biomass/Switch Grass:[56]

POLLUTANT	a.LIMITS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions - (Continued)		**(2)** To demonstrate compliance with condition I.H.1.a.(1), the permittee shall calculate the percentage of switch grass heat input to each boiler using the following calculation: $P = \frac{HC_{SG} \times Q_{SG}}{\sum_{i=1}^{n}(HC_i \times Q_i)} \times 100$ where: **P** is the monthly average percentage (by heat input supplied to the boiler) of switch grass; $\mathbf{HC_{SG}}$ is the heat content of the switch grass used during the month (expressed in Btu per pound or mmBtu per ton); $\mathbf{Q_{SG}}$ is the amount of switch grass used (expressed in pounds or tons) during the month; **n** is the total number of other fuels co-fired with the switch grass during the month; **i** represents each fuel fired during the month; $\mathbf{HC_i}$ is the heat content of the switch grass fired and each fuel co-fired with switch grass during the month (expressed as Btu per pound or mmBtu per ton for solid fuels or Btu per million cubic feet for gaseous fuels); and $\mathbf{Q_i}$ is the amount of each fuel co-fired with switch grass during the month (expressed in pounds or tons for solid fuels or million cubic feet for gaseous fuels). The permittee shall perform these calculations for each calendar month no later than the end of the fifteenth business day of the next calendar month. [s. NR 407.09(1)(c)1.a., Wis. Adm. Code] **(3)** The permittee shall use one of the following to determine the heat content of the fuels used: (a) certified supplier information; (b) representative data; or (c) the results of the sampling and analysis required by condition I.AB.4.a.(1)(d). If there is a discrepancy in these values, the results of the sampling and analysis required by condition I.AB.4.a.(1)(d) shall govern. [s. NR 407.09(4)(a), Wis. Adm. Code]	

[56] The requirements outlined in section I.E. of this permit apply to the boilers at all times regardless of the type of fuel fired.

H. *ALTERNATE OPERATING SCENARIO #3:* S15/B28 and S16/B29 - Two Boilers Each Rated at 544 mmBtu per hour - (Continued)

Additional Applicable Requirements While Firing Biomass/Switch Grass:[57]

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
2. Visible Emissions	**(1)** Biomass/Switch Grass may not be burned in the boiler in quantities greater than the lesser of the following: (a) 30 percent heat input supplied to each boiler (see note); or (b) the percentages, in heat input, supplied by switch grass during the most recent stack test, performed in accordance with I.H.2.b.(1), that demonstrated compliance with the visible emission limitation in condition I.E.2.a.(1). [s. 285.63(1)(a), Wis. Stats.] *NOTE: This limit has been included so that the boilers may not be considered as an "Incinerator" under the solid waste management definition in NR 500.03, Wis. Adm. Code.*	**(1)** The following compliance emission tests while firing switch grass in combination with other fuels, shall be conducted for each boiler to demonstrate compliance with the visible emission limit in condition I.E.2.a.(1): (a) A visible emission test shall be conducted within 90 days of the first time switch grass is used in each boiler after the date this permit is issued; AND (b) Within 90 days of increasing the maximum hourly percentage of biomass/switch grass used by more than 5 percent. (c) This testing shall be conducted in accordance with condition I.AB.3.a.(1). (d) The permittee may use compliance emission test results from another boiler owned by the permittee with similar design specification, in lieu of the compliance testing required above, provided the permittee receives prior written approval from the Department. The permittee shall submit requests for this approval to the Department in writing. [s. NR 439.07, Wis. Adm. Code]	**(1)** Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] **(2)** The recordkeeping requirements for particulate matter emissions outlined in condition I.H.1.c.(2) also serve as recordkeeping requirements for visible emissions. [s. NR 439.04(1)(d), Wis. Adm. Code]

[57] The requirements outlined in section I.E. of this permit apply to the boilers at all times regardless of the type of fuel fired.

I. *ALTERNATE OPERATING SCENARIO #4:* **S15/B28 and S16/B29 - Two Boilers Each Rated at 544 mmBtu per hour - (Continued)**

Additional Applicable Requirements While Firing Boiler Cleaning Waste Liquid:[58]

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Hazardous Air Pollutants *	**(1)** The permittee shall only combust boiler cleaning waste liquids that have trace metal contents below the TCLP regulatory levels in NR 605.08, Table I, Wis. Adm. Code. [59]: [s. NR 445.05(1), (3) and (4), Wis. Adm. Code] * **(2)** Boiler cleaning waste liquid may not be fired with any other alternate fuel. [s. NR 445.05(1), (3) and (4), Wis. Adm. Code] * **(3)** The total amount of boiler cleaning waste liquid fired in boilers B27, B28 and B29 combined, in any 12 month period may not exceed 96,000 gallons.[60] [s. NR 445.05(1), (3) and (4), Wis. Adm. Code] * **(4)** The total flow rate of boiler cleaning waste liquid fired in boilers B27, B28 and B29 combined may not exceed 2700 gallons per hour. [s. NR 445.05(1), (3) and (4), Wis. Adm. Code] *	**(1)** To demonstrate compliance with I.I.1.a.(1), the permittee shall analyze all boiler cleaning waste liquids that will be fired in the boilers to determine the concentration of each compounds listed in I.I.1.a.(1). [s. NR 407.09(4)(a)1., Wis. Adm. Code] * **(2)** To demonstrate compliance with I.I.1.a.(2), the permittee shall keep the records required by I.I.1.c.(2)(c). [s. NR 407.09(4)(a)1., Wis. Adm. Code] * **(3)** To demonstrate compliance with I.I.1.a.(3), the permittee shall calculate the gallons of boiler cleaning waste liquid fired in boilers B27, B28 and B29 over each 12 consecutive month period, by totaling the amount of boiler cleaning waste liquid fired in boilers B27, B28 and B29 for the previous 12 months. The permittee shall perform this calculation within fifteen business days of combusting boiler cleaning waste liquid in any of boilers B27, B28 and B29. [s. NR 407.09(4)(a)1., Wis. Adm. Code] * **(4)** To demonstrate compliance with I.I.1.a.(4), the permittee shall calculate the total amount of boiler cleaning waste liquid feed to boilers B27, B28 and B29 combined, at any one time, in gallons per hour. [s. NR 407.09(4)(a)1., Wis. Adm. Code] *	**(1)** The permittee shall use the test methods listed in s. NR 605.11, Wis. Adm. Code, or 40 CFR part 261, Appendix II to determine the concentration of the compounds listed in I.I.1.a.(1), in all boiler cleaning waste liquid to be burned in the boilers. [s. NR 439.06(8), Wis. Adm. Code] * **(2)** The permittee shall keep records of: (a) The date that any boiler cleaning waste liquids are burned in the boiler; (b) The analysis required by I.I.1.b.(1) for all boiler cleaning waste liquids burned in the boiler; (c) All other fuels burned at the time of firing boiler cleaning waste liquids in the boiler; (d) A list of the boilers which are firing boiler cleaning waste liquids at the same time; (e) The amount of boiler cleaning waste liquid fired in each boiler, firing boiler cleaning waste liquid at the same time, in gallons; (f) The flow rate of boiler cleaning waste liquid feed to each boiler firing boiler cleaning waste liquid at the same time, in gallons per hour; (g) The total amount of boiler cleaning waste liquid fired in boilers B27, B28 and B29 combined over each 12 month period, as calculated in I.I.1.b.(3); and (h) The total amount of boiler cleaning waste liquid feed to boilers B27, B28 and B29 combined, at any one time, in gallons per hour, as calculated in I.I.1.b.(4). [s. NR 439.04(1)(d), Wis. Adm. Code] *

[58] The requirements outlined in section I.E. of this permit apply to the boilers at all times regardless of the type of fuel fired.

[59] These concentrations are the TCLP regulation action levels (Table I, ch. NR 605, Wis. Adm. Code) that are used to determine if a material is a hazardous waste.

[60] This limitation along with the limitations on the amount of paper/poly waste used, see conditions I.G.3.a.(1) - (3), limit the potential emission rates of each of the ch. NR 445, Wis. Adm. Code, Table 3 hazardous air pollutants to less than the corresponding table values.

J. P31/S31 - Natural Gas/Propane Generator Rated at 1.2 MW Power Output, 18.0 mmBtu per Hour Heat Input - Installed 1969

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions	**(1)** Emissions may not exceed the most restrictive of: (a) 0.60 pounds per million Btu heat input; and (b) 1.25 pounds per hour.[61] [s. NR 415.06(1)(a), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]	**(1)** The permittee shall only fire natural gas and/or propane in this generator.[62] [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	**(1)** Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5, including condensible backhalf emissions, or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code] **(2)** The permittee shall retain on site, plans and specifications that indicate the generator's fuel usage design capabilities.[63] [s. NR 439.04(1)(d), Wis. Adm. Code]
2. Visible Emissions	**(1)** No owner or operator of a direct or portable source may cause or allow emissions of shade or density greater than number 2 of the Ringlemann chart or 40% opacity with the following exceptions: When combustion equipment is being cleaned or a new fire started, emissions may exceed number 2 of the Ringlemann chart or 40% opacity but may not exceed number 4 of the Ringlemann chart or 80% opacity for 6 minutes in any one hour. Combustion equipment may not be cleaned nor a fire started more than 3 times per day. [s. NR 431.04(1) and s. NR 431.05(1), Wis. Adm. Code]	**(1)** The permittee shall only fire natural gas and/or propane in this generator. [64] [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]	**(1)** Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] **(2)** The permittee shall retain on site, plans and specifications that indicate the generator's fuel usage design capabilities.[65] [s. NR 439.04(1)(d), Wis. Adm. Code]

[61] This more restrictive emission limitation is necessary to ensure that the national ambient air quality standards or particulate matter are attained and maintained.

[62] Because the more restrictive emission limitation is the maximum theoretical emissions while firing these fuel, limiting the type of fuels used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 0.0697 pounds per million Btu from AP-42, 5th edition, ch. 3.4.

[63] These plans and specifications are sufficient because the generator is designed to only burn natural gas and/or propane.

[64] Natural gas and propane are clean burning fuels. It is not expected that the visible emission limitation of 40% opacity would be exceeded while firing these fuels. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

[65] These plans and specifications are sufficient because the generator is designed to only burn natural gas and/or propane.

J. P31/S31 - Natural Gas/Propane Generator Rated at 1.2 MW Power Output, 18.0 mmBtu per Hour Heat Input - Continued

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
3. Nitrogen Oxide	**(1)** The operating hours of generator P31 may not exceed 358 hours during each 12 consecutive month period.[66] [ss. 285.63(1)(b) and 285.65(7), Wis. Stats]	**(1)** The permittee shall calculate the operating hours for generator P31, for each 12 consecutive month period by summing the monthly operating hours for P31, for the previous 12 consecutive months. The above calculations shall be performed within fifteen business days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]	**(1)** Reference Test Method for Nitrogen Oxide Emissions: Whenever compliance emission testing is required, US EPA Method 7, 7A, 7C, 7D, and 7E, or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(6), Wis. Adm. Code] **(2)** The permittee shall keep monthly records of the following for P31: (a) The hours that P31 was operated during each month; and (b) The operating hours for P31, for each 12 consecutive month period as calculated in condition I.J.3.b.(1). [s. NR 439.04(1)(d), Wis. Adm. Code]

[66] The operating hour limitation is necessary to ensure that the national ambient air quality standard for nitrogen oxide is attained and maintained.

K. P33/S33 - Three Natural Gas Generators Total Rating of 787.5 kW Power Output, 11.8 mmBtu per Hour Heat Input - Installed 1987

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions	**(1)** Emissions from each unit may not exceed the most restrictive of: (a) 0.15 pounds per million Btu heat input; and (b) 0.82 pounds per hour.[67] [s. NR 415.06(2)(a), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]	**(1)** The permittee shall only fire natural gas in these generators.[68] [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	**(1)** Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5, including condensible backhalf emissions, or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code] **(2)** The permittee shall retain on site, plans and specifications that indicate each generator's fuel usage design capabilities.[69] [s. NR 439.04(1)(d), Wis. Adm. Code]
2. Visible Emissions	**(1)** No owner or operator of a direct or portable source may cause or allow emissions of shade or density greater than number 1 of the Ringlemann chart or 20% opacity with the following exceptions: When combustion equipment is being cleaned or a new fire started, emissions may exceed number 1 of the Ringlemann chart or 20% opacity but may not exceed number 4 of the Ringlemann chart or 80% opacity for 6 minutes in any one hour. Combustion equipment may not be cleaned nor a fire started more than 3 times per day. [s. NR 431.05 and s. NR 431.05(1), Wis. Adm. Code]	**(1)** The permittee shall only fire natural gas in these generators. [70] [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]	**(1)** Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] **(2)** The permittee shall retain on site, plans and specifications that indicate each generators fuel usage design capabilities.[71] [s. NR 439.04(1)(d), Wis. Adm. Code]

[67] This more restrictive emission limitation is necessary to ensure that the national ambient air quality standards for particulate matter are attained and maintained.

[68] Because the maximum theoretical emissions while firing this fuel are less than the allowable limit of 0.15 pounds per million Btu heat input, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 0.0697 pounds per million Btu from AP-42, 5th edition, ch. 3.4.

[69] These plans and specifications are sufficient because the generators are designed to only burn natural gas.

[70] Natural gas is a clean burning fuels. It is not expected that the visible emission limitation of 20% opacity would be exceeded while firing this fuel. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

[71] These plans and specifications are sufficient because the generators are designed to only burn natural gas.

K. P33/S33 - Three Natural Gas Generators Total Rating of 787.5 kW Power Output, 11.8 mmBtu per Hour Heat Input - Continued

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
3. Nitrogen Oxide	**(1)** The operating hours of generators P33 may not exceed 1990 hours during each 12 consecutive month period.[72] [ss. 285.63(1)(b) and 285.65(7), Wis. Stats]	**(1)** The permittee shall calculate the operating hours for generators P33, for each 12 consecutive month period by summing the monthly operating hours for P33, for the previous 12 consecutive months. The above calculations shall be performed within fifteen business days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]	**(1)** Reference Test Method for Nitrogen Oxide Emissions: Whenever compliance emission testing is required, US EPA Method 7, 7A, 7C, 7D, and 7E, or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(6), Wis. Adm. Code] **(2)** The permittee shall keep monthly records of the following for P33: (a) The hours that P33 was operated during each month; and (b) The operating hours for P33, for each 12 consecutive month period as calculated in condition I.K.3.b.(1). [s. NR 439.04(1)(d), Wis. Adm. Code]

[72] The operating hour limitation is necessary to ensure that the national ambient air quality standard for nitrogen oxide is attained and maintained.

L. P34/S34 - Emergency Diesel Generator rated at 600 kW- Installed 1999

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. All Pollutants	**(1)** The emergency generator shall be designated as emergency reserve equipment and only be used in emergency situations and for scheduled periodic testing. [s. NR 436.03(2)(c), Wis. Adm. Code] **(2)** The permittee shall notify the Department within 24 hours of emergency generator start up, for start ups other than those for periodic testing purposes. The Department may or may not give approval for continued equipment use. [s. NR 436.03(2)(c), Wis. Adm. Code] **(3)** The operating hours of generator P34 may not exceed 200 hours per year.[73] [ss. NR 400.02(30), Wis Adm. Code and 285.63(1)(b) and 285.65(7), Wis. Stats] **(4)** The sulfur content of any distillate fuel oil burned may not exceed 30 ppm. [s. 285.65(7), Wis. Stats. *74]	**(1)** Distillate oil is the only fuel that shall be fired in the emergency generator. [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]	**(1)** The permittee shall keep records of when the emergency generator is operated. These records shall include: (a) Date of operation; (b) An indication of whether the generator was operated for periodic testing or an emergency situation; (c) Start-up time for the generator; (d) Shut-down time for the generator; and (e) The hours of operation for the generator for each occurance. (f) The total annual hours of operation of the generator. [s. NR 439.04(1)(d), Wis. Adm. Code]

[73] By definition, the operating hours of an emergency generator may not exceed 200 hours per year. Additionally, this operating hour limitation is necessary to ensure that the national ambient air quality standard for nitrogen oxide is attained and maintained.

