

217/782-2113

CONSTRUCTION PERMIT - PSD APPROVAL
NSPS SOURCE

PERMITTEE

MGP Ingredients of Illinois, Inc.
Attn: David Wilbur
1301 South Front Street
Pekin, Illinois 61555

Application No.: 07030058

I.D. No.: 179060AAD

Applicant's Designation: BOILER

Date Received: March 22, 2007

Date Issued: June 22, 2009

Subject: Solid Fuel-Fired Boiler

Location: 1301 South Front Street, Pekin

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of a solid fuel-fired boiler with low-NO_x burners, a selective catalytic reduction (SCR) system, scrubber system and baghouse; with associated fuel and ash storage and handling systems with baghouses, an auxiliary boiler, and other ancillary operations, as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following conditions.

In conjunction with this permit, approval is given with respect to the federal regulations for Prevention of Significant Deterioration of Air Quality (PSD) for the project, as described in the application, in that the Illinois Environmental Protection Agency (Illinois EPA) finds that the application fulfills all applicable requirements of 40 CFR 52.21. This approval is issued pursuant to the Clean Air Act, as amended, 42 U.S.C. 7401 et seq., the federal regulations promulgated thereunder at 40 CFR 52.21 for Prevention of Significant Deterioration of Air Quality (PSD), and a delegation of Authority agreement for the administration of the PSD Program. This approval becomes effective in accordance with the provisions of 40 CFR 124.15 and may be appealed in accordance with provisions of 40 CFR 124.19. This approval is based upon the findings that follow. This approval is subject to the following conditions. This approval is also subject to the general requirement that the project be developed and operated consistent with the specifications and data included in the application and any significant departure from the terms expressed in the application, if not otherwise authorized by this permit, must receive prior written authorization from the Illinois EPA.

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FINDINGS

- 1a. MGP Ingredients of Illinois, Inc. (MGP) has requested a permit to construct a solid fuel-fired boiler with a nominal heat input of 493 million Btu per hour. The boiler will be used for cogeneration to produce both process steam and electricity for operation of the existing MGP manufacturing plant. The proposed boiler will be equipped with low-NO_x burners, selective catalytic reduction (SCR) system, a scrubber and a baghouse. Ancillary operations would include fuel handling and storage; ash handling and storage; lime handling and storage; and other ancillary operations.
- b. The boiler would be designed to burn solid fuel (coal, coal tailings and biomass). Natural gas will be used as the auxiliary fuel.
- c. A natural gas-fired boiler will also be constructed. It would be operated to supply steam for the plant during the time in which the proposed solid fuel-fired boiler is being constructed. Thereafter, this natural gas-fired boiler will serve as an auxiliary boiler and have an annual capacity factor of no more than 10 percent.
2. The MGP plant is located in Pekin in Tazewell County. The site is in an area that is currently designated attainment for all criteria pollutants.
3. The proposed project is a major project for emissions of nitrogen oxides (NO_x), sulfur dioxide (SO₂), carbon monoxide (CO), and particulate matter (PM) under the PSD rules. (Refer to Table I for a summary of the potential emissions of the project.)
4. After reviewing the materials submitted by MGP, the Illinois EPA has determined that the project will (i) comply with applicable Board emission standards (ii) comply with applicable federal NSPS emission standards, and (iii) utilize Best Available Control Technology (BACT) on emissions of NO_x, CO, PM and SO₂ as required by PSD. (Refer to the Unit-Specific Conditions for "Control Technology Determinations" for the determination of BACT.)
5. The air quality analysis submitted by MGP and reviewed by the Illinois EPA shows that the proposed project will not cause violations of the ambient air quality standard for NO_x, SO₂, PM and CO. The air quality analysis also shows compliance with the allowable increment levels established under the PSD regulations.
6. The Illinois EPA has determined that the proposed project complies with all applicable Illinois Pollution Control Board Air Pollution Regulations and the federal regulations for Prevention of Significant Deterioration of Air Quality (PSD), 40 CFR 52.21.
7. A copy of the application, the project summary prepared by the Illinois EPA and a draft of this construction permit were placed in a public location near the plant site, and the public was given notice and an opportunity to examine this material, to participate in a public hearing, and to submit comments on these matters.