74 This is a state-only requirement based on Condition IV.B.1 and VII.E of the Memorandum of Understanding Between MGE and UW-Madison/DOA and Certain Citizen/Environmental Groups

M. P32/S32 - Alternate Fuel Receiving Building - Installed 1979

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions	(1) Emissions may not exceed the most restrictive of: (a) 0.40 pounds per 1000 pound gas; (b) $E = 3.59\ P^{0.62}$ where: E is the emission rate in pounds per hour and P is the process weight rate in tons per hour; and (c) 1.68 pounds per hour.[75] [ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]	(1) The permittee shall operate a baghouse to control particulate matter emissions from the alternate fuel receiving building operations. [s. 285.63(1)(a), Wis. Stats.] (2) The permittee shall maintain the pressure drop across the baghouse between 2.0 and 7.0 inches of water or a pressure drop range approved by the Department in writing. [s. NR 407.09(4)(a), Wis. Adm. Code]	(1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5, including condensible backhalf emissions, or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code] (2) The permittee shall monitor and record the pressure drop across the baghouse, in inches of water, at least once every eight hours, when the alternate fuel receiving process is operated during the shift. [s. NR 439.055(1) and (2)(b)1., Wis. Adm. Code] (3) The permittee shall keep records of: (a) The date and time any bags are replaced; and (b) The date of baghouse inspections. [s. NR 439.04(1)(d), Wis. Adm. Code]
2. Visible Emissions	(1) 20 percent opacity. [s. NR 431.05, Wis. Adm. Code]	(1) The compliance demonstration methods for particulate matter outlined in conditions I.M.1.b.(1) and (2) are also required as compliance demonstration methods for visible emissions. [s. NR 415.04(1), Wis. Adm. Code]	(1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] (2) The record keeping requirements for particulate matter emissions in condition I.M.1.c.(2) and (3) shall also serve as the record keeping requirements for visible emissions. [s. NR 439.04(1)(d), Wis. Adm. Code]

[75] The more restrictive emission limitation is required to ensure that the national ambient air quality standards for particulate matter are attained and maintained. This more restrictive limitation is equal to the maximum theoretical particulate matter emissions from this process.

N. F01 - Coal Thawing and Railcar/Truck Unloading - Installed Pre- 1961

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions *Continued on Next Page...*	**(1)** The permittee may not cause, allow or permit any materials to be handled, transported or stored without taking precautions to prevent particulate matter from becoming airborne. [s. NR 415.04, Wis. Adm. Code]	**(1)** At least once each day of operation, personnel shall visually inspect the coal thawing and railcar/truck unloading operation for particulate matter emissions, and take precautions to prevent particulate matter from becoming airborne. Precautions to control particulate matter emissions shall include but not be limited to applying water and/or dust suppression chemicals. [ss. NR 407.09(4)(a) and NR 415.04(1), Wis. Adm. Code] **(2)** Personnel shall be trained and instructed to: (a) use preventative measures to avoid particulate matter emissions; and (b) notify the supervisory personnel if visible emissions are detected. [ss. NR 407.09(4)(a) and NR 415.04(1), Wis. Adm. Code] **(3)** The permittee shall provide training to personnel at least once every two years that includes but is not limited to: (a) reasons for dust control; (b) standard operating and maintenance procedures as required by condition I.N.1.b.(4); and (c) reporting and record keeping requirements. [ss. NR 407.09(4)(a) and NR 415.04(1), Wis. Adm. Code]	**(1)** The permittee shall keep records of: (a) The results of the visual inspections required by condition I.N.1.b.(1); (b) The date and time of each visual inspection; (c) The initials of the individual performing the inspection; (d) The status of visible emissions (i.e. are visible emissions detected or not); (e) The cause of any particulate matter emissions; (f) Any action taken to control particulate matter emissions; (g) The results of actions taken to control particulate matter emissions (i.e. did actions eliminate visible emissions); (h) The approximate amount of any water and/or chemicals used; (i) The time that any water and/or chemicals are applied; (j) Any maintenance or repairs made; and (k) The number of railroad cars unloaded each day; (l) If the coal thawing and railcar/truck unloading process is not operated on a particular day, that information, date and initials of individual making determination shall be recorded in lieu of the data in (a) through (k). [s. NR 439.04(1)(d), Wis. Adm. Code] **(2)** The permittee shall keep records of: (a) Visible emissions reported by personnel, as required by condition I.N.1.b.(2); (b) The date and time the visible emissions are detected; (c) The date and time the visible emissions are reported to the supervisory personnel; (d) The cause of the particulate matter emissions; (e) Actions taken to control the particulate matter emissions; (f) The results of the actions taken to control particulate matter emissions (i.e. did actions eliminate visible emissions); (g) The approximate amount of any water and/or chemicals used; (i) The time that any water and/or chemicals are applied; and (j) Any maintenance or repairs made. [s. NR 439.04(1)(d), Wis. Adm. Code]

O. P01/S01 - Coal Thawing Burners - Maximum Rated Heat Input Capacity 40.0 mmBtu/hr - Pre- 1961

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions	(1) Emissions may not exceed 0.60 pounds per million Btu heat input. [s. NR 415.06(1)(a), Wis. Adm. Code]	(1) The permittee shall only fire natural gas in the coal thawing burners.[76] [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	(1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5, including condensible backhalf emissions, or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code] (2) The permittee shall retain on site, a written statement certifying that the coal thawing burners are only capable of firing natural gas.[77] [s. NR 439.04(1)(d), Wis. Adm. Code]
2. Visible Emissions	(1) No owner or operator of a direct or portable source may cause or allow emissions of shade or density greater than number 2 of the Ringlemann chart or 40% opacity with the following exceptions: When combustion equipment is being cleaned or a new fire started, emissions may exceed number 2 of the Ringlemann chart or 40% opacity but may not exceed number 4 of the Ringlemann chart or 80% opacity for 6 minutes in any one hour. Combustion equipment may not be cleaned nor a fire started more than 3 times per day. [s. NR 431.0(1) and s. NR 431.05(1), Wis. Adm. Code]	(1) The permittee shall only fire natural gas in the coal thawing burners. [78] [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]	(1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] (2) The permittee shall retain on site, a written statement certifying that the coal thawing burners are only capable of firing natural gas.[79] [s. NR 439.04(1)(d), Wis. Adm. Code]

[76] Because the maximum theoretical emissions while firing this fuel is less than the allowable limit of 0.60 pounds per million Btu heat input, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic foot of natural gas fired from AP-42, 5th edition, ch. 1.4.

[77] This certification is sufficient because the burners are designed to only burn natural gas.

[78] Natural gas is a clean burning fuel. It is not expected that the visible emission limitation of 40% opacity would be exceeded while firing this fuel. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

[79] This certification is sufficient because the burners are designed to only burn natural gas.

P. F02 - Outdoor Coal Storage and Coal Pile Maintenance - Installed Pre- 1961

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions	**(1)** The permittee may not cause, allow or permit any materials to be handled, transported or stored without taking precautions to prevent particulate matter from becoming airborne. Nor may the permittee allow a structure, a parking lot, or a road to be used, constructed, altered, repaired, sand blasted, or demolished without taking such precautions. [s. NR 415.04, Wis. Adm. Code]	**(1)** The permittee shall ensure that hose connections, spray bars, etc., provide sufficient coverage of all areas of the coal yard. [s. NR 415.04(1), Wis. Adm. Code] **(2)** At least once each day, the personnel shall: (a) visually inspect the outdoor coal storage and coal pile maintenance activities for particulate matter emissions; (b) visually inspect the coal surface to verify the following conditions exist to prevent particulate matter emissions: (i) adequate crust; (ii) sufficient moisture; (ii) adequate compaction; and (iii) proper structure (e.g., no slides of coal or loose coal) (c) take precautions to prevent particulate matter from becoming airborne as necessary. Precautions to control particulate matter emissions shall include, but not be limited to, applying water and/or dust suppression chemicals, reclamation of the coal pile, and compaction of the coal pile. [ss. NR 407.09(4)(a) and NR 415.04(1), Wis. Adm. Code] **(3)** Personnel shall be trained and instructed to: (a) use preventative measures to avoid particulate matter emissions; (b) determine when to report particulate matter emission problems to the supervisory personnel (e.g., presence of visible emissions, insufficient moisture, inadequate crust on sections of the pile, coal pile structure, compaction of coal pile, wind speed, etc.); and (c) notify the supervisory personnel if visible emissions are detected. [ss. NR 407.09(4)(a) and NR 415.04(1), Wis. Adm. Code]	**(1)** The permittee shall retain a plot plan and equipment list showing the location of hose connections, spray bars, etc. at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code] **(2)** The permittee shall keep records of: (a) The results of the visual inspections required by condition I.P.1.b.(2); (b) The date and time of each visual inspection; (c) The initials of the individual performing the inspection; (d) The status of visible emissions (i.e. are visible emissions detected or not); (e) The cause of any particulate matter emissions; (f) Any action taken to control particulate matter emissions; (g) The results of actions taken to control particulate matter emissions (i.e. did actions eliminate visible emissions); (h) The approximate amount of any water and/or chemicals used; (i) The time that any water and/or chemicals are applied; and (j) Any maintenance or repairs made. [s. NR 439.04(1)(d), Wis. Adm. Code] **(3)** The permittee shall keep records of: (a) Visible emissions reported by personnel, as required by condition I.P.1.b.(3); (b) The date and time the visible emissions are detected; (c) The date and time the visible emissions are reported to the supervisory personnel; (d) The cause of the particulate matter emissions; (e) Actions taken to control the particulate matter emissions; (f) The results of the actions taken to control particulate matter emissions (i.e. did actions eliminate visible emissions); (g) The approximate amount of any water and/or chemicals used; (h) The time that any water and/or chemicals are applied; and (i) Any maintenance or repairs made. [s. NR 439.04(1)(d), Wis. Adm. Code]

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P. F02 - Outdoor Coal Storage and Coal Pile Maintenance - (Continued)

POLLUTANT	a.LIMITS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions - (Continued)		**(4)** The permittee shall provide training and instruction to personnel at least once every two years that includes, but is not limited to: (a) reasons for dust control; (b) operating procedures to prevent particulate matter emissions; (c) equipment operation and maintenance; and (d) reporting and record keeping requirements. [ss. NR 407.09(4)(a) and NR 415.04(1), Wis. Adm. Code] **(5)** The permittee shall comply with the following standard operating and maintenance procedures for long term coal storage and coal pile maintenance:[80] (a) The long term coal pile shall be compacted to minimize air and water infiltration as follows: (i) The long term coal pile shall be compacted within twenty-four hours following addition of coal to the pile; (ii) When removing coal or otherwise working the long term coal pile, all coal slides, loose coal, or other pile disturbances shall be cleaned up within twenty-four hours; (iii) The long term coal pile shall be compacted in layers not exceeding three feet thick; (iv) Each layer of the long term coal pile shall be compacted with an end loader or another similar vehicle; (v) The long term coal pile shall be compacted until end loader wheel tracks or tracks from another similar vehicle left on the compacted pile are equal to or less than one inch deep; (vi) Following any coal pile compaction operation, the permittee shall visually inspect the long term coal pile to determine compliance status with I.P.1.b.(5)(a)(i)-(v); and (b) The permittee shall use preventive measures during and immediately following long term coal pile construction and reclamation to prevent particulate matter emissions. [ss. NR 407.09(4)(a) and NR 415.04(1), Wis. Adm. Code]	**(4)** The permittee shall keep records of: (a) The date the training required by conditions I.P.1.b.(3) and (4) is provided; (b) A list of the topics covered by the training; and (c) A list of the attendees. [s. NR 439.04(1)(d), Wis. Adm. Code] **(5)** The permittee shall maintain records of: (a) Date and time that coal addition or coal pile disturbance is complete; (b) Date and time that coal pile compaction is complete; (c) Initials of the individual performing compaction and inspection; (d) Certification that conditions b.(5)(a)(i)-(v) have been complied with. [s. NR 439.04(1)(d), Wis. Adm. Code]
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[80] These requirements apply to the long term coal storage pile. The permittee is also allowed to operate a working coal pile that consists of the coal that remains after unloading the coal from railroad deliveries and filling the plants coal bunkers for the following days operation. The working pile supplies coal to the boilers for days when burn requirements exceed the available coal deliveries (i.e. when daily coal deliveries are less than daily coal use).

P. F02 - Outdoor Coal Storage and Coal Pile Maintenance - (Continued)

POLLUTANT	a. LIMITS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions - (Continued)		**(6)** The permittee shall review the standard operating and maintenance procedures for coal storage and coal pile maintenance required by I.P.1.b.(5) annually and update as necessary. [ss. NR 407.09(4)(a) and NR 415.04(1), Wis. Adm. Code] **(7)** The permittee shall maintain a barrier wall around the coal yard to prevent particulate matter from becoming airborne. [s. NR 415.04(1), Wis. Adm. Code] **(8)** At no time shall the height of any coal storage pile exceed the height of the barrier wall around the coal yard. [s. NR 415.04(1), Wis. Adm. Code] **(9)** In lieu of the requirements in I.P.1.b.(2), (3), and (5) through (8) and I.P.1.c.(2), (3) and (5), the permittee may follow alternate compliance demonstration and recordkeeping requirements, if approved or conditionally approved by the Department in writing. The permittee shall submit any request for alternate procedures to the Department in writing. [ss. NR 407.09(4)(a) and NR 415.04(1), Wis. Adm. Code]	

R. F03 - Coal Reclaim for Boilers B27, B28 and B29 - Installed Pre-1961

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions	(1) The permittee may not cause, allow or permit any materials to be handled, transported or stored without taking precautions to prevent particulate matter from becoming airborne. [s. NR 415.04, Wis. Adm. Code]	(1) To minimize particulate matter emissions, personnel shall conduct the following inspections and actions: (a) At least once per day, the personnel shall: (i) Inspect the conveyor system for coal loss and particulate matter emissions. (ii) Visually inspect the coal handling operations for particulate matter emissions. (iii) Take corrective actions and/or perform maintenance and repairs to prevent particulate matter emissions. (b) At least once per week, the personnel shall: (i) Inspect the hopper area, conveyor galleries, and transfer tower to verify proper operation of the reclaim and conveying system. (ii) Verify that the telescopic chute maintains a maximum of five feet of clearance from the pile when in use. (iii) Take corrective actions and/or perform maintenance and repairs to prevent particulate matter emissions. (c) At least once every six months, the personnel shall inspect the dust suppression system for proper operation and take corrective actions and/or perform maintenance and repairs to prevent particulate matter emissions. [s. NR 407.09(4)(a), Wis. Adm. Code] (2) The permittee shall provide training and instruction to personnel at least once every two years that includes, but is not limited to: (a) reasons for dust control; (b) operating procedures to prevent particulate matter emissions; (c) equipment operation and maintenance; and (d) reporting and record keeping requirements. [ss. NR 407.09(4)(a) and NR 415.04(1), Wis. Adm. Code]	(1) The permittee shall keep the following records of the activities in condition I.R.1.b.(1): (a) The date and time of conveyor inspections. (b) Results of the inspection. (c) The date and time any coal loss or particulate matter emissions are observed. (d) The cause of any particulate matter emissions. (e) Any repairs or corrective actions taken. (f) Initials of the individual performing the inspection. [s. NR 439.04(1)(d), Wis. Adm. Code] (2) The permittee shall keep records of: (a) The date the training required by conditions I.P.1.b.(3) and (4) is provided; (b) A list of the topics covered by the training; and (c) A list of the attendees. [s. NR 439.04(1)(d), Wis. Adm. Code]

S. F05 - Ash Silo No. 1 Unloading - Installed 1961

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions *Continued on Next Page...*	**(1)** The permittee may not cause, allow or permit any materials to be handled, transported or stored without taking precautions to prevent particulate matter from becoming airborne. [s. NR 415.04, Wis. Adm. Code]	**(1)** The permittee shall use a vacuum truck to vacuum ash from the silo into an enclosed truck or railcar tank as follows: (a) The ash shall be conveyed by a vacuum hose from the silo into the enclosed tank, with exhaust gas exiting through on-board bag filters; (b) Water shall be added to the ash during loading. The amount of water required shall be determined per I.S.1.b.(4). [s. NR 407.09(4)(a), Wis. Adm. Code] **(2)** Prior to each ash silo unloading the operator shall: (a) visually inspect the on-board bag filters required by condition I.S.1.b.(1)(a); and (b) clean, repair and/or replace the filter as necessary. [s. NR 407.09(4)(a), Wis. Adm. Code] **(3)** At least once per day of operation, the operator shall: (a) visually inspect all hoses and connections for leaks, particulate matter emissions and secure connections; and (b) perform maintenance and repairs as necessary. [s. NR 407.09(4)(a), Wis. Adm. Code] **(4)** The permittee shall: (a) determine the rate(s) at which water must be added to the ash during ash silo unloading to prevent particulate matter emissions and leakage of material during loading, transport, unloading and ash handling; (b) maintain and follow procedures to ensure that water is added to the ash at the rate determined in (a), to minimize particulate matter emissions and other losses during loading, transport, unloading and ash handling. [s. NR 415.04, Wis. Adm. Code]	**(1)** The permittee shall keep records of: (a) The results of the visual inspections required by conditions I.S.1.b.(2) and (3) ; (b) The date, time and initials of the individual performing the visual inspections required by conditions I.S.1.b.(2), and (3); (c) The date, time and initials of the individual performing any cleanings of the on-board bag filters; (d) The cause of any leaks and/or particulate matter emissions; (e) The nature of any maintenance, repairs and/or replacements; and (f) The date, time and initials of the individual performing any maintenance, repairs and/or replacements. [s. NR 439.04(1)(d), Wis. Adm. Code] **(2)** The permittee shall keep records of: (a) The date, start and stop time of each ash silo unloading; (b) Whether or not particulate matter emissions were observed during each ash silo unloading; and (c) The rate at which water is added to the ash during transfer to the vacuum truck; (d) If the ash silo unloading system is not used during a particular day, that information shall be recorded in lieu of (a) through (c). [s. NR 439.04(1)(d), Wis. Adm. Code]

S. F05 - Ash Silo No. 1 Unloading

POLLUTANT	a.LIMITS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions - (Continued) *Continued on Next Page...*		**(5)** At least once each day of operation, personnel shall: (a) visually inspect the ash unloading process for particulate matter emissions; (b) visually inspect ash unloading operations to determine whether the procedures outlined in conditions I.S.1.b.(1) through (3) are being followed; and (c) take actions and/or perform maintenance and repairs to eliminate particulate matter emissions as necessary. [s. NR 407.09(4)(a), Wis. Adm. Code] **(6)** Ash unloading operators shall be trained and instructed to: (a) follow the procedures outlined in conditions I.S.1.b.(1) through (3); (b) use preventative measures to avoid particulate matter emissions; and (c) notify the supervisory personnel if any visible emissions are detected. [s. NR 407.09(4)(a), Wis. Adm. Code] **(7)** The permittee shall provide training to ash unloading operators at least once every two years that includes but is not limited to: (a) reasons for dust control; (b) operating procedures to prevent particulate matter emissions; (c) equipment operation and maintenance; and (d) reporting and record keeping requirements. [s. NR 407.09(4)(a), Wis. Adm. Code]	**(3)** The permittee shall keep records of: (a) The results of the visual inspections required by condition I.S.1.b.(5); (b) The date and time of each visual inspection; (c) The initials of the individual performing the inspection; (d) The status of visible emissions (i.e. are visible emissions detected or not); (e) The cause of any particulate matter emissions; (f) Any action taken to control particulate matter emissions; (g) The results of actions taken to control particulate matter emissions (i.e. did actions eliminate visible emissions); and (h) Any maintenance or repairs made. [s. NR 439.04(1)(d), Wis. Adm. Code] **(4)** The permittee shall keep records of: (a) Visible emissions reported by ash unloading operators, as required by condition I.S.1.b.(6); (b) The date and time the visible emissions are detected; (c) The date and time the visible emissions are reported to the supervisory personnel; (d) The cause of the particulate matter emissions; (e) Actions taken to control the particulate matter emissions; (f) The results of the actions taken to control particulate matter emissions (i.e. did actions eliminate visible emissions); and (g) Any maintenance or repairs made. [s. NR 439.04(1)(d), Wis. Adm. Code]

S. F05 - Ash Silo No. 1 Unloading - (Continued)

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions - (Continued)		**(8)** The permittee shall prepare and follow standard operating and maintenance procedures for the ash unloading process. The standard operating and maintenance procedures shall include but not be limited to specific procedures for preventing particulate matter emissions. [ss. NR 407.09(4)(a) and NR 439.03(3), Wis. Adm. Code]	**(5)** The permittee shall keep records of: (a) The date the training required by condition I.S.1.b.(7) is provided; (b) A list of the topics covered by the training; and (c) A list of the attendees. [s. NR 439.04(1)(d), Wis. Adm. Code] **(6)** The permittee shall: (b) Review the standard operating and maintenance procedures required by condition I.S.1.b.(8) at least annually and update them as necessary; and (c) Submit a copy of any updated standard operating and maintenance procedures to the Department within 30 days of the update. [s. NR 439.04(1)(d), Wis. Adm. Code]

U. P60/S60[81] - Ash Silo No. 2 Unloading - Installed Pre-1961

Please see the alternative requirements that relate to unloading Ash Silo No. 2.

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, & MONITORING REQUIREMENTS
1. Particulate Matter Emissions *Continued on Next Page...*	**(1)** Emissions may not exceed the more restrictive of the following: (a) $E = 3.59\ P^{0.62}$ where: E is the emission limitation in pounds per hour and P is the maximum total process weight rate in tons per hour, when P is less than 30 tons per hour; (b) $E = 17.31\ P^{0.16}$ where: E is the emission limitation in pounds per hour and P is the maximum total process weight rate in tons per hour, when P is equal to or greater than 30 tons per hour; (c) 0.40 pounds of particulate matter per 1,000 pounds of gas; and (d) 0.85 pounds per hour.[82] [ss. NR 415.05(1)(o) and (2), Wis. Adm. Code and 285.63(1)(b), Wis. Stats.] **(2)** Process P60 may not be operated more than 12 hours per day.[83] [ss. 285.63(1)(b) and 285.65(7), Wis. Stats.]	**(1)** The permittee shall operate an ash silo unloading system with the following specifications, or as approved by the Department in writing: (a) An enclosed railcar or truck tanker shall be used to transport dry ash. (b) The tanker to be loaded shall be filled through the top hatch opening through spout that extends into the tanker. (c) The spout shall seal tightly, in a leak-free manner, to the tanker top hatch opening. (d) The spout shall have a concurrent design that draws ash-laden air out of the tanker while unloading ash from the silo to the tanker. (e) The ash-laden air drawn from the tanker shall be exhausted through a cartridge filter module that controls particulate matter emissions. (f) The tanker and the spout shall be under negative pressure during load-out operations. (g) The spout shall be equipped with limit switches that indicate the spout is in the full-down position before ash unloading. (h) A pneumatic, load level sensing probe shall be used to avoid overfilling of tanker and ash spillage. When the probe detects full load levels it shall trigger product full lights which prompt the operator to shut the ash unloading valve. [s. NR 407.09(4)(a), Wis. Adm. Code]	**(1)** The permittee shall keep the following records for each tanker loaded: (a) The date, start and stop time of ash unloading; (b) truck or railcar number; (c) operator initials; (d) an assessment of the performance of the dust capture and control system (e.g., notation of any leaks in the system or visible particulate matter emissions); and (e) any deviations from the standard operating and maintenance procedures, as required by I.U.1.b.(5). [s. NR 439.04(1)(d), Wis. Adm. Code] **(2)** The permittee shall retain a copy of the most current daily pre-operation checklist, required by I.U.1.b.(4), at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]

[81] Stack S60 includes the stack exhausting the cartridge filter module on the ash unloading system (S60A) and the bag filter exhaust from the portable vacuum truck (S60B).

[82] The more restrictive limitation of 0.85 pounds per hour is required to ensure that the national ambient air quality standards for particulate matter are attained and maintained and may not be exceeded. (Note: The potential emissions from stack S60A are 0.83 pounds per hour and from stack S60B are 0.017 pounds per hour.)

[83] This requirement is necessary to ensure the national ambient air quality standards for particulate matter are attained and maintained.

U. P60/S60 - Ash Silo No. 2 Unloading - (Continued)

POLLUTANT	a.LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions - (Continued) *Continued on Next Page...*	**(3)** The permittee may not cause, allow or permit any materials to be handled, transported or stored without taking precautions to prevent particulate matter from becoming airborne. [s. NR 415.04, Wis. Adm. Code]	**(2)** Ash-laden air drawn from tanker during ash unloading shall be exhausted through a cartridge filter module with the following specifications to control particulate matter emissions, or as approved by the Department in writing: (a) The cartridge filter module shall be equipped with pulse jet cleaning solenoid valves to sequentially clean each filter cartridge on a regular basis. [s. NR 407.09(4)(a), Wis. Adm. Code]	**(3)** For each day the ash unloading system is operated, the permittee shall record the results of performing the daily pre-operation check as outlined in the checklist required by I.U.1.b.(4). (e.g., Check air lines for leaks: none detected) [s. NR 439.04(1)(d), Wis. Adm. Code] **(4)** The permittee shall retain a copy of the most current standard operating and maintenance procedures, required by I.U.1.b.(5), at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code] **(5)** The permittee shall keep records of: (a) The results of the visual inspections required by condition I.U.1.b.(6); (b) The date and time of each visual inspection; (c) The initials of the individual performing the inspection; (d) Any deviation from the standard operating and maintenance procedures required by I.U.1.b.(5) and the reason for these deviations; (e) An assessment of the performance of the dust capture and control system (e.g., notation of any leaks in the system or visible particulate matter emissions); (f) Any precaution taken or maintenance and/or repairs performed to prevent particulate matter emissions; [s. NR 439.04(1)(d), Wis. Adm. Code]

U. P60/S60 - Ash Silo No. 2 Unloading - (Continued)

POLLUTANT	a.LIMITS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions - (Continued) *Continued on Next Page...*		**(4)** The operator shall follow a daily pre-operation checklist to verify the ash unloading system is operating properly prior to any ash unloading. This checklist shall include but not be limited to: (a) checking connections for proper seals; (b) checking lines and connections for leaks; (c) checking spout limit switches for proper operation; (d) checking load level probe and signal lights for proper operation. The permittee shall review this checklist not less than annually and update as necessary. [ss. NR 407.09(4)(a) and NR 439.03(3), Wis. Adm. Code] **(5)** The permittee shall follow standard operating and maintenance procedures for the ash unloading process. The standard operating and maintenance procedures shall include but not be limited to specific procedures for preventing particulate matter emissions. The permittee shall review these procedures not less than annually and update them as necessary. [ss. NR 407.09(4)(a) and NR 439.03(3), Wis. Adm. Code] **(6)** At least once each day of operation, personnel shall: (a) observe the ash unloading system in operation; (b) visually inspect the ash unloading system for proper operation; (c) visually inspect ash unloading operations to determine whether the standard operating and maintenance procedures required by I.U.1.b.(5) are being followed; (d) receive a verbal performance report from the operator; and (e) ensure precautions are taken and/or maintenance and repairs are performed to prevent particulate matter emissions as necessary. [s. NR 407.09(4)(a), Wis. Adm. Code]	**(6)** The permittee shall keep records of: (a) Operating problems reported by ash unloading operator(s), as required by condition I.U.1.b.(7); (b) The date and time operating problems are detected; (c) The date and time operating problems are reported to the supervisory personnel; (d) Any maintenance or repairs performed to correct operating problems; [s. NR 439.04(1)(d), Wis. Adm. Code] **(7)** The permittee shall keep records of: (a) The date the training required by condition I.U.1.b.(8) is provided; (b) A list of the topics covered by the training; and (c) A list of the attendees. [s. NR 439.04(1)(d), Wis. Adm. Code] **(8)** To demonstrate that P60 is not operated more than 12 hours per day as required by I.U.1.a.(2) the permittee shall record: (a) The date and time each time P60 is started; (b) The date and time each time P60 is stopped; and (c) The total number of hours and minutes that P60 is operated each day. [s. NR 439.04(1)(d), Wis. Adm. Code]

U. P60/S60 - Ash Silo No. 2 Unloading - (Continued)

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions - (Continued)		(7) Ash unloading operator(s) shall be trained and instructed to: (a) follow the standard operating and maintenance procedures, as required by I.U.1.b.(5); (b) perform the daily pre-operation checklist, as required by I.U.1.b.(4); (c) use measures to prevent particulate matter emissions; and (d) notify the supervisory personnel when operating problems occur. [s. NR 407.09(4)(a), Wis. Adm. Code] (8) The permittee shall provide training to ash unloading operators at least once every two years that includes but is not limited to: (a) reasons for dust control; (b) operating procedures to prevent particulate matter emissions; (c) equipment operation and maintenance; and (d) reporting and record keeping requirements. [s. NR 407.09(4)(a), Wis. Adm. Code]	(9) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5, including condensible backhalf emissions, or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]
2. Visible Emissions	(1) Visible emissions from S60 may not exceed 20 percent opacity. [s. NR 431.05, Wis. Adm. Code]	(1) The compliance demonstration methods for particulate matter emissions outlined in conditions I.U.1.b.(1) through (8) shall also serve as compliance demonstration methods for visible emissions. [s. NR 407.09(4)(a), Wis. Adm. Code]	(1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] (2) The record keeping requirements of I.U.1.c.(1) through (7) shall also apply for visible emissions. [s. NR 439.04(1)(d), Wis. Adm. Code]

UU. *ALTERNATE OPERATING SCENARIO #1:* **P60/S60 - Ash Silo No. 2 Unloading - Installed Pre-1961**

Alternative requirements for unloading Ash Silo No. 2.

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions *Continued on Next Page...*	**(1)** The permittee may not cause, allow or permit any materials to be handled, transported or stored without taking precautions to prevent particulate matter from becoming airborne. [s. NR 415.04, Wis. Adm. Code]	**(1)** The permittee shall use a vacuum truck to vacuum ash from the silo into an enclosed truck or railcar tank as follows: (a) The ash shall be conveyed by a vacuum hose from the silo into the enclosed tank, with exhaust gas exiting through on-board bag filters; (b) Water shall be added to the ash during loading. The amount of water required shall be determined per I.UU.1.b.(4). [s. NR 407.09(4)(a), Wis. Adm. Code] **(2)** Prior to each ash silo unloading the operator shall: (a) visually inspect the on-board bag filters required by condition I.UU.1.b.(1)(a); and (b) clean, repair and/or replace the filter as necessary. [s. NR 407.09(4)(a), Wis. Adm. Code] **(3)** Once per day of operation, the operator shall: (a) visually inspect all hoses and connections for leaks, particulate matter emissions and secure connections; and (b) perform maintenance and repairs as necessary. [s. NR 407.09(4)(a), Wis. Adm. Code] **(4)** The permittee shall: (a) determine the rate(s) at which water must be added to the ash during ash silo unloading to prevent particulate matter emissions and leakage of material during loading, transport, unloading and ash handling; (b) maintain and follow procedures to ensure that water is added to the ash at the rate determined in (a), to minimize particulate matter emissions and other losses during loading, transport, unloading and ash handling. [s. NR 415.04, Wis. Adm. Code]	**(1)** The permittee shall keep records of: (a) The results of the visual inspections required by conditions I.UU.1.b.(2) and (3) ; (b) The date, time and initials of the individual performing the visual inspections required by conditions I.UU.1.b.(2), and (3); (c) The date, time and initials of the individual performing any cleanings of the on-board bag filters; (d) The cause of any leaks and/or particulate matter emissions; (e) The nature of any maintenance, repairs and/or replacements; and (f) The date, time and initials of the individual performing any maintenance, repairs and/or replacements. [s. NR 439.04(1)(d), Wis. Adm. Code] **(2)** The permittee shall keep records of: (a) The date, start and stop time of each ash silo unloading; (b) Whether or not particulate matter emissions were observed during each ash silo unloading; and (c) The rate at which water is added to the ash during transfer to the vacuum truck; (d) If the ash silo unloading system is not used during a particular day, that information shall be recorded in lieu of (a) through (c). [s. NR 439.04(1)(d), Wis. Adm. Code]

UU. *ALTERNATE OPERATING SCENARIO #1:* **P60/S60 - Ash Silo No. 2 Unloading - Installed Pre-1961**

Applicable requirements for unloading Ash Silo No. 2 when the ash silo unloading system identified in Section U is out-of-service.