1.0 PROJECT CONDITIONS

- 1.1 Emissions from the boilers and associated operations that make up this project shall not exceed the limitations in Table I.
- 1.2 The units that are part of this project, other than the boilers, are subject to the following emission standards of general applicability:
 - a. No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally overhead at a point beyond the property line of the source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour), pursuant to 35 IAC 212.301 and 212.314.
 - b. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent into the atmosphere from any emission unit other than those emission units subject to the requirements of 35 IAC 212.122, pursuant to 35 IAC 212.123(a), except as allowed by 35 IAC 212.123(b) and 212.124.
- 1.3 The proposed project is not by itself a major source for emissions of hazardous air pollutants (HAP), because the potential HAP emissions from the project will be less than 10 tons of an individual HAP, and 25 tons of total HAPs, so that a case-by-case determination of MACT pursuant to Section 112(g) of the Clean Air Act will not apply to the new emission units that are part of the proposed project.
- 1.4 a. New Source Performance Standards (NSPS) will apply to certain new emission units that are part of the proposed project. The boilers will be subject to 40 CFR 60, Subpart Db for industrial boilers, and 40 CFR 60 Subpart Y will apply to all new coal preparation operations at the source.

Note: The facility will be receiving lime in a useable form so that no grinding operations are required; therefore, the facility will not be subject to 40 CFR 60, Subpart OOO.
- b. The Permittee shall at all times, maintain and operate the boilers and other emission units that are subject to the NSPS, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions, pursuant to 40 CFR 60.11(d).
- c. For the boilers and other emission units that are subject to NSPS, the Permittee shall fulfill applicable notification requirements of the NSPS, 40 CFR 60.7(a), including:

- i. Written notification of commencement of construction, no later than 30 days after such date. [40 CFR 60.7(a)(1)];
- ii. Written notification of the actual date of initial startup, within 15 days after such date. [40 CFR 60.7(a)(3)]

1.5 Unless otherwise specified in a particular condition, compliance with annual limits shall be determined from a running total of 12 months of data.

- 1.6 a. Ancillary equipment shall be operated and maintained in accordance with good air pollution control practice to minimize emissions.
- b.
 - i. Engines firing fuels other than natural gas shall only be used as emergency equipment, as defined at 35 IAC 211.1920.
 - ii. The power output of such engines shall be no more than 1,500 horsepower.
 - iii. Operation of such engines shall not exceed 500 hours per year, provided, however, that the Illinois EPA may authorize temporary operation of engines in excess of 500 hours per year to address extraordinary circumstances that require operation of this device, by issuance of a separate State construction permit addressing such circumstances.
- c.
 - i. Natural gas shall be the only fuel fired in the heaters.
 - ii. Emissions of NO_x and CO from the heaters shall not exceed 0.10 lb/mmBtu and 0.082 lb/mmBtu, respectively.
- d. This permit is issued based on negligible emissions of each criteria pollutant from the hydraulic reservoirs. For this purpose, emissions shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 tons/year.
- e. This permit is issued based on negligible emissions of VOM from the used lubricating oil storage tank. For this purpose, emissions shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 tons/year.

Note: These requirements constitute the determination of Best Available Control Technology (BACT) for ancillary equipment, as required under the PSD rules.

- f. i. The ancillary equipment shall comply with all applicable emission standards and control requirements of applicable federal New Source Performance Standards (NSPS), 40 CFR Part 60, including the NSPS for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60, Subpart IIII, for the engines that are part of the boiler facility.
- ii. The ancillary equipment shall comply with all applicable emission standards and control requirements of applicable state emission regulations at Title 35, Subtitle B, Chapter I, Subchapter c.
- iii. The Permittee shall fulfill applicable requirements of applicable regulations, including provisions for testing, monitoring, recordkeeping, notification and reporting.

1.7 Good Air Pollution Control Practices

The Permittee shall operate and maintain the emission units that are part of the boiler project, including associated air pollution control equipment, in a manner consistent with good air pollution control practice, as follows:

- a. At all times, including periods of startup, shutdown, malfunction or breakdown, operate as practicable to minimize emissions.
- b. Conduct routine inspections and perform appropriate maintenance and repairs to facilitate proper functioning of equipment and minimize or prevent malfunctions and breakdowns.
- c. Install, calibrate and maintain required monitoring devices and instrumentation in accordance with good monitoring practices, following the manufacturer's recommended operating and maintenance procedures or such other procedures as otherwise necessary to assure reliable operation of such devices.

1.8 Effect of Permit

- a. i. This permit does not relieve the Permittee of the responsibility to comply with all local, state and federal regulations that are part of Illinois' State Implementation Plan, as well as all other applicable federal, state and local requirements.
- ii. In particular, this permit does not relieve the Permittee from the responsibility to carry out practices during the construction and operation of the project, such as application of water or dust

suppressant sprays to unpaved traffic areas, as necessary to minimize fugitive dust and prevent an air pollution nuisance from fugitive dust, as prohibited by 35 IAC 201.141.

- b. i. This permit shall become invalid if construction is not commenced within 18 months after this permit becomes effective, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable period of time, pursuant to 40 CFR 52.21(r)(2). This condition supersedes Standard Condition 1.
- ii. For purposes of this provision, the definitions of "construction" and "commence" at 40 CFR 52.21 (b)(8) and (9) shall apply, which requires that a source must enter into a binding agreement for on-site construction or begin actual on-site construction. (See also the definition of "begin actual construction," 40 CFR 52.21 (b)(11)).
- c. i. Under this permit, the affected solid fuel-fired boiler and associated equipment may be operated for a period that ends 180 days after the boiler first fired solid fuel to allow for equipment shakedown and required emissions testing. This period may be extended by the Illinois EPA upon request of the Permittee if additional time is needed to complete shakedown or perform emission testing. This condition supersedes Standard Condition 6.
- ii. Upon successful completion of emission testing of the affected solid fuel-fired boiler demonstrating compliance with applicable short term emissions limitations, the Permittee may continue to operate the boiler and associated equipment as allowed by Section 39.5(5) of the Environmental Protection Act, that is, the Permittee may continue to operate the units covered by this permit until the Illinois EPA takes final action on the Permittee's request to modify the sources' existing CAAPP permit to include the units covered under this permit, provided that the Permittee has properly applied for such modification in a timely fashion.

1.9 Shakedown Notification and Reporting

- a. The Permittee shall provide the Illinois EPA 30 days advance notification prior to initial start-up of the affected solid fuel-fired boiler to allow inspection.
- b. The Permittee shall provide to the Illinois EPA prompt notification of any event that disrupts the orderly shakedown of the affected solid fuel-fired boiler.

- c. The Permittee shall provide the Illinois EPA progress reports on a calendar quarter basis, commencing the first quarter after the issuance of this permit, terminating in the final quarter after the affected solid fuel-fired boiler first commences operation. These reports shall include the following:
 - i. Overall operating level (heat input and maximum fuel usage);
 - ii. Activities accomplished/significant events;
 - iii. Current schedule for emission testing;
 - iv. A summary of any emission measurements conducted; and
 - v. Outreach activities planned/provided for local communities or interested parties.
- d. The Permittee shall provide the Illinois EPA notice as to when shakedown of the solid fuel-fired boiler is considered complete.

1.10 Authorization to Operate

The new boiler facility may be operated under this construction permit until issuance of a CAAPP permit that addresses this facility, provided a timely and complete application for revised CAAPP permit is submitted for the facility as provided by Section 39.5(5)(x) of the Act. This condition supersedes Standard Condition 6.

2.0 UNIT-SPECIFIC CONDITIONS

CONDITION 2.1: UNIT-SPECIFIC CONDITIONS FOR THE SOLID FUEL-FIRED BOILER

2.1.1 Description

The affected unit that is the principal subject of this permit is a solid fuel-fired boiler, nominally rated at 493 mmBtu/hour. The boiler will be used for cogeneration to produce both process steam and electricity for operation of the existing MGP plant. The boiler would principally be fired with pulverized coal and/or coal tailings, which may be supplemented by bran, other biomass, and/or off-specification product from manufacturing operations at the plant. Natural gas would be used as the auxiliary fuel.

The emissions from the affected boiler will be controlled by low-NO_x burners, a selective catalytic reduction (SCR) system, a scrubber system and a baghouse. In the SCR system, ammonia will be injected into the flue gas upstream of a series of catalyst beds to control emissions of nitrogen oxides (NO_x). In the scrubber system, hydrated lime or limestone slurry is sprayed into the flue gases, to collect and remove sulfur dioxide (SO₂) and other acid gases, such as hydrogen chloride (HCl), from the flue gas. The baghouse will control emissions of filterable particulate matter (PM).