POLLUTANT	a.LIMITS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions - (Continued) *Continued on Next Page...*		**(5)** At least once each day of operation, personnel shall: (a) visually inspect the ash unloading process for particulate matter emissions; (b) visually inspect ash unloading operations to determine whether the procedures outlined in conditions I.UU.1.b.(1) through (3) are being followed; and (c) take actions and/or perform maintenance and repairs to eliminate particulate matter emissions as necessary. [s. NR 407.09(4)(a), Wis. Adm. Code] **(6)** Ash unloading operators shall be trained and instructed to: (a) follow the procedures outlined in conditions I.UU.1.b.(1) through (3); (b) use preventative measures to avoid particulate matter emissions; and (c) notify the supervisory personnel if any visible emissions are detected. [s. NR 407.09(4)(a), Wis. Adm. Code] **(7)** The permittee shall provide training to ash unloading operators at least once every two years that includes but is not limited to: (a) reasons for dust control; (b) operating procedures to prevent particulate matter emissions; (c) equipment operation and maintenance; and (d) reporting and record keeping requirements. [s. NR 407.09(4)(a), Wis. Adm. Code]	**(3)** The permittee shall keep records of: (a) The results of the visual inspections required by condition I.UU.1.b.(5); (b) The date and time of each visual inspection; (c) The initials of the individual performing the inspection; (d) The status of visible emissions (i.e. are visible emissions detected or not); (e) The cause of any particulate matter emissions; (f) Any action taken to control particulate matter emissions; (g) The results of actions taken to control particulate matter emissions (i.e. did actions eliminate visible emissions); and (h) Any maintenance or repairs made. [s. NR 439.04(1)(d), Wis. Adm. Code] **(4)** The permittee shall keep records of: (a) Visible emissions reported by ash unloading operators, as required by condition I.UU.1.b.(6); (b) The date and time the visible emissions are detected; (c) The date and time the visible emissions are reported to the supervisory personnel; (d) The cause of the particulate matter emissions; (e) Actions taken to control the particulate matter emissions; (f) The results of the actions taken to control particulate matter emissions (i.e. did actions eliminate visible emissions); and (g) Any maintenance or repairs made. [s. NR 439.04(1)(d), Wis. Adm. Code]

UU. *ALTERNATE OPERATING SCENARIO #1:* **P60/S60 - Ash Silo No. 2 Unloading - Installed Pre-1961**

Applicable requirements for unloading Ash Silo No. 2 when the ash silo unloading system identified in Section U is out-of-service.

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions - (Continued)		**(8)** The permittee shall prepare and follow standard operating and maintenance procedures for the ash unloading process. The standard operating and maintenance procedures shall include but not be limited to specific procedures for preventing particulate matter emissions. [ss. NR 407.09(4)(a) and NR 439.03(3), Wis. Adm. Code]	**(5)** The permittee shall keep records of: (a) The date the training required by condition I.UU.1.b.(7) is provided; (b) A list of the topics covered by the training; and (c) A list of the attendees. [s. NR 439.04(1)(d), Wis. Adm. Code] **(6)** The permittee shall: (b) Review the standard operating and maintenance procedures required by condition I.UU.1.b.(8) at least annually and update them as necessary; and (c) Submit a copy of any updated standard operating and maintenance procedures to the Department within 30 days of the update. [s. NR 439.04(1)(d), Wis. Adm. Code]

V. P05/S05 - Ash Transfer From Boiler House to Ash Silo No. 1 - Installed Pre-1961

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions *Continued on Next Page...*	**(1)** Emissions from ash transfer system P05 may not exceed the more restrictive of: (a) 0.20 pounds of particulate matter per 1,000 pounds of gas; or (b) 1.50 pounds per hour.[84] [ss. NR 415.05(1)(m), Wis. Adm. Code and 285.63(1)(b), Wis. Stats.]	**(1)** Ash transfer system P05 shall be used to transfer bottom ash only. [s. 285.63(1)(a), Wis. Stats.] **(2)** The velocity of the exhaust gas exiting stack S05 may not be less than 0.6 meters/second.[85] [s. 285.63(1)(b), Wis. Stats.] **(3)** At least annually the permittee shall: (a) perform inspections of the mechanical vacuum blower and the mechanical separator and baghouse used to collect the ash and transfer it to the ash silo. (b) perform maintenance and repairs as necessary. [s. NR 407.09(4)(a), Wis. Adm. Code] **(4)** The permittee shall operate an ash collection system and fabric filter baghouse to meet the emission limitation in I.V.1.a.(1). [ss. 285.63(1)(a) and 285.65(3), Wis. Stats.]	**(1)** Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5, including condensible backhalf emissions, or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code] **(2)** The permittee shall keep records that show the minimum exhaust gas exit velocity for stack S05. [s. NR 439.04(1)(d), Wis. Adm. Code] **(3)** The permittee shall keep records of: (a) The results of the inspections required by I.V.1.b.(3), (b) The date, time and initials of the individual performing the inspection; and (c) All maintenance and repairs performed. [s. NR 439.04(1)(d), Wis. Adm. Code]

[84] The emission limitation of 1.50 pounds particulate matter per hour is necessary to ensure that the national ambient air quality standards for particulate matter are attained and maintained. Additionally, this limitation ensures that hazardous air pollutant emissions in the form of particulate matter will not cause or contribute to an exceedance of corresponding acceptable ambient concentrations.

[85] The minimum stack gas flow rate along with the emission limitation in I.V.1.a.1.(b) are necessary to ensure the national ambient air quality standards for particulate matter are attained and maintained.

V. P05/S05 - Ash Transfer From Boiler House to Ash Silo No. 1 - (Continued)

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions - (Continued)	**(3)** The permittee may not cause, allow or permit any materials to be handled, transported or stored without taking precautions to prevent particulate matter from becoming airborne. [s. NR 415.04, Wis. Adm. Code]		**(4)** The permittee shall monitor and record the pressure drop across the baghouse used to collect ash once every 8 hours of source operation or once per day, whichever yields the greater number of measurements. [ss. NR 439.055(1) and (2), Wis. Adm. Code]
2. Visible Emissions	**(1)** Opacity may not exceed 40%. [s. NR 431.04(1), Wis. Adm. Code]	**(1)** The compliance demonstration methods of I.V.1.b.(1) through (4) for particulate matter emissions shall also serve as compliance demonstration methods for visible emissions. [s. NR 407.09(4)(a), Wis. Adm. Code]	**(1)** Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] **(2)** The record keeping requirements of I.V.1.c.(3) and (4) shall also apply for visible emissions. [s. NR 439.04(1)(d), Wis. Adm. Code]

W. P06/S06 - Ash Transfer From Boiler House to Ash Silo No. 2 - Installed 1961

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions	(1) Emissions from ash transfer system P06 may not exceed the more restrictive of: (a) 0.20 pounds of particulate matter per 1,000 pounds of gas; or (b) 0.54 pounds per hour.[86] [ss. NR 415.05(1)(m), Wis. Adm. Code and 285.63(1)(b), Wis. Stats.] (3) The permittee may not cause, allow or permit any materials to be handled, transported or stored without taking precautions to prevent particulate matter from becoming airborne. [s. NR 415.04, Wis. Adm. Code]	(1) The velocity of the exhaust gas exiting stack S06 may not be less than 4.89 meters/second.[87] [s. 285.63(1)(b), Wis. Stats.] (2) The height of stack S06 may not be less than 31 feet. [ss. 285.63(1)(b) and 285.65(7), Wis. Stats.] (3) At least annually the permittee shall: (a) perform inspections of the mechanical vacuum blower and the mechanical separator and baghouse used to collect the ash and transfer it to the ash silo. (b) perform maintenance and repairs as necessary. [s. NR 407.09(4)(a), Wis. Adm. Code] (4) The permittee shall operate an ash collection system and fabric filter to meet the emission limitation in I.W.1.a.(1). [ss. 285.63(1)(a) and 285.65(3), Wis. Stats.]	(1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5, including condensible backhalf emissions, or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code] (2) The permittee shall keep records that show the minimum exhaust gas exit velocity for stack S06. [s. NR 439.04(1)(d), Wis. Adm. Code] (3) The permittee shall keep records of: (a) The results of the inspections required by I.W.1.b.(3); (b) The date, time and initials of the individual performing the inspection; and (c) All maintenance and repairs performed. [s. NR 439.04(1)(d), Wis. Adm. Code] (4) The permittee shall monitor and record the pressure drop across the baghouse used to collect ash once every 8 hours of source operation or once per day, whichever yields the greater number of measurements. [ss. NR 439.055(1) and (2), Wis. Adm. Code]

[86] The emission limitation of 0.54 pounds particulate matter per hour is calculated from the limitation of 0.20 pounds per 1000 pounds gas, using the gas flow rate of 755 acfm supplied by the permittee. This limitation is necessary to ensure that the national ambient air quality standards for particulate matter are attained and maintained. Additionally, this limitation ensures that hazardous air pollutant emissions in the form of particulate matter will not cause or contribute to an exceedance of corresponding acceptable ambient concentrations.

[87] The minimum stack gas flow rate along with the stack height limitation in I.W.1.b.(2) and the emission limitation in I.W.1.a.1(b) are necessary to ensure the national ambient air quality standards for particulate matter are attained and maintained.

W. P06/S06 - Ash Transfer From Boiler House to Ash Silo No. 2 - (Continued)

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
2. Visible Emissions	**(1)** Opacity may not exceed 40%. [s. NR 431.04(1), Wis. Adm. Code]	**(1)** The compliance demonstration methods of I.W.1.b.(3) and (4) for particulate matter emissions shall also serve as compliance demonstration methods for visible emissions. [s. NR 407.09(4)(a), Wis. Adm. Code]	**(1)** Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] **(2)** The record keeping requirements of I.W.1.c.(3), (4) and (5) shall also apply for visible emissions. [s. NR 439.04(1)(d), Wis. Adm. Code]

X. F07 - Facility Wide Solvent Use - Installed 1930

This process is subject to the general limitations for volatile organic compound and hazardous air pollutant emissions, outlined in ss. NR 419.03 and NR 419.04, and NR 445.03(*), Wis. Adm. Code, respectively. These general limitations are included in Part II of the Operation Permit.

Y. F08 - Vehicle Traffic Areas (Including Vehicles Leaving the Coal Yard) - Installed 1930

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions	**(1)** The permittee may not cause, allow or permit any materials to be handled, transported or stored without taking precautions to prevent particulate matter from becoming airborne. [s. NR 415.04, Wis. Adm. Code]	**(1)** The tires of each vehicle exiting the coal yard shall be washed in an automated permanent wheel wash station. [s. NR 407.09(4)(a), Wis. Adm. Code] **(2)** The traffic flow in the coal yard shall be designed and controlled so that no vehicle can exit the coal yard without going through the automated permanent wheel wash station with the exception of oversized vehicles that cannot fit through the wheel wash station and vehicles with wheels that cannot be accommodated by the wheel wash station. [s. NR 407.09(4)(a), Wis. Adm. Code] **(3)** For vehicles that meet the exceptions listed in I.Y.1.b.(2) or when the wheel wash is out of service for maintenance, the wheels of each vehicle shall be manually washed on a paved wash area prior to exiting the coal yard. [s. NR 407.09(4)(a), Wis. Adm. Code] **(4)** The paved wash area referred to in I.Y.1.b.(3) shall be kept clean whenever it is used for manual wheel washing. [s. NR 407.09(4)(a), Wis. Adm. Code] **(5)** All public streets surrounding the facility, shall be kept free of materials tracked out from the coal yard. [s. NR 407.09(4)(a), Wis. Adm. Code] **(6)** Areas in the coal yard used for vehicular traffic shall be kept moist and/or clean to prevent particulate matter emissions. [s. NR 407.09(4)(a), Wis. Adm. Code]	**(1)** The permittee shall keep records of the following for each vehicle exiting the coal yard that does not go through the automated wheel wash station or that goes through the wash station while not operating in the automatic mode:[88] (a) whether the tires were washed; (b) whether the paved wash area was cleaned; and (c) whether any material is tracked out from the coal yard. [s. NR 439.04(1)(d), Wis. Adm. Code]

Continued on Next Page...

[88] These records are required for any vehicles that meet the exceptions in I.Y.1.b.(2) and exit the coal yard without passing through the automated wheel wash station and for any vehicles that exit the coal yard during any malfunction of the automated wheel wash system that requires vehicles to either by-pass the wash station or requires manual operation of the wash station.

Y. F08 - Vehicle Traffic Areas (Including Vehicles Leaving the Coal Yard) - (Continued)

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions - (Continued) *Continued on Next Page...*		**(7)** At least once each day, personnel shall: (a) visually inspect vehicle traffic areas for particulate matter emissions and wash or sweep the paved areas as needed to prevent particulate matter emissions; (b) visually inspect tire washing operations to determine whether the procedures outlined in conditions I.Y.1.b.(1) through (4) are being followed; (c) visually inspect the public streets surrounding the facility for materials tracked out from the coal yard; (d) visually inspect paved truck traffic areas to determine if they are adequately cleaned and/or moist to prevent particulate matter emissions; and (e) take precautions to prevent particulate matter from becoming airborne. Precautions to control particulate matter emissions shall include but not be limited to applying water and/or dust suppression chemicals and cleaning paved traffic areas and surrounding public streets. [s. NR 407.09(4)(a), Wis. Adm. Code] **(8)** Personnel shall be trained and instructed to: (a) follow the procedures outlined in conditions I.Y.1.b.(1) through (6); (b) use preventative measures to avoid particulate matter emissions; and (c) notify the supervisory personnel if any visible emissions are detected. [s. NR 407.09(4)(a), Wis. Adm. Code]	**(2)** The permittee shall keep records of: (a) The results of the visual inspections required by condition I.Y.1.b.(7); (b) The date and time of each visual inspection; (c) The initials of the individual performing the inspection; (d) The status of visible emissions (i.e. are visible emissions detected or not); (e) The cause of any particulate matter emissions; (f) Any action taken to control particulate matter emissions; (g) The results of actions taken to control particulate matter emissions (i.e. did actions eliminate visible emissions); (h) The approximate amount of any water and/or chemicals used; (i) The time that any water and/or chemicals are applied; (j) Any malfunctions of the automated wheel wash station; and (k) Any maintenance or repairs made. [s. NR 439.04(1)(d), Wis. Adm. Code] **(3)** The permittee shall keep records of: (a) Visible emissions reported by personnel, as required by condition I.Y.1.b.(8); (b) The date and time the visible emissions are detected; (c) The date and time the visible emissions are reported to the supervisory personnel; (d) The cause of the particulate matter emissions; (e) Actions taken to control the particulate matter emissions; (f) The results of the actions taken to control particulate matter emissions (i.e. did actions eliminate visible emissions); (g) The approximate amount of any water and/or chemicals used; (h) The time that any water and/or chemicals are applied; and (i) Any maintenance or repairs made. [s. NR 439.04(1)(d), Wis. Adm. Code] **(4)** The permittee shall keep records of: (a) The date the training required by condition I.Y.1.b.(9) is provided; (b) A list of the topics covered by the training; and (c) A list of the attendees. [s. NR 439.04(1)(d), Wis. Adm. Code]

Y. F08 - Vehicle Traffic Areas (Including Vehicles Leaving the Coal Yard) - (Continued)

POLLUTANT	a. LIMITS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions - (Continued)		**(9)** The permittee shall provide training to personnel at least once every two years that includes but is not limited to: (a) reasons for dust control; (b) operating procedures to prevent particulate matter emissions; (c) equipment operation and maintenance; and (d) reporting and record keeping requirements. [s. NR 407.09(4)(a), Wis. Adm. Code] **(10)** The permittee shall prepare and follow standard operating and maintenance procedures for vehicle traffic areas and wheel washing. The standard operating and maintenance procedures shall include but not be limited to specific procedures for preventing particulate matter emissions. [ss. NR 407.09(4)(a) and NR 439.03(3), Wis. Adm. Code] **(11)** All active truck traffic area within the coal yard shall be paved. [s. NR 415.04(1), Wis. Adm. Code] **(12)** In lieu of the requirements in I.Y.1.b.(7), (8), and (12) and I.Y.1.c.(2), (3) and (6), the permittee may follow alternate compliance demonstration and recordkeeping requirements, if approved or conditionally approved by the Department in writing. The permittee shall submit any request for alternate procedures to the Department in writing. [ss. NR 407.09(4)(a) and NR 415.04(1), Wis. Adm. Code]	**(5)** The permittee shall: (a) Review the standard operating and maintenance procedures required by condition I.Y.1.b.(10) at least annually and update them as necessary; and (b) Submit a copy of any updated standard operating and maintenance procedures to the Department within 30 days of the update. [s. NR 439.04(1)(d), Wis. Adm. Code] **(6)** The permittee shall keep the following records each time the paved truck traffic area is cleaned: (a) The date and time the paved area is cleaned; and (b) The cleaning method used. [s. NR 439.04(1)(d), Wis. Adm. Code]