2.1.2 Control Technology Determination

- a. Emissions from the affected boiler shall be controlled by the following:
 - i. Low-NO_x combustion system;
 - ii. Selective catalytic reduction (SCR) system;
 - iii. Scrubber system; and
 - iv. Baghouse.
- b. Emissions of the affected boiler shall comply with the following limits. These limits apply to all operation of the affected boiler, that is, emissions during periods of startup, shutdown and malfunction are not excluded from the determination of compliance.
 - i. CO emissions from the affected boiler shall not exceed:
 - A. 0.15 lb/mmBtu (24-hour average); or
 - B. Alternatively, when the affected boiler operates at less than 50 percent load (24-hour average), 73.9 lbs/hour (24-hour average). (Note: This limit is the product of the CO emission limit that generally applies, in lbs/mmBtu, and the nominal rated heat input of the affected boiler.

- ii. PM emissions from the affected boiler shall not exceed the following limits:
 - A. PM (filterable) emissions shall not exceed 0.012 lb/mmBtu (3-hour average). Compliance with this limit, which also serves to limit emissions of filterable PM₁₀ and PM_{2.5}, shall be determined for particulate as would be measured by USEPA Method 5.
 - B. PM (total) emissions shall not exceed 0.030 lb/mmBtu (3-hour average). Compliance with this limit, which also serves to limit emissions of total PM₁₀ and PM_{2.5}, shall be determined for particulate as would be measured by USEPA Methods 5 and 202.
 - C. PM_{2.5} (filterable) emissions, in lb/mmBtu, 3-hour average, shall not exceed the limit set pursuant to Condition 2.1.11. Compliance with this limit shall be determined for particulate matter as would be measured by an applicable Recommended Test Method for PM_{2.5} adopted by USEPA in 40 CFR Part 51, Appendix M or otherwise by an appropriate Conditional Test Method or proposed Recommended Test Method developed by USEPA. (Refer to Condition 2.1.7-2(b) (ii).)
- iii. NO_x emissions from the affected boiler shall not exceed:
 - A. 0.10 lb/mmBtu (30-day rolling average); and
 - B. 0.08 lb/mmBtu (30-day rolling average), including only hours when the boiler operates at 60 percent load or greater.
- iv. SO₂ emissions from the affected boiler shall not exceed:
 - A. 0.185 lb/mmBtu (30-day rolling average); and
 - B. If actual SO₂ emissions of the affected boiler are 0.140 lb/mmBtu or greater (30-day rolling average), 2.0 percent of the potential combustion concentration, i.e., 98 percent reduction (30-day rolling average). This limit shall take effect 18 months after the initial startup of the affected boiler. Compliance with this limit shall be determined based on the actual SO₂ emissions of the affected boiler and its theoretical emissions of SO₂ that would result from combustion of solid fuel without emissions control systems, calculated as the product of the average SO₂ input rate from "as fired" fuel analyses, determined in accordance with 40 CFR 60 Appendix A, Method 19, and 60.48a(b), and the heat input to the boiler.

- c. The filter material used in the baghouse shall be a membrane material, micro-fiber material, micro-fiber capped composite material or other similar filter material that has enhanced performance for collection of PM_{2.5} or "fine particulate," as compared to conventional woven or felt filter material.

2.1.3-1 Applicable Federal Emission Standards

- a. The affected boiler is subject to the New Source Performance Standards (NSPS) for Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Db and applicable provisions in 40 CFR 60, Subpart A, General Provisions. The affected boiler shall comply with applicable emission standards on and after the date on which the initial performance test is completed or is required to be completed under 40 CFR 60.8, whichever date comes first:
- b. Pursuant to the NSPS, the affected boiler shall comply with the following standards:
 - i. Opacity shall not exceed 20 percent (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. This standard shall apply at all times, except during periods of startup, shutdown or malfunction as provided by 40 CFR 60.2 and 60.11(c).
 - ii. PM emissions (filterable only) shall not exceed 13 ng/J per actual heat input in any one hour period (0.030 lb/million Btu), pursuant to 40 CFR 60.43b(h)(1), except during periods of startup, shutdown or malfunction as provided by 40 CFR 60.2 and 60.11(c).
 - iii. NO_x emissions shall not exceed 86 ng/J (0.20 lb/million Btu) on a 30-day rolling average, pursuant to 40 CFR 60.44b(1)(1).
 - iv. SO₂ emissions shall not exceed 87 ng/J (0.2 lb/million Btu) or 92 percent removal of the potential SO₂ emission rate and 1.2 lbs/mmBtu heat input, on a 30-day rolling average, pursuant to 40 CFR 60.42b(k)(1).
- c. At all times, the Permittee shall maintain and operate the affected boiler, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions, pursuant to 40 CFR 60.11(d).