Z. F09 - Particulate Matter Fallout

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Particulate Matter Emissions	**(1)** The permittee may not cause, allow or permit any materials to be handled, transported or stored without taking precautions to prevent particulate matter from becoming airborne. [s. NR 415.04, Wis. Adm. Code]	**(1)** The permittee shall analyze the particulate matter fallout occurrences at the facility, identify the source(s) of the fallout and develop and implement precautions to prevent these emissions. [ss. NR 415.04, Wis. Adm. Code and 285.63(1)(a), Wis. Stats.]	**(1)** The permittee shall document particulate matter fallout occurrences at the facility for evaluation by Department personnel. [s. NR 439.04(1)(d), Wis. Adm. Code]

AA. Specific Conditions Applicable to all MG&E Facilities

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Sulfur Dioxide *	(1) Corporate Emission Limitation: The average number of pounds of sulfur dioxide emissions per million British thermal unit of heat input from all boilers under the ownership or control of the permittee for any year may not exceed 1.20. [s. 285.41(2), Wis. Stats] *	(1) Annual Compliance Plan - Each year MG&E shall prepare an annual plan for achieving compliance with the emission rate under condition I.AA.1.a.(1) that includes, at a minimum: (a) MG&E□s expected electricity demand: (b) MG&E□s annual operation plan; (c) The expected operation characteristics of each boiler operated by MG&E, including: (i) The order to be used in placing the boilers into operational production; (ii) The planned maintenance schedule for each boiler; (iii) How any maintenance is expected to affect the methods of meeting electricity demands; (iv) The amount of coal and other fossil fuels or other materials to be used for each boiler in operational production; (v) The sulfur content (in pounds of sulfur dioxide per mmBtu of heat input) of coal and other fossil fuels or other materials to be used for each boiler in operational production; (vi) The anticipated sulfur dioxide emissions from each boiler; (vii) Contingency plans for unexpected events or increased demand including a summary of generation costs and the anticipated additional costs for reducing sulfur dioxide emissions under those circumstances; (viii) The methods that will be used to achieve compliance with condition I.AA.1.a.(1) in the following year including, if applicable, the provisions of any trading agreement under s. 285.41(2)(b)1., Wis. Stats.; (ix) The total anticipated annual sulfur dioxide emissions from all boilers under the ownership or control of the permittee for each of the next 3 years. [s. 285.41(3)(a), Wis. Stats.] * **(2)** MG&E shall prepare an annual sulfur dioxide emission summary which outlines compliance status with the corporate emission limit in condition I.AA.1.a.(1) for each calendar year. [s. 285.41(6), Wis. Stats.] *	**(1)** MG&E shall submit a copy of the Annual Compliance Plan required by condition I.AA.1.b.(1) on or before October 1 of each year for the following calendar year to: (a) The Wisconsin Department of Natural Resources, Bureau of Air Management, 101 South Webster Street, P.O. Box 7921 (AM/7), Madison, WI 53707; and (b) The Wisconsin Public Service Commission, 610 North Whitney Way, Madison, WI 53705. [s. 285.41(3)(a), Wis. Stats.] * **(2)** The annual sulfur dioxide emission summary required by condition I.AA.1.b.(2) shall be submitted by March 1 for the preceding calendar year to: (a) The Wisconsin Department of Natural Resources, Bureau of Air Management, 101 South Webster Street, P.O. Box 7921 (AM/7), Madison, WI 53707; and (b) The Wisconsin Public Service Commission, 610 North Whitney Way, Madison, WI 53705. [s. 285.41(6), Wis. Stats.] *

(Continued on Next Page...)

AA. Specific Conditions Applicable to all MG&E Facilities - (Continued)

POLLUTANT	a.LIMITS	b. COMPLIANCE DEMONSTRATION METHODS	c. REFERENCE TESTMETHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
1. Sulfur Dioxide - (Continued) *		**(3)** Alternate Scenario - Trading to Comply with Condition I.AA.1.a.(1): (a) Two major utilities (as defined in s. 285.41(1)(f), Wis. Stats.) may enter into an agreement for trading emissions unless the sum of the proposed traded emissions and the projected annual emissions of the grantor major utility for the year to which the agreement will apply would exceed the actual annual emissions for the grantor major utility in 1985. (b) To determine whether the major utility that is the grantor in an agreement is in compliance with the emission rate in condition I.AA.1.a.(1) in a given year, the Department shall add the traded emissions and the grantor's annual emissions and divide the sum by the annual heat input of the grantor. (c) To determine whether the major utility that is the grantee in an agreement is in compliance with the emission rate in condition I.AA.1.a.(1) in a given year, the Department shall subtract the traded emissions from the grantee's annual emissions and divide the difference by the annual heat input of the grantee. [s.285.41(2)(b), Wis. Stats] * **(4)** Alternate Scenario - Variance: MG&E may request a variance from the emission rate in condition I.AA.1.a.(1) according to the following conditions: (a) MG&E may request a variance from the emission rate in condition I.AA.1.a.(1) if the Department has not served MG&E with written notice under s. 285.83, Wis. Stats. that MG&E has violated condition I.AA.1.a.(1); AND (b) if any of the following variance conditions exist: (i) A major electrical supply emergency within or outside this state. (ii) A major fuel supply disruption. (iii) An extended and unplanned disruption in the operation of a nuclear plant or low sulfur coal-fired boiler under the ownership or control of the major utility. (iv) The occurrence of an uncontrollable event not anticipated in the plan submitted under conditions I.AA.1.b.(1) and c.(1). (v) A plan by MG&E to install and place into operation new technological devices that will enable it to achieve compliance with condition I.AA.1.a.(1). (c) With the request for a variance, MG&E shall submit its plan for achieving compliance with condition I.AA.1.a.(1). (d) If the request is based on the variance conditions specified under condition I.AA.1.b.(4)(b)(i) through (iv), the request shall include an explanation of why the major utility cannot achieve or remain in compliance by using fuel with a lower sulfur content or by environmental dispatching. [s. 285.41(4), Wis. Stats.] *	**(3)** Any requests for variance described in condition I.AA.1.b.(4) shall be submitted to: (a) The Wisconsin Department of Natural Resources, Bureau of Air Management, 101 South Webster Street, P.O. Box 7921 (AM/7), Madison, WI 53707; and (b) The Wisconsin Public Service Commission, 610 North Whitney Way, Madison, WI 53705. [s. 285.41(4), Wis. Stats.] *

AB. General Conditions Applicable to the Entire Facility (to be continued)

CONDITION TYPE	a. CONDITIONS
1. Reporting	**(1)** Submit the results of monitoring or a summary of monitoring results required by this permit to the Department every 6 months. (a) The time periods to be addressed by the submittal are: January 1 to June 30 and July 1 to December 31. (b) The report shall be submitted to the South Central Region Air Management Program, 3911 Fish Hatchery Road, Fitchburg, WI 53711, phone (608) 273-5603 within 30 days after the end of each reporting period. (c) All deviations from and violations of applicable requirements shall be clearly identified in the submittal. (d) Each submittal shall be certified by a responsible official as to the truth, accuracy and completeness of the report. [s. NR 439.03(1)(b), Wis. Adm. Code] **(2)** Submit a certification of compliance with the requirements of this permit to the Department and U.S. EPA annually. (a) The time period to be addressed by the report is the January 1 to December 31 period which precedes the report. (b) The report shall be submitted to the Wisconsin Department of Natural Resources, South Central Region Air Program, 3911 Fish Hatchery Road, Fitchburg, WI 53711, phone (608) 273-5603 and to Compliance Data - Wisconsin, Air and Radiation Division, U.S. EPA, 77 W. Jackson, Chicago, IL 60604 within 30 days after the end of each reporting period. (c) The information included in the report shall comply with the requirements of Part II Section N of this permit. (d) Each report shall be certified by a responsible official as to the truth, accuracy and completeness of the report. [s. NR 439.03(1)(c), Wis. Adm. Code]
2. Quarterly Excess Emission Reports	**(1)** The quarterly excess emission reports required by conditions I.C.2.c.(3), I.C.3.c.(3), I.C.4.c.(3), I.E.2.c.(3), I.E.3.c.(3) and I.E.4.c.(3) shall: (a) Be Submitted to the Department of Natural Resources, South Central Air Program, 3911 Fish Hatchery Road, Fitchburg, WI 53711 phone (608) 273-5603, within 30 days following the end of each calendar quarter. (b) Contain the following information: (i) The magnitude of any excess emissions, and conversion factor or factors used; (ii) The date and starting and ending times or duration of each period of excess emissions; (iii) The periods of excess emissions that occur during startups, shutdowns, sootblowing, control equipment malfunction, process malfunction, fuel problems, other known causes or for unknown causes; (iv) The cause of any malfunction and the measures taken to reduce excess emission; (v) The date and starting and ending times of any period during which the monitoring system was inoperative for and reason or causes, including monitor malfunction or calibration, except zero and span checks. The report shall identify the repairs or adjustments made to the system; (vi) The date and starting and ending time of an period during which the process being monitored was inoperative; (vii) When no period of excess emission occurred during the quarter and the monitoring system had no period of downtime, an excess emission report shall be filed stating such information. [ss. NR 439.09(10), NR 439.09(10)(a) and NR 440.07(3), Wis. Adm. Code] **(2)** If the permittee receives written approval from the Department, they may, instead of the full excess emission reports required by conditions I.C.2.c.(3), I.C.3.c.(3), I.C.4.c.(3), I.E.2.c.(3), I.E.3.c.(3) and I.E.4.c.(3) submit a summary excess emission report. This summary excess emission report shall be submitted on a form provided by the Department or in a format approved by the Department. [ss. NR 439.09(10)(d) and NR 440.07(4), Wis. Adm. Code]

AB. General Conditions Applicable to the Entire Facility (continued)

CONDITION TYPE	a. CONDITIONS
3. Compliance Testing	**(1)** Whenever compliance emission tests are required by the Department: (a) Any compliance emission tests required by the Department shall be conducted while operating at 100% capacity. If operation at 100% capacity is not feasible, the sources shall operate at a capacity which is approved by the Department in writing. (b) The reference test methods outlined in this permit shall be used unless an alternate, U.S. EPA approved, test method is approved by the Department in writing. (c) The Department shall be informed at least 20 working days prior to any tests so a Department representative can witness the testing. (d) At the time of notification, a compliance test plan shall also be submitted for approval. (e) Two copies of the report on any required tests shall be submitted to the Department for evaluation within 60 days after the tests. [s. NR 439.07, Wis. Adm. Code]
4. Additional Reference Test Methods *Continued on Next Page...*	**(1)** Whenever required the permittee shall use the following methods and procedures to obtain fuel samples and perform analyses for certain properties and constituents. Alternative methods may be used if approved, in writing, by the Department: (a) Reference Test Method for Coal Sampling: Whenever coal sampling is required, it shall be performed according to ASTM D2234-89, Standard Test Methods for Collection of a Gross Sample of Coal. [s. NR 439.08(1)(a), Wis. Adm. Code] (b) Reference Test Method for Preparing Coal for Analysis: Whenever preparation of a coal sample for analysis is required, it shall be performed according to ASTM D2013-86, Standard Method of Preparing Coal Samples for Analysis. [s. NR 439.08(1)(b), Wis. Adm. Code] (c) Reference Test Method for the Sulfur Content in Coal: Whenever the sulfur content of a coal sample is required, it shall be determined according to ASTM D3177-89, Standard Test Methods for Total Sulfur in the Analysis Sample of Coal and Coke, or ASTM D4239-94, Standard Test Methods for Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods. [s. NR 439.08(1)(c), Wis. Adm. Code] (d) Reference Test Method for Heat Content in Coal: Whenever the heat content of a coal sample is required, it shall be determined according to ASTM D1989-93, Standard Test Method for Gross Calorific Value of Coal and Coke by Microprocessor Controlled Isoperibol Calorimeters, or ASTM D5865, Standard Test Method for Gross Calorific Value of Coal and Coke. [s. NR 439.08(1)(d), Wis. Adm. Code] (e) Reference Test Method for Ash Content in Coal: Whenever the ash content of a coal sample is required, it shall be determined according to ASTM D3174-93, Standard Test Method for Ash in the Analysis Sample of Coal and Coke from Coal. [s. NR 439.08(1)(e), Wis. Adm. Code] (f) Reference Test Method for Moisture Content in Coal: Whenever the moisture content of a coal sample is required, it shall be determined according to ASTM D3173-87 (1992), Standard Test Method for Moisture in the Analysis Sample of Coal and Coke. [s. NR 439.08(1)(f), Wis. Adm. Code] *(Continued on Next Page...)*

AB. General Conditions Applicable to the Entire Facility - (Continued)

CONDITION TYPE	a. CONDITIONS
4. Additional Reference Test Methods - (Continued)	**(1)** *(Continued from previous page...)* (g) Reference Test Method for Ultimate Analysis of Coal: Whenever the ultimate analysis of a coal sample is required, it shall be determined according to ASTM D5373, Standard Practice for Ultimate Analysis of Coal and Coke. [s. NR 439.08(1)(g), Wis. Adm. Code] (h) Reference Test Method for Liquid Fossil Fuel Sampling: Whenever liquid fossil fuel sampling is required, it shall be performed according to ASTM D4057-88, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, or ASTM D4177-82 (1990), Standard Practice for Automatic Sampling of Petroleum and Petroleum Products. [s. NR 439.08(2)(a), Wis. Adm. Code] (i) Reference Test Method of Sulfur Content in Liquid Fossil Fuel: Whenever the sulfur content of a liquid fossil fuel sample is required, it shall be determined according to ASTM D129-91, Standard Test Method for Sulfur in Petroleum Products (General Bomb Method), ASTM D1552-90, Standard Test Method for Sulfur in Petroleum Products (High-Temperature Method), ASTM D4294-90, Standard Test Method for Sulfur in Petroleum Products by Energy-Dispersive X-ray Fluorescence Spectroscopy, ASTM D6428, Test Method for Total Sulfur in Liquid Aromatic Hydrocarbons and Their Derivatives by Oxidative Combustion and Electrochemical Detection, ASTM D2622, Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-ray Fluorescence Spectrometry, ASTM D5453, Standard Test Method for Determination of Total Sulfur in Light Hydrocarbons, Motor Fuels and Oils by Ultraviolet Fluorescence, or ASTM D4120, Standard Test Method for Trace Quantities of Sulfur in Light Liquid Petroleum Hydrocarbons by Oxidative Microcoulometry. [s. NR 439.08(2)(b), Wis. Adm. Code] (j) Reference Test Method of Heat Content in Liquid Fossil Fuel: Whenever the heat content of a liquid fossil fuel sample is required, it shall be determined according to ASTM D240-92, Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by a Bomb Calorimeter. [s. NR 439.08(2)(c), Wis. Adm. Code] (k) Reference Test Method for Sampling and Analysis of Fuels Other Than Coal and Liquid Fossil Fuel: Whenever sampling and analysis of a fuel other than coal and liquid fossil fuel is required, it shall be determined by methods and procedures approved, in writing, by the Department. [s. NR 439.08(3), Wis. Adm. Code] **(2)** MG&E shall notify the Department when alternative ASTM methods are used for fuel analysis as soon as MG&E is aware of the change in methods. This will typically be used when an improved method of analysis has been developed, a method has been updated, or to obtain a lower detection limit. . [s. NR 439.08, Wis. Adm. Code]
5. Fugitive Dust Control Plan	**(1)** The permittee shall maintain and follow a fugitive dust control plan for all potential sources of fugitive dust emissions. This plan shall be submitted to the Department upon request. A copy of the plan shall be kept at the facility. [ss. NR 439.03(3), Wis. Adm. Code] **(2)** Control and compliance requirements for the handling and storage of coal. **(a)** APPLICABILITY. This section applies to the owner or operator of any stationary source that handles or stores 1,000 tons or more of coal in any 12 consecutive month period. **(b)** REQUIREMENTS FOR OUTDOOR FUGITIVE COAL DUST EMISSIONS. No later than June 30, 2007, the owner or operator of a source that handles coal or maintains a coal storage pile shall achieve compliance with this section by doing all of the following: 1. Having the ability to control, in a timely manner, outdoor fugitive coal dust emissions in an effort to prevent emissions off the source property. Note: Examples of measures that would meet the ability to control requirement include active measures such as the application of water or chemical dust suppressants, passive measures such as the use of enclosed delivery or handling systems or solid fencing, or access to third-parties to provide dust suppression, as appropriate. The intent of this section is to allow facilities that suppress dust using water to manage the amount of water applied to avoid potential boiler, handling, or other operational problems, as long as there is sufficient dust control so as not

CONDITION TYPE	a. CONDITIONS
	to cause excessive outdoor fugitive coal dust emissions. 2. Developing and implementing a plan to control outdoor fugitive coal dust emissions in an effort to prevent emissions off the source property. The plan shall include all of the following: a. Identification of all sources of outdoor fugitive coal dust emissions from coal handling and coal storage piles on the source property. b. A description of the measures that can be taken to control, in a timely manner, outdoor fugitive coal dust emissions from all sources identified under subd. a. under the following conditions: i. Routine operations. ii. Periods of high activity. iii. Periods of increased probability of outdoor fugitive dust emissions. iv. When equipment used to control outdoor fugitive coal dust emissions malfunctions. Note: Suppliers of coal may want to consult with users in development of the plan to ensure that use of the controls provided for in par. 1. does not result in operational problems at a source combusting coal. Examples of periods of high activity include periods when the daily handling of coal is much greater than usual, such as when unloading a large number of coal shipments at the close of the shipping season. Examples of periods of increased probability of fugitive coal dust emissions include periods or a combination of periods of drought, freezing weather, or forecasts of high winds exceeding 25 miles per hour. 3. Keeping records of actions taken to control outdoor fugitive coal dust emissions in accordance with s. NR 439.04 (2). 4. Keeping a copy of the plan and records of all actions taken at the facility for inspection upon request. **(c)** REQUIREMENTS FOR NON-FUGITIVE COAL DUST EMISSIONS TO THE AMBIENT AIR. No later than June 30, 2007, the owner or operator subject to this section shall, for any non-fugitive source of coal dust emissions exhausted through a fabric filter to the ambient air, do one of the following: 1. Limit visible emissions from each source to 10% opacity. 2. Limit the quantity, concentration or duration of potential to emit emissions of respirable coal dust from all sources so that ambient air concentration off the source property is less than 21.6 $\mu g/m^3$ for any 24 hour averaging period. The owner or operator may rely on information generated by either the EPA screening or refined dispersion model to demonstrate meeting the concentration in this paragraph. **(d)** COMPLIANCE CERTIFICATION. No later than June 30, 2007, the owner or operator of a source subject to this section shall certify the source's compliance status. An owner or operator of a source that has requirements at least as stringent as the requirements in sub. (b) or (c) in a permit or order may so state in his or her certification. Note: This is a one-time certification. Certification forms may be obtained from, and submitted to: Wisconsin Department of Natural Resources Bureau of Air Management PO Box 7921 Madison WI 53707-7921 Attention: NR 445 Certification form for handling and storage of coal. [s. NR 445.10, Wis. Adm. Code*]
6. Compliance Assurance Monitoring (CAM) Rule/Plan [89]	**(1)** MG&E shall submit a compliance assurance monitoring (CAM) plan for Units 7, 8 and 9, for DNR approval, within 180 days of the issuance of this permit renewal. [40 CFR Part 64]

[89] The CAM Rule was published on October 22, 1997 in the Federal Register, 62 FR 54900 and was effective on November 21, 1997. The frequent questions and answers on the CAM Rule/Plan can be seen at the web site of "http://www.epa.gov/ttnemc01/cam/camfaq1r1004.pdf".

STATE OF WISCONSIN - ACID RAIN PORTION OF OPERATION PERMIT

Issued to: Madison Gas & Electric - Blount Street
ORIS Code: 3992

Unit ID#[90]	Owned and Operated By:	New Unit - Commence Operation Date[91]	New Unit - Monitor Certification Deadline
3	Madison Gas & Electric - Blount Street	NA	NA
5	Madison Gas & Electric - Blount Street	NA	NA
6	Madison Gas & Electric - Blount Street	NA	NA
7	Madison Gas & Electric - Blount Street	NA	NA
8	Madison Gas & Electric - Blount Street	NA	NA
9	Madison Gas & Electric - Blount Street	NA	NA
11	Madison Gas & Electric - Blount Street	NA	NA

Operation Permit Effective Dates: January 1, 2007 through December 31, 2012
The acid rain portion of this operation permit shall take effect on January 1, 2007. [s. NR 409.11(1)(a)3., Wis. Adm. Code]

Duty to Reapply: The designated representative shall submit a complete acid rain portion of an operation permit application at least 12 months, but not more than 18 months, before this permit expires. [s. NR 409.08(1)(c), Wis. Adm. Code]

Permit Shield: Operation in accordance with the acid rain portion of this operation permit shall be deemed to be operation in compliance with the acid rain program, except as provided in s. NR 409.06(7)(f), Wis. Adm. Code. [s. NR 409.10(2), Wis. Adm. Code]

Contents of Acid Rain Portion of the Operation Permit
1. Statement of Basis
2. Unit Specific Requirements
3. Standard Requirements
4. General Requirements
5. Comments, notes and justifications regarding permit decisions.

[90] Provided by the National Allowance Database for the Federal Acid Rain Program.

[91] NA = Not Applicable

1. Statement of Basis

Statutory and Regulatory Authorities: This portion of the operation permit is issued pursuant to ss. 285.60 to 285.66, Wis. Stats., Titles IV and V of the federal Clean Air Act (42 USC 7651 to 7661f), and chs. NR 407 and 409, Wis. Adm. Code.

2. Specific Requirements for Units 3, 5, 6, 7, 8, 9, and 11

POLLUTANT	LIMITATION	COMPLIANCE PLAN
a. Sulfur dioxide	**(1)** Sulfur dioxide emissions from EACH unit may not exceed the number of allowances that the source lawfully holds under the acid rain program, including allowances allocated directly to the source through the acid rain program and allowances obtained through the emissions trading provisions of the acid rain program, subject to the following qualifications: [s. NR 407.09(2)(a), Wis. Adm. Code] **(a)** No permit revision may be required for increases in emissions that are authorized by allowances acquired pursuant to the acid rain program, provided that the increases do not require a permit revision under any other applicable requirement; **(b)** No limit may be placed on the number of allowances that may be held by the stationary source; **(c)** A stationary source may not use allowances as a defense to noncompliance with any applicable requirements other than the requirements of the acid rain program; and **(d)** Any acid rain allowance shall be accounted for according to the procedures established in the acid rain program. **(2)** The permittee shall operate EACH unit in compliance with the standard sulfur dioxide requirements of condition 3.c. of the acid rain portion of this permit. [s. NR 409.06(3)(a)2, Wis. Adm. Code]	**(3)** The permittee shall, as of the allowance transfer deadline,[92] for these phase II units, hold allowances in EACH unit's compliance subaccount [after deductions under 40 CFR 73.34(c)] not less than the total annual emissions of sulfur dioxide from the unit. The permittee is not applying for any compliance options under 40 CFR 72.40(b) or s. NR 409.09(1)(b), Wis. Adm. Code. [s. NR 409.06(3)(a)1., Wis. Adm. Code.
b. Nitrogen oxides *Continued on Next Page...*	**(1)** Emissions from Unit 7 may not exceed 0.68 pounds per million Btu of heat input on an annual average basis. [40 CFR ss. 76.7(a)(2) and 75.17(a)(2)(i)(B)]	**(2)** For nitrogen oxides these units will meet the applicable limitations established by regulations implementing 40 CFR part 76.

[92] The allowance transfer deadline is midnight of January 30 or, if January 30 is not a business day, midnight of the first business day thereafter.

2. Specific Requirements for Units 3, 5, 6, 7, 8, 9, and 11 - *(Continued)*

POLLUTANT	LIMITATION	COMPLIANCE PLAN
b. Nitrogen oxides - (continued)	**(3)** Nitrogen Oxides - Early Election Plan: **(a)** The following affected units are governed by an approved early election plan and are subject to the emission limitations for NOx as outlined below, as provided under 40 CFR 76.8(a)(2), except as provided under 40 CFR 76.8(e)(3)(iii). **(i)** Unit 8 - 0.50 pounds per mmBtu; **(ii)** Unit 9 - 0.50 pounds per mmBtu; **(b)** Liability: **(i)** The permittee shall be liable for any violation of the early election plan by Units 8 and 9 or 40 CFR 76.8 at those Units. **(ii)** The permittee shall be liable, beginning January 1, 2000, for fulfilling the obligations in 40 CFR Part 77. **(c)** Termination: **(i)** The approved early election plan shall be in effect for Units 8 and 9 only until the earlier of January 1, 2008 or January 1 of the calendar year for which a termination of the plan takes effect. **(ii)** If the designated representative of Units 8 and 9 fails to demonstrate compliance with the applicable emissions limitation listed in condition 2.b.(1) and 40 CFR 76.5, for any year during the period beginning January 1, 1997 and ending December 31, 2007, the permitting authority will terminate the early election plan. This termination will take effect beginning January 1 of the year after the year for which there is a failure to demonstrate compliance, and the designated representative may not submit a new early election plan. **(iii)** The designated representative may terminate the early election plan for Units 8 and 9 any year prior to 2008 but may not submit a new early election plan. In order to terminate the plan, the designated representative must submit a notice under 40 CFR 72.40(d) by January 1 of the year for which the termination is to take effect. **(iv)** If the early election plan is terminated any year prior to 2000, Units 8 and 9 shall meet, beginning January 1, 2000, the applicable emission limitations for NOx for Phase II Units with Group 1 boilers under 40 CFR 76.7. **(v)** If the early election plan is terminated on or after 2000, the unit shall meet, beginning on the effective date of the termination, the applicable emissions limitation for NOx for Phase II units with Group 1 boilers under 40 CFR 76.7. ***Note: There are no applicable nitrogen oxide limitations for Units 3, 5, 6, and 11.***	

3. Standard Requirements for all Affected Units

CONDITION	REQUIREMENTS
a. Permit Requirements	**(1)** The designated representative of each affected source and each affected unit at the source shall: **(a)** Except for a phase I acid rain permit to be issued by U.S. EPA, submit a complete acid rain portion of an operation permit application (including a compliance plan) under 40 CFR part 72 and ch. NR 409, Wis. Adm. Code in accordance with the deadlines specified in s. NR 409.08(1), Wis. Adm. Code and 40 CFR 72.30; and **(b)** Submit in a timely manner any supplemental information that the Department determines is necessary in order to review an acid rain portion of an operation permit application and issue or deny an acid rain portion of an operation permit application. [s. NR 409.06(1)(a), Wis. Adm. Code] **(2)** The owners and operators of each affected source and each affected unit at the source shall: **(a)** Operate the unit in compliance with a complete acid rain portion of an operation permit application or a superseding acid rain portion of an operation permit issued by the Department; and **(b)** Have an acid rain portion of an operation permit. [s. NR 409.06(1)(b), Wis. Adm. Code]
b. Monitoring Requirements	**(1)** The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR parts 74, 75, and 76 and section 407 of the act (42 USC 7651f) and regulations implementing section 407 of the act. [s. NR 409.06(2)(a), Wis. Adm. Code] **(2)** The emissions measurements recorded and reported in accordance with 40 CFR part 75 and section 407 of the act (42 USC 7651f) and regulations implementing section 407 of the act shall be used to determine compliance by the unit with the acid rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the acid rain program. [s. NR 409.06(2)(b), Wis. Adm. Code] **(3)** The requirements of 40 CFR parts 74 and 75 and regulations implementing section 407 of the act (42 USC 7651f) do not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the act and other provisions of the operation permit for the source. [s. NR 409.06(2)(c), Wis. Adm. Code]

3. Standard Requirements for all Affected Units - (*Continued*)

c. Sulfur Dioxide Requirements	**(1)** The owners and operators of each source and each affected unit at the source shall: **(a)** Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount, after deductions under 40 CFR 73.34(c), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and **(b)** Comply with the applicable acid rain emissions limitations for sulfur dioxide. [s. NR 409.06(3)(a), Wis. Adm. Code] **(2)** Each ton of sulfur dioxide emitted in excess of the acid rain emissions limitations for sulfur dioxide shall constitute a separate violation. [s. NR 409.06(3)(b), Wis. Adm. Code] **(3)** An affected unit shall be subject to the requirements under condition 3.c.(1) of the acid rain portion of this permit as follows: **(a)** Starting January 1, 2000, for an affected unit under s. NR 409.01(1)(a)2., Wis. Adm. Code; or **(b)** Starting on the later of January 1, 2000 or the monitor certification deadline under 40 CFR part 75, for an affected unit under s. NR 409.01(1)(a)3, Wis. Adm. Code. [s. NR 409.06(3)(c), Wis. Adm. Code] **(4)** Allowances shall be held in, deducted from, or transferred among allowance tracking system accounts in accordance with the acid rain program. [s. NR 409.06(3)(d), Wis. Adm. Code] **(5)** An allowance may not be deducted in order to comply with the requirements under condition 3..c.(1)(a) of this permit prior to the calendar year for which the allowance was allocated. [s. NR 409.06(3)(e), Wis. Adm. Code] **(6)** An allowance allocated by the U.S. EPA under the acid rain program is a limited authorization to emit sulfur dioxide in accordance with the acid rain program. No provision of the acid rain program, the acid rain portion of an operation permit application, the acid rain portion of an operation permit or the written exemption under ss. NR 409.04 and 409.05, Wis. Adm. Code and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. [s. NR 409.06(3)(f), Wis. Adm. Code] **(7)** An allowance allocated by the U.S. EPA under the acid rain program does not constitute a property right. [s. NR 409.06(3)(g), Wis. Adm. Code]
d. Nitrogen Oxides Requirements	**(1)** The owners and operators of the source and each affected unit at the source shall comply with the applicable acid rain emission limitation for nitrogen oxides.[93]

[93] A new subsection (NR 409.06(4), Wis. Adm. Code, Nitrogen Oxide Requirements), will be created based on 40 CFR part 76. Under this subsection, the owners and operators of the source and each affected unit at the source will have to comply with the applicable acid rain emissions limitations for nitrogen oxides.