2.1.3-2 Applicable State Emission Standards

- a. The affected boiler is subject to the following state emission standards:
 - i. The emission of smoke or other particulate matter shall not have an opacity greater than 20 percent, except as allowed

by 35 IAC 212.122(b) and 212.124. Compliance with this limit shall be determined by 6-minute averages of opacity measurements in accordance with USEPA Reference Method 9. [35 IAC 212.109 and 212.122(a)]

- ii. The CO emissions into the atmosphere shall not exceed 200 ppm, corrected to 50 percent excess air, for any one-hour block period. [35 IAC 216.121]
- iii. NO_x emissions shall not exceed 0.7 lb/mmBtu in any one-hour period. [35 IAC 217.121(d)]
- iv. SO₂ emissions shall not exceed 1.2 lbs/mmBtu in any one-hour period. (35 IAC 214.121)
- v. PM emissions shall not exceed 0.1 lb/mmBtu in any one-hour period. (35 IAC 212.204)

b. Malfunction and Breakdown Provisions

In the event of a malfunction or breakdown of the affected boiler, the Permittee is authorized to continue operation of the affected boiler in violation of the applicable state emission standards in Condition 2.1.3-2(a)(ii), (iii) and (iv). This authorization is made pursuant to 35 IAC 201.262 and is subject to the following requirements:

- i. This authorization only allows such continued operation as necessary to prevent risk of injury to personnel or severe damage to equipment, provided however, that operation shall not continue solely for the economic benefit of the owner or operator of the plant. As provided by 35 IAC 201.265, this authorization does not shield the Permittee from enforcement for any such violation and shall only constitute a prima facie defense to such an enforcement action.
- ii. A. Upon occurrence of excess emissions due to malfunction or breakdown, the Permittee shall as soon as practicable, repair the affected boiler or remove the affected boiler from service, so that excess emissions cease unless shutting down the affected boiler would lead to a greater amount of emissions during subsequent startup than would be caused by continuing to run the affected boiler for a short period until repairs can be made.
- B. Consistent with the above, if the Permittee has operated and maintained the affected boiler and air pollution control equipment so that malfunctions are infrequent, sudden, and not caused by poor maintenance or careless operation, and in general are not preventable, the Permittee shall begin shutdown of the affected boiler within 2 hours unless the

malfunction is expected to be repaired within 6 hours. In such case, the shutdown of the system shall be undertaken when it is apparent that the repair will not be accomplished within 6 hours.

- iii. The Permittee shall fulfill applicable recordkeeping and reporting requirements of Conditions 2.1.9(e) and 2.1.10 with respect to malfunctions and breakdowns.
- iv. Following notification to the Illinois EPA of a malfunction or breakdown that resulted in excess emissions, the Permittee shall comply with all reasonable directives of the Illinois EPA with respect to such incident, pursuant to 35 IAC 201.263.

Note: These provisions are subject to review and revision when the CAAPP permit for the source is revised to address the affected boiler and each time the CAAPP permit is subsequently renewed.

c. Startup Provisions

- i. The Permittee is authorized to operate the affected boiler in violation of the applicable state emission standards in Conditions 2.1.3-2(a)(ii), (iii) and (iv) during startup, pursuant to 35 IAC 201.262.
- ii. The Permittee shall conduct startup of the affected boiler in accordance with the manufacturer's written instructions or other written instructions prepared by the Permittee and maintained on site that are specifically developed to minimize excess emissions from startups and that include, at a minimum, the following measures:
 - A. Review of the operational condition of the affected boiler prior to initiating startup of the affected boiler;
 - B. Use of natural gas burners as needed to heat the affected boiler prior to initiating burning of solid fuel;
 - C. Manage the load of the affected boiler until all control systems are functioning normally and
 - D. Review of the operational parameters of the affected boiler during each startup as necessary to make appropriate adjustments to the startup to reduce or eliminate excess emissions.
- iii. The Permittee shall fulfill applicable recordkeeping requirements of Condition 2.1.9(d).

Note: These provisions are subject to review and revision when the CAAPP permit for the source is revised to address the affected boiler and each time the CAAPP Permit is subsequently renewed.

2.1.4 Non-Applicability Provisions

The affected boiler is not subject to the Title IV (i.e., Acid Rain) provisions of the Federal Clean Air Act since it is not a utility unit.

2.1.5-1 Operational and Production Limits for the Boiler

The usage of solid fuel in the affected boiler shall not exceed 25,400 tons/month and 271,000 tons/year.

2.1.5-2 Work Practice Requirements for the Boiler

- a. For the affected boiler, the Permittee shall develop, implement, and maintain a written Startup, Shutdown, and Malfunction Plan (SSM Plan) that describes, in detail, its procedures for operating and maintaining the affected boiler during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process, and air pollution control and monitoring equipment used to comply with the relevant emission standards and limits. This SSM Plan shall be developed to satisfy the purposes set forth in 40 CFR 63.6(e) (3) (i) (A), (B) and (C). For this purpose and other conditions of this permit for which the regulatory definitions of the terms "startup," "shutdown" and "malfunction" under the NSPS are not applicable, the definitions of the terms "startup," "shutdown" and "malfunction" under the NESHAP, at 40 CFR 63.2, shall apply and be used.
- b. At all times, including periods of startup, shutdown, and malfunction as defined at 40 CFR 63.2, the Permittee shall operate and maintain the affected boiler, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions to the levels required by the relevant standards and limits, i.e., meet the emission standard(s) or comply with the applicable SSM Plan, as required below. Determination of whether such operation and maintenance procedures are being used will be based on available information, which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the SSM Plan), review of operation and maintenance records, and inspection of the unit. [Reflects 40 CFR 63.6(e) (1) (i)]
- c. i. During periods of startup, shutdown, and malfunction of the affected boiler, the Permittee shall operate and maintain the affected boiler, including associated air pollution control and monitoring equipment, in accordance with the procedures specified in the SSM Plan. The Permittee shall correct malfunctions as soon as practicable after their occurrence in accordance with the SSM Plan. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, the Permittee shall comply by minimizing

emissions during such a startup, shutdown, and malfunction event consistent with safety and good air pollution control practices. [Reflects 40 CFR 63.6(e) (1) (ii) and (3) (ii)]

- ii. When actions taken by the Permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in SSM Plan, the Permittee shall keep records for that event which demonstrate that the procedures specified in the SSM Plan were followed. In addition, the Permittee shall keep records of these events as specified in 40 CFR 63.10(b), including records of the occurrence and duration of each startup, shutdown, or malfunction of operation and each malfunction of the air pollution control and monitoring equipment. Furthermore, the Permittee shall confirm in the periodic compliance reports (refer to Condition 2.1.10) that actions taken during periods of startup, shutdown, and malfunction were consistent with the SSM Plan. [Reflects 40 CFR 63.6(e) (3) (iii)]
- iii. If an action taken by the Permittee during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) of the affected boiler is not consistent with the procedures specified in the SSM Plan, and the affected boiler exceeds a relevant emission standard or limit, then the Permittee must record the actions taken for that event and must promptly report such actions as specified by 40 CFR 63.10(d) (5), unless otherwise specified elsewhere in this permit or when superseded in the CAAPP Permit. [Reflects 40 CFR 63.6(e) (3) (iv)]
- d.
 - i. The Permittee shall develop its initial SSM Plan prior to the initial startup of the affected boiler. The Permittee shall make changes to the SSM Plan if required by the Illinois EPA or necessary to satisfy the requirements of this part or address other changes to the procedures for the boiler. [Reflects 40 CFR 63.6(e) (3) (vii) and (viii)]
 - ii. This SSM Plan is a record required by this permit, which the Permittee must retain in accordance with the general requirements for retention and availability of records. In addition, when the Permittee revises the SSM Plan, the Permittee must also retain and make available the previous (i.e., superseded) version of the SSM Plan for a period of at least 5 years after such revision. [Reflects 40 CFR 63.6(e) (3) (v) and 40 CFR 63.10(b) (1)]

2.1.6 Emission Limitations

- a. The emissions of the affected boiler shall not exceed the following limits. These limits address all emissions from the affected boiler, including emissions during startup, malfunction and breakdown, as addressed by Conditions 2.1.3.