3. Standard Requirements for all Affected Units - (*Continued*)

CONDITION	REQUIREMENTS
e. Excess Emissions Requirements	**(1)** The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan to the U.S. EPA, as required under 40 CFR part 77, and submit a copy to the Department. [s. NR 409.06(5)(a), Wis. Adm. Code] **(2)** The owners and operators of an affected unit that has excess emissions in any calendar year shall: **(a)** Pay to the U.S. EPA without demand the penalty required, and pay to the U.S. EPA upon demand the interest on that penalty, as required by 40 CFR part 77; and **(b)** Comply with the terms of an approved offset plan, as required by 40 CFR part 77. [s. NR 409.06(5)(b), Wis. Adm. Code]
f. Recordkeeping and Reporting Requirements	**(1)** Unless otherwise provided, the owners and operators of the source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the U.S. EPA or the Department: **(a)** The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative; **(b)** All emissions monitoring information, in accordance with 40 CFR part 75; **(c)** Copies of all reports, compliance certifications, and other submissions and all records made or required under the acid rain program; and, **(d)** Copies of all documents used to complete an acid rain portion of an operation permit application and any other submission under the acid rain program or to demonstrate compliance with the requirements of ch. NR 409, Wis. Adm. Code and the acid rain program. [s. NR 409.06(6)(a), Wis. Adm. Code] **(2)** The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the acid rain program, including those under s. NR 409.13, Wis. Adm. Code and 40 CFR part 75. [s. NR 409.06(6)(b), Wis. Adm. Code]

3. Standard Requirements for all Affected Units - *(Continued)*

CONDITION	REQUIREMENTS
h. Effect on Other Authorities	**(1)** No provision of the acid rain program, an acid rain portion of an operation permit application, an acid rain portion of an operation permit, or a written exemption under s. NR 409.04 or NR 409.05, Wis. Adm. Code, or 40 CFR part 72.7 or 72.8 may be construed as: **(a)** Except as expressly provided in title IV of the act (42 USC 7651 to 7651o), exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with any other provision of the act, including the provisions of title I of the act relating to applicable national ambient air quality standards or state implementation plans; **(b)** Limiting the number of allowances a unit can hold; provided, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the act; **(c)** Requiring a change of any kind in any state law regulating electric utility rates and charges, affecting any state law regarding the state regulation, or limiting the state regulation, including any prudence review requirements under state law; **(d)** Modifying the federal power act (16 USC 791a et seq.) or affecting the authority of the federal energy regulatory commission under the federal power act; or, **(e)** Interfering with or impairing any program for competitive bidding for power supply in a state in which the program is established. [s. NR 409.06(8), Wis. Adm. Code]

4. General Requirements for all Affected Units

CONDITION	REQUIREMENTS
a. Reporting	**(1)** Annual Compliance Certification Report: For each calendar year in which a unit is subject to the acid rain emissions limitations, the designated representative shall submit to the U.S. EPA and to the Department within 60 days after the end of the calendar year, an annual compliance certification report for the unit in compliance with 40 CFR 72.90. For the purpose of determining compliance with the acid rain emissions limitations and reduction requirements, total tons for a year shall be calculated as the sum of all recorded hourly emissions rates, or the tonnage equivalent of the recorded hourly emissions rates, in accordance with 40 CFR part 75, with any remaining fraction of a ton equal to or greater than 0.50 ton deemed to equal one ton and any fraction of a ton less than 0.50 ton deemed not to equal any ton.[94] [s. NR 409.13(1), Wis. Adm. Code]
b. Submissions	**(1)** The designated representative shall submit a certificate of representation, and any superseding certificate of representation, to the U.S. EPA in accordance with subpart B of 40 CFR part 72 and, concurrently, shall submit a copy to the Department. The designated representative may disregard this requirement if the aforementioned certificate has already been submitted to the U.S. EPA and the Department. [s. NR 409.07(1)(a), Wis. Adm. Code] **(2)** Each submission under the acid rain program shall be submitted, signed and certified by the designated representative for all sources on behalf of which the submission is made. [s. NR 409.07(1)(b), Wis. Adm. Code] **(3)** In each submission under the acid rain program, the designated representative shall certify, by his or her signature: **(a)** The following statement, which shall be included verbatim in the submission: "I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made." **(b)** The following statement which shall be included verbatim in the submission: "I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best proof my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment." [s. NR 409.07(1)(c), Wis. Adm. Code] **(4)** The designated representative of a source shall serve notice on each owner and operator of the source and of an affected unit at the source: **(a)** By the date of submission, of any acid rain program submissions by the designated representative; **(b)** Within 10 business days of receipt of a determination, of any written determination by the U.S. EPA or the Department; and **(c)** Provided that the submission or determination covers the source or the unit. [s. NR 409.07(1)(e), Wis. Adm. Code] **(5)** The designated representative of a source shall provide each owner and operator of an affected unit at the source a copy of any submission or determination under condition 4.b.(4) of the acid rain portion of this permit, unless the owner or operator expressly waives the right to receive a copy. [s. NR 409.07(1)(f), Wis. Adm. Code]

[94] Please note that your facility will have two (2) compliance certification reporting requirements: one for the operation permit portion, and one for the acid rain portion of this permit. Submitting a complete annual compliance certification in accordance with this condition will satisfy the compliance certification requirement for the acid rain portion of this permit. See the Total Facility portion of the operation permit portion for the other compliance certification reporting requirement.

4. General Requirements for all Affected Units - *(Continued)*

CONDITION	REQUIREMENTS
c. Severability	**(1)** Invalidation of the acid rain portion of an operation permit does not affect the continuing validity of the rest of the operation permit, nor shall invalidation of any other portion of the operation permit affect the continuing validity of the acid rain portion of the permit. [s. NR 409.11(1)(c), Wis. Adm. Code]
d. Appeal Procedures	**(1)** Appeals of the acid rain portion of this operation permit issued by the Department that do not challenge or involve decisions or actions of the U.S. EPA under 40 CFR parts 72, 73, 75, 77 and 78 and regulations implementing sections 407 and 410 (42 USC 7651f and 7651i) of the act shall be conducted according to the procedures in ch. NR 407 and ss. 285.13(1), 285.81 and 227.40 to 227.60, Wis. Stats. The permit shield under s. NR 409.10(2) shall continue to be in effect during the appeal process. Appeals of the acid rain portion of a permit that challenge or involve decisions or actions of the U.S. EPA shall follow the procedures under 40 CFR part 78 and section 307 of the act (42 USC 7607). Decisions or actions include, but are not limited to, allowance allocations, determinations concerning alternative monitoring systems and determinations of whether a technology is a qualifying repowering technology. [s. NR 409.11(2)(a), Wis. Adm. Code] **(2)** No state or administrative or judicial appeal of the acid rain portion of an operation permit may be allowed to commence more than 30 days following the issuance of the acid rain portion of an operation permit, as provided by ss. 285.81 and 227.53, Wis. Stats. [s. NR 409.11(2)(b), Wis. Adm. Code] **(3)** The U.S. EPA may intervene as a matter of right in any state administrative appeal of an acid rain portion of an operation permit or denial of an acid rain portion of an operation permit. [s. NR 409.11(2)(c), Wis. Adm. Code] **(4)** No administrative appeal concerning an acid rain requirement may result in a stay of the following requirements: (a) The allowance allocations for any year during which the appeal proceeding is pending or is being conducted. (b) Any standard requirement under s. NR 409.06, Wis. Adm. Code. (c) The emissions monitoring and reporting requirements applicable to the affected units at an affected source under 40 CFR part 75. (d) Uncontested provisions of the decision on appeal. (e) The terms of a certificate of representation submitted by a designated representative under subpart B of 40 CFR part 72. [s. NR 409.11 (2)(d), Wis. Adm. Code]

5. Comments, Notes and Justifications: None

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August 18, 2006

VIA CERTIFIED MAIL and ELECTRONIC MAIL

Bradford Pyle
Wisconsin Department of Natural Resources
South Central Region
3911 Fish Hatchery Road
Fitchburg, WI 53711

Re: Comments on the Proposed Draft Title V Operating Permit Renewal for the Blount Street Generating Station, 717 E. Main Street, Madison, Dane County, Wisconsin, Air Pollution Operation Permit Renewal No. 113004430-P10

Dear Mr. Pyle:

These comments are submitted on behalf of the Sierra Club and Clean Wisconsin, pursuant to Wis. Stat. ch. 285, Wis. Admin. Code ch. NR 407, and 40 C.F.R. Pt. 70. In a cooperative effort with DNR, we are undertaking an effort to review and comment on permits for large sources of air pollution. As explained below, the proposed permit for the Blount Street Generating Station ("Blount") must be modified in a number of ways to ensure adequate protection or air quality.

I. A Permit Shield Is Not Appropriate Unless DNR Has Determined, Based on Evidence in the Permit Record, That A Requirement Does Not Apply.

The permit shield included in the Draft Permit inappropriately exempts Boilers B20 through B29 from the New Source Performance Standard in Wis. Admin. Code §§

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Ex B

NR 440.19, 440.20, and 440.205. Draft Permit p. iv. DNR claims that this exemption and accompanying shield is appropriate because the boilers "were constructed before August 17, 1971, and not modified or reconstructed after that date." *Id.* As DNR suggests, the NSPS standards for fossil-fuel-fired steam generators in NR 440.19, NR 440.20, and NR 440.205 apply to any source that commences construction, reconstruction, or modification after August 17, 1971, September 18, 1978, and June 19, 1984, respectively. Wis. Admin. Code §§ NR 440.19(1)(c), NR 440.20(1)(a)2., 440.205(1). A "modification" includes "any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted." Wis. Admin. Code § NR 440.02(16) (emphasis added). If the boilers were modified since any applicable New Source Performance Standard, much lower emission limits would apply—even if the boilers were "constructed" before 1971.

DNR makes no determination in the Analysis and Preliminary Determination ("PD") or public record for the Draft Title V Permit whether the boilers at Blount have been "modified" since 1971, 1978, or 1984. Even if it did, DNR has no basis for such a determination because it has not reviewed all historic physical changes to the facility to determine if any resulted in an emission rate increase. *See* Wis. Admin. Code § NR

440.14(1). Therefore, DNR must either remove the permit shield from the permit or conduct a thorough investigation into all historic physical and operational changes at the facility and determine that none resulted in an emission rate increase. Additionally, the permit shield appears to shield boilers B21 and B22 from the NESHAP for industrial boilers. Draft Permit p. iv. This should be removed. The NESHAP does apply to the boilers, even if the NESHAP does not contain permit limits at this time.

II. The Draft Permit Must Be Modified to Comply With the Credible Evidence Rule.

The U.S. EPA and citizen suit litigants have the authority to bring enforcement actions "on the basis *of any information available* to the Administrator." 42 U.S.C. § 7413 (emphasis added). This has been interpreted to mean any "credible evidence" that a court would accept. *Sierra Club v. Pub. Serv. Co. of Colorado, Inc.*, 894 F.Supp. 1455 (D.Colo. 1995) (neither CAA nor its implementing regulations limit the evidence of compliance or noncompliance to the methods set forth in a permit); *Credible Evidence Revisions*, 62 Fed. Reg. 8314 (Feb. 24, 1997); U.S. EPA Region 9 *Title V Permit Review Guidelines*, Sept. 9 1999, p. III-46. U.S. EPA has stated that this means that "any credible evidence can be used to show a violation of or, conversely, demonstrate compliance with an emissions limit." *Id.* Permit language may not exclude the use of any data that may provide credible evidence. *Id.* The U.S. EPA views permit conditions providing

enumerated compliance test methods as tacitly excluding the use of other data to demonstrate compliance or noncompliance. This tacit exclusion violates the credible evidence rule. "The permit must specify the source's obligations for monitoring in a way that does not establish an exclusive link between the test method and the emissions limit." *Id.*

The Draft Permit contains numerous conditions which violate the credible evidence rule by specifying certain types of data to be used to determine compliance. "Permit language may not [s]pecify that only certain types of data may be used to determine compliance." *Id.* Identifying such data is not necessary according to the U.S. EPA. "In general, the permit should simply tell the source what it must do . . . It is not necessary to say that a term assures compliance or that an activity is required to assure compliance." *Id.* at III-47; *see also Credible Evidence Revisions*, 62 Fed. Reg. 8314; 40 C.F.R. § 51.212; 40 C.F.R. § 52.23.

The Draft Permit divides permit provisions into separate columns for: (1) pollutant; (2) limitation; (3) compliance demonstration; and (4) reference test methods, recordkeeping, and monitoring requirements. *See* Draft Permit pp. iv-v. The Preamble to the Draft Permit states that the "Compliance Demonstration" provisions (column "b" throughout the Draft Permit) lists the methods that "may be used to demonstrate compliance with the associated emission limit or work practice standard..." Draft

Permit at p. v. This provision impermissibly enumerates the evidence that "may be used" to determine compliance. Because this language has the potential to be interpreted as limiting the evidence that can be used to enforce the Permit's limits to only those items listed in the "Compliance Demonstration" column, it violates the credible evidence rule.

The fact that the Draft Permit defines "Compliance Demonstration" twice further adds to the problem. *See* Draft Permit at p. v. The second definition states that the "Compliance Demonstration" column of the permit "contains monitoring and testing requirements and methods to demonstrate compliance with the conditions." This provision further appears to limit the "methods to demonstrate compliance" to only those methods specifically listed in column "b" of the Permit. Again, this violates the credible evidence rule by drawing an exclusive link between the identified monitoring requirements in column "b" and compliance with the applicable limits. Additionally, throughout the Draft Permit, DNR states that the compliance demonstration method required for each pollutant "shall be conducted to demonstrate compliance with the [specific] emission limit..." *See e.g.*, Draft Permit § I.C.1.b.(1).

DNR attempts to account for the Credible Evidence Rule by including the following statement in the permit:

> Notwithstanding the compliance determination methods which the owner or operator of a source is authorized to use

> under ch. NR 439, Wis. Adm. Code, the Department may use any relevant information or appropriate method to determine a source's compliance with applicable emission limitations.

Draft Permit at p. v (emphasis added). There are two problems with this apparent attempt to comply with the credible evidence rule:

1) The sentence refers to the compliance demonstration methods in Wis. Admin. Code ch. 439, rather than those in the permit. It appears that DNR meant to say that "notwithstanding the provisions of this permit, any relevant information may be used to enforce applicable permit limits." In other words, the provision allowing DNR to use any evidence despite NR 439 does not cure the provisions in the permit, itself, which restrict the evidence that can be used to prove violations.

2) The provision states that "the Department may use any relevant information..." By only noting the DNR's ability to use any relevant evidence, the Draft Permit implies that U.S. EPA and citizens do not have the same ability. The credible evidence rule does not allow the DNR to limit EPA or citizens' ability to use any credible evidence. Therefore, the carve-out for DNR enforcement authority fails to cure the credible evidence problems in the permit.

III. The Permit Must Establish Compliance Demonstration Requirements that Ensure Continuous Compliance With Emission Limits.

The permit should explicitly state that a violation of a "compliance demonstration" provision is a violation the underlying emission limit. *See* Wis. Admin. Code §§ NR 407.09(1)(c)(1)b. (monitoring must ensure compliance with reliable data for the relevant time period), NR 407.09(4)(a)1. (all operating permits shall contain compliance requirements "sufficient to assure compliance with the terms and

conditions of the permit").[1] Moreover, the permit must establish a method to ensure continuous compliance with all permit limits. 40 C.F.R. §§ 70.6(a)(3)(i)(B); Wis. Admin. Code § NR 407.09(1)(c)1.b.

> The "periodic monitoring rule," 40 C.F.R. § 70.6(a)(3)(i)(B), requires that "[w]here the applicable requirement does not require periodic testing or instrumental or noninstrumental monitoring (which may consist of record keeping designed to serve as monitoring), [each title V permit must contain] periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit. . . Such monitoring requirements shall assure use of terms, test methods, units, averaging periods, and other statistical conventions consistent with the applicable requirement.

In the Matter of Midwest Generation, LLC, Waukegan Generation Station, Order Responding to Petitioner's Request That the Administrator Object to Issuance of a State Operating Permit at p. 19 (September 22, 2005) (hereinafter "*Waukegan*") (*citing* 69 Fed. Reg. at 3202, 3204 (Jan. 22, 2004)); *see also, Appalachian Power Co. v. EPA*, 208 F.3d 1015 (D.C. Cir. 2000); Carraway, Candace, U.S. EPA Office of Air Quality Planning and Standards, *How Do I Review Each Applicable Requirement for Adequate Periodic Monitoring*? at p. 2 (June 2000).

[1] Note that a source's failure to comply with the 'compliance demonstration' permit provisions will also constitutes a violation of the monitoring requirement, in addition to a violation of the emission limit. Wis. Admin. Code § NR 407.09(1)(f)1. ("permittee has the duty to comply with all conditions of the permit" (emphasis added)).

The permit must contain enforceable parametric monitoring ranges for particulate matter controls. The underlying SIP limits for the boilers, in NR 415.06, do not include a monitoring requirement, the Title V permit's compliance demonstration provisions must be sufficient to yield continuous data from which the source's compliance can be determined at any given point in time. 40 C.F.R. §§ 70.6(a)(3)(i)(B); Wis. Admin. Code § NR 407.09(1)(c)1.b.

The Draft Permit requires the use of a cyclone collector and Electrostatic Precipitator ("ESP") as the method to demonstrate compliance with the permit limits for PM applicable to boilers B27, B28 and B29. Draft Permit §§ I.C.1.b.(2), I.E.1.(b)(2). The Draft Permit also requires the source to monitor the primary voltage, secondary voltage, primary current in amps, and secondary current in amps. Draft Permit §§ I.C.1.b.(3), I.E.1.b.(3). However, the Draft Permit fails to "include a correlation between these measurements and compliance with the PM emission limitations." *Waukegan*, supra, p. 20; *see also In Re Port Hudson Operation Georgia Pacific*, Petition No. 6-03-01, at pages 37-40 (May 9, 2003) ("Georgia Pacific"); *In Re Doe Run Company Buick Mill and Mine*, Petition No. VII-1999-001, at pages 24-25 (July 31, 2002) ("Doe Run").