Pollutant	Short-Term Limit (Lbs/Hour)	Averaging Period	Annual Limit (Tons/Year)
NO _x	148.0	24-Hour Daily	183.4
CO	739.0	24-Hour Daily	324.0
PM/PM ₁₀ (Filterable)	5.9	3-Hour Block	25.9
PM/PM ₁₀ (Total)	14.8	3-Hour Block	64.7
SO ₂	73.9	24-Hour Daily	324.0
	123.0	3-Hour Block	
VOM	18.0	3-Hour Block	7.8
Sulfuric Acid Mist	0.048	3-Hour Block	0.21
Fluorides	0.007	3-Hour Block	0.03
Lead	0.021	3-Hour Block	0.09
HCl	0.64	3-Hour Block	2.8
Individual HAP	0.64	3-Hour Block	2.8
Total HAPs	1.35	3-Hour Block	5.91

- b. The emissions of mercury from the affected boiler shall not exceed 0.000003 lb/mmBtu, annual average, and 0.0065 tons/year.
- c. When the BACT limit for the emissions of PM_{2.5} (filterable) from the affected boiler becomes effective, the emissions of PM_{2.5} (filterable) from the boiler shall not exceed short-term (3-hour block) and annual limits that are calculated from the above limits for the boiler's emissions of PM/PM₁₀ (filterable) using the ratio of the BACT limits (which are expressed in lb/mmBtu).

2.1.7-1 Sampling Requirements

- a. The Permittee shall perform sampling for the solid fuel used in the affected boiler in accordance with the NSPS, 40 CFR 60 (Subpart Db).
- b. The Permittee shall analyze representative samples of the solid fuel supply for the affected boiler for heat content using the procedures specified by USEPA Method 19.
- c. The Permittee shall analyze representative samples of the solid fuel supply to the affected boiler for mercury and other metals, chlorine and ash content using standard methods accepted by USEPA, as follows:
 - i. Analysis of the fuel supply to the affected boiler shall be conducted in conjunction with emissions testing (see Condition 2.1.7-2).
 - ii. Analysis of representative samples of a solid fuel shall be conducted in conjunction with acceptance of a new type of solid fuel.

- iii. Analysis of representative samples of solid fuels shall be conducted at least every two years, if a more frequent analysis is not needed pursuant to the above requirements.

2.1.7-2 Emission Testing Requirements

- a. i. Within 60 days after achieving the maximum production rate at which the affected boiler will be operated, but not later than 180 days after initial startup, the Permittee shall, when firing solid fuel, have tests conducted for VOM, PM/PM₁₀ (filterable and condensable), HCl, metals, and sulfuric acid mist, as specified below at its expense, by an approved testing service while the boiler is firing solid fuel at 95 percent or greater of the maximum operating load.

Note: An extension of the deadline for the testing of PM emissions required by the NSPS can only be provided by USEPA.

- ii. A series of emissions tests shall be conducted for the affected boiler for PM_{2.5} and PM/PM₁₀, with testing conducted so that data is collected from at least three tests that are separated by approximately one year (between 9 and 15 months apart), with testing completed no later than 36 months after initial startup of the boiler. For this purpose, the first test may be combined with the initial testing required by Condition 2.1.7-2(a)(i).
- iii. In addition to the emission testing required above, the Permittee shall perform emission tests as requested by the Illinois EPA for the units it specifies within 45 days of a written request by the Illinois EPA or such later date agreed to by the Illinois EPA. The operating conditions during such testing shall be consistent with those specified by the Illinois EPA, e.g., firing of solid fuel with maximum levels of supplementary fuel.
- b. i. The following methods and procedures shall be used for testing of emissions of the affected boiler, unless another USEPA method is approved by the Illinois EPA. Refer to 40 CFR 51, Appendix M or 40 CFR 60, Appendix A for USEPA test methods.

	<u>Method</u>
Location of Sample Points	Method 1
Gas Flow and Velocity	Method 2
Flue Gas Weight	Method 3 or 3A
Moisture Content	Method 4
Metals/Mercury	Method 29 or Draft ASTM Z65907
Particulate