U.S. EPA has determined that if opacity is used as a surrogate for continuous PM monitoring, the permit must specify the opacity range that shows PM compliance based on stack testing. *Waukegan* at pp. 20-21. Alternatively, if ESP parameters are used,

USEPA has consistently required the permit to specify the upper and/or lower range for each parameter that has been shown to correlate to compliance with the PM limit through stack testing. *Id.*; *In the Matter of Dunkirk Power LLC*, Order Objecting to Proposed Operating Permit No. II-2002-02 at 20 (Adm'r July 31, 2003) ("Once the operating ranges have been established for the ESP operating parameters [based on emission stack tests], operating the ESP outside of any of these ranges would constitute a violation of the title V permit."); *In the Matter of Oxy Vinyls, LP, Louisville, Kentucky*, Objection to Proposed Part 70 Operating Permit No. 212-99-TV (Feb. 1, 2001) ("The permit must specify the parametric range or procedure used to establish that range, as well as the frequency for re-evaluating the range.").[2] In other words, if the permit relies on parametric monitoring, it must specify the monitoring range that equates to compliance such that any deviation from the range is a violation of the underlying permit limit.

U.S. EPA determined that a proposed Title V permit for Tampa Electric's F.J. Gannon Station was deficient because, like the Draft Permit for Blount, the Gannon permit failed to include a parameter range that correlates to an emission rate:

> 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

[2] These USEPA decisions are based on 40 C.F.R. § 70.06(a)(1), and any modification to USEPA's interpretation of 40 C.F.R. § 70.6(c) would not change the requirement to correlate a parameter range and the emission rate.

> 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 (Adm'r July 31, 2003) (same). Therefore, the DNR must establish a parametric monitoring rage that correlates to compliance in the permit and specify that a violation of that range is a violation of the underlying PM limit.

Additionally, the Permit should contain the requirements of the Compliance Assurance Monitoring Rule. 40 C.F.R. pt. 64. The Draft Permit does not include a CAM plan, and there was no opportunity for public review of the CAM plan.

IV. The Permit Must Incorporate, and The Public Must Be Allowed To Review And Comment On, The Startup, Shutdown, and Malfunction Plans (Malfunction Prevention Plan) and The Fugitive Dust Control Plans.

Throughout the permit, DNR relies on a "plan for periodic internal inspections" and requires the source to prepare and follow "a plan for periodic internal inspection...

include[ing] the frequency of the inspections and the items to be inspected." *See e.g.*, Draft Permit § I.C.1.b.(4) and (5). In other words, rather than establishing monitoring requirements in the permit for internal inspections, the Draft Permit proposes to allow the source to establish the necessary monitoring plan up to 60 days after the final permit is issued. First, if DNR is relying on the inspection plan to ensure compliance, as the Draft Permit appears to do, the plan must be provided in the application. 40 C.F.R. § 70.5(a)(2) (a complete application must contain sufficient information to determine all applicable requirements), 70.5(c) (application cannot "omit information needed to determine the applicability of, or impose, any applicable requirement..."), 70.5(c)(3)(vi) (application must include any "work practice standards").

Second, DNR must determine that the permit requirements (including the inspection plan) assure compliance with all applicable requirements. 40 C.F.R. §§ 70.6(a)(1), 70.7(a)(iv). DNR cannot possibly rely on the plan for DNR's conclusion that the monitoring-- including the plan-- assures compliance with all requirements, when DNR has not yet reviewed the plan. *See Environmental Defense Center, Inc. v. EPA*, 344 F.3d 832, 855-56 (9th Cir.2003) ("[P]rograms that are designed by regulated parties must, in every instance, be subject to meaningful review by an appropriate regulating entity to ensure that each such program [complies with the relevant statutory standard]."); *In re RockGen Energy Center*, 8 E.A.D. 536, 553-54 (EAB 1999) (remanding

DNR permit requirement for a startup/shutdown plan that was not reviewed by DNR before permit issuance).

Third, because compliance with the plan constitutes a permit requirement—effectively incorporating the plan by reference into the permit-- the plan must be subject to public notice and comment. The public cannot comment on the sufficiency of the permit, which incorporates the plan, when the plan is not part of the permit record. 40 C.F.R. § 70.7(h); *see e.g., Waterkeeper Alliance v. EPA*, 399 F.3d 486, 503-04 (2nd Cir. 2005) (invalidating EPA regulation that allowed Nutrient Management Plans to be submitted after public comment and after a NPDES permit was issued); *In re RockGen Energy Center*, 8 E.A.D. at 553-54 (remanding permit requirement for a startup/shutdown plan that was not subject to public notice and review).

Therefore, DNR must require the source to provide the inspection plan with its application, DNR must review the plan to determine that it assures compliance, and must allow the public an opportunity to review and comment on the plan before incorporating the plan into the final permit.

V. All Monitoring Data and Recordkeeping Must Be Submitted to DNR; It is Not Sufficient That the Monitoring Results Be Kept At the Source.

The permit should explicitly require the source to submit all records of monitoring results to the DNR. Throughout the permit, DNR only requires that

monitoring results be maintained at the facility, but fails to require such results be provided to DNR. *See e.g.*, Draft Permit § I.A.3.c.(2). However, Wis. Admin. Code § NR 439.03(1)(b) expressly requires the source to "submit the results of monitoring required by the permit... no less often than every 6 months..." (emphasis added). There is no limit on this requirement, but instead, it requires all monitoring results to be submitted. The applicable SIP regulations provide that DNR may require sufficient summary reporting, but do not allow DNR cannot waive the requirement to submit monitoring records altogether. Wis. Admin. Code §§ NR 407.09(1)(c)3.a., NR 439.03(1)(a)(b). Even when the DNR allows "summary" reporting, the summary must "include sufficient data for the department to determine whether the source is in compliance with the applicable requirements..." *Id.* In other words, all information necessary to determine compliance with every applicable requirement must be contained within the summary report. If DNR would have to ask for additional information to determine compliance, the reporting is insufficient.

The requirement to submit monitoring records is not a mere formality. Without the records submitted to DNR, and therefore publicly available, the public cannot monitor the source's compliance or bring enforcement actions. *See e.g.*, U.S. EPA, *"Effective" Limits on Potential to Emit: Issues and Options*, Jan. 31, 1996 at p. 11. Unless the actual results of continuous monitoring (i.e., the volts and current of the ESP) are

submitted, the public has no way to determine whether the source is in compliance. Additionally, the public cannot determine if the source is complying with monitoring and recordkeeping if the source does not supply the results to the DNR. Because the records are not submitted to DNR, the public has no way to determine whether additional violations occurred, but were undetected by the permittee because the monitoring records are not submitted to DNR and publicly available. For example, as part of the cooperative agreement between MG&E and DNR, a third-party audit of the Blount facility's records discovered a number of monitoring and recordkeeping violations that the company and DNR had not discovered through the records submitted to DNR. MG&E Baseline Report 2003 pp. 28-43 (available at http://www.mge.com/images/PDF/ECA/BaselineReport.pdf). Clearly, the reporting requirements in the permit were insufficient to assure compliance and did not indicate to DNR that the facility was in violation of monitoring and recordkeeping requirements. This must be changed and the final permit must require submission of all required monitoring results and other record keeping requirements.

Thank you again for the opportunity to provide these comments. If you have any questions, or if you would like any additional information that we can provide, please do not hesitate to contact us.

Very Truly Yours,

GARVEY MCNEIL & MCGILLIVRAY, S.C.

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cc: Kevin Kessler, WDNR
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MEMORANDUM

DATE: February 1, 2007 FILE REF: 4560

TO: Thomas Roushar (SCR) – WDNR Air Management Program

FROM: Brad Pyle (NER) & Y. Su (SCR) /s/ – WDNR Air Management Program

SUBJECT: Summary of and Responses to Public Comments on the Air Pollution Control Permit Application for Air Pollution Operation Permit Renewal No. 113004430-P10 for MG&E Blount Street Station.

On Tuesday, November 8, 2006 at 5:30 pm, DNR held a public hearing concerning the proposed Air Pollution Operation Permit Renewal No. 113004430-P10 for the Madison Gas and Electric Blount Street Generating Station. DNR was represented at the hearing by Bradford Pyle and Marcia Penner. 28 appearance slips were filed at the hearing, 4 in favor, 12 opposed, 7 as interest may appear, and 5 did not check any box.

DNR has carefully reviewed and considered all comments it has received. This memo summarizes and responds to all written comments received during the 30 day public comment period, and verbal comments received at the public hearing for this permit.

Calculations for alternate fuels
Comment: MGE requests that the compliance demonstration for permit condition H.1.b.(2) be changed from daily to monthly.
Response: Change made as requested.

Process P60 alternate operating scenario
Comment: MGE requests that the permit header for process P60 be corrected to read "alternative requirements for unloading ash silo 2".
Response: Change made as requested.

Fuel Ash
Comment: MG&E requests that fuel ash from other facilities that meets the definition of coal be allowed as fuel.
Response: On Dec. 19, 2006, MGE informed DNR that the company no longer wishes to burn fuel ash. As such, no further response is needed.

Allowable wood fuels
Comment: MG&E requests that the good wood combustion restriction for glued, treated, or coated wood be changed. They are concerned that it may be impossible to ensure that wood fuels are not glued, treated, or coated "in any way".
Response: The permit uses the exact wording from DNR good wood combustion technology guidance and correspondence from MG&E, so no change is proposed. Please see Condition I.F.2.a.(1)(c) of the Permit for additional options related to obtaining approval for allowable wood fuels. DNR will use reasonable discretion in determining compliance with this requirement when there are incidental amounts of glued, treated, or coated wood fuels.

Facility emissions
Comment: After our preliminary determination (PD) document was completed and signed on July 10, 2006, the company submitted revised emission rates for criteria and hazardous air pollutant emissions, with a request to use them in our review of this permit renewal.
Response: While DNR recognizes the efforts to more accurately represent the emissions from the source, the preliminary determination remains unchanged. DNR does not believe that any of the applicable requirements change as a result of the rate revisions, but a review of the rates will next occur when this permit is revised or renewed in future.

Ex C

Permit shield
Comment: Sierra Club and Clean Wisconsin suggest that the content of the permit shield should have been reviewed for this renewal
Response: The company certifies that its renewal application is true, accurate and complete. The Department relies on this certification for its determination of how the permit shield applies to the company.

Credible evidence
Comment: Sierra Club and Clean Wisconsin believe there is language in the permit that has the potential to be interpreted as limiting evidence that can be used to enforce the permit limits to only those listed in the compliance demonstration column of the permit.
Response: The credible evidence rule gives EPA and citizens the ability to sue based on evidence they have, independent of the language in the permit. The Department believes that the sentence "Notwithstanding the compliance determination methods which the owner or operator of a source is authorized to use under ch. NR 439, Wis. Adm. Code, the Department may use any relevant information or appropriate method to determine a source's compliance with applicable emission limitations" on Page 3 of the Draft Permit adequately addresses the comments about the credible evidence rule.

Compliance demonstration requirements for continuous compliance
Comment: Sierra Club and Clean Wisconsin comment that the particulate limit monitoring requirements are insufficient. Operating control devices, monitoring opacity and conducting biennial emission stack testing do not ensure that the source is meeting the limit.
Response: Periodic monitoring is an acceptable method for ensuring compliance under s. NR 407.09(1)(c)1.b., Wis. Adm. Code. Continuous compliance monitoring is not necessary unless required by an underlying applicable requirement (such as requirements to install and operate continuous emission monitors (CEMs)). The original Title V permit issued to the facility contained many of the monitoring requirements in the renewal of the Title V permit for the facility. No objections were raised by the public or USEPA with regard to the adequacy of the monitoring requirements in Permit No. 113004430-P01 when it was issued.

Parametric monitoring
Comment: The permit should require an enforceable parameter range.
Response: There is no official or legal requirement that parametric values be placed in permits. EPA suggests placing such values in compliance assurance monitoring (CAM) plans when appropriate.

Plans
Comment: Sierra Club and Clean Wisconsin comment that the draft permit requires a compliance assurance monitoring (CAM) plan. They believe that the plan should be a part of the permit so that the public can comment on the plan.
Response: The draft permit requires that the facility submit a compliance assurance monitoring plan for Boilers 7, 8 and 9, for DNR approval, within 180 days of the issuance of this permit renewal. For permitting purposes, the Department recommends that the CAM plan be an attachment or addendum to the permit rather than being incorporated into the permit. This would allow for easier revisions should the need arise. The CAM rule does not require a permitting authority to develop CAM plans if a permit applicant fails to provide an approvable CAM plan. However, the CAM rule requires a permitting authority to provide monitoring that satisfies part 70 requirements and a compliance schedule for providing an approvable CAM plan within 180 days. See section 40 CFR s. 64.6(e). Note that if an owner or operator fails to provide an approvable CAM plan within that 180 day compliance schedule, the owner or operator is not in compliance with 40 CFR part 64. See 40 CFR section 64.6(e)(3).

Comment: Sierra Club and Clean Wisconsin comment that the draft permit requires a malfunction prevention and abatement plan. They believe that the plan should be a part of the permit so that the public can comment on the plan.
Response: Section NR 439.11, Wis. Adm. Code contains the requirement to prepare a malfunction prevention and abatement plan. This requirement is a general permit condition for direct stationary sources and is located in Part II of all permits. The facility is required to prepare a plan in writing. The Department may order any owner or operator to submit the plan for review and approval. The Department may amend the plan if deemed necessary for malfunction prevention or the reduction of excess emissions during malfunctions. There is no requirement that the plan be included as part of the permit.

Submit all records
Comment: Sierra Club and Clean Wisconsin comment that the permit should require that the source submit all results of monitoring rather than a summary of results to the DNR.
Response: In lieu of submission of all monitoring results, a summary of the monitoring results may be submitted to the Department as allowed by s. NR 439.03(1)(b), Wis. Adm. Code. The Department may require submission of additional information from the company if necessary.

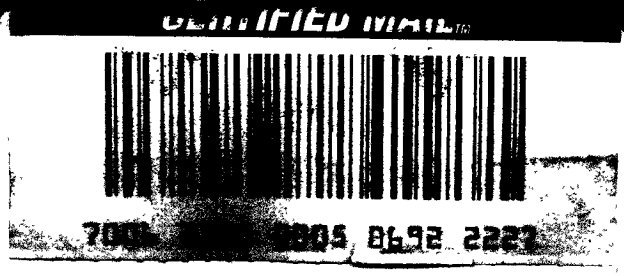
Global Warming
Comment: DNR should regulate carbon dioxide (C02) emissions.
Response: DNR does not regulate C02 emissions because thus far DNR has no such authority to do so.

Efficiency
Comment: The boilers do not make efficient use of the Btu value of the fuels. Cogeneration would increase the efficiency.
Response: Emission limits are based on heat input to the boilers. DNR promotes **voluntary** energy efficiency.

Fine Particulate PM 2.5
Comment: The permit should require a PM 2.5 analysis. The PM 2.5 emissions should be modeled to ensure their levels do not exceed an ambient air quality standard. There are ambient air quality standards that are more restrictive that are under consideration in California and Canada. These standards are not used for this permit action.
Response: DNR has properly implemented EPA guidance regarding PM 2.5 dated October 21, 1997. DNR is still implementing the 1997 EPA memo, relying on PM10 modeling as a surrogate approach to PM 2.5 for the following reasons: lack of tools to calculate emissions of PM 2.5 and related precursors, an inability to account for secondarily formed fine particles through chemical reactions in the atmosphere, and a lack of emission factors. DNR proposed addition of the PM 2.5 ambient air quality standard to ch. NR 404 of the Wis. Adm. Code, dated July 31, 2003. DNR has not yet completed adoption of this rule, and therefore cannot require compliance with a PM 2.5 standard because no standard has been created pursuant to s. 285.21, Wis. Stats.

Comment: DNR needs more protective air standards. DNR needs to reduce air pollution in Madison.
Response: Under the Clean Air Act, EPA establishes air quality standards to protect public health, including the health of "sensitive" populations such as people with asthma, children, and the elderly. Madison is an attainment area for all criteria air pollutants. DNR has no authority to reduce air pollution in Madison as part of this permit action. DNR is working collaboratively with the Dane County Clean Air Coalition to go beyond basic standards protection.

Preclude the construction of a cogeneration plant
Comment: Renewal of the permit will preclude the construction and operation of a more efficient cogeneration plant.
Response: Renewal of the permit for this source will not preclude the construction or operation of another source for which an air pollution control permit application has been received. Also, it is likely that renewal of the permit for this source will not preclude the construction of a co-generation plant in the future.



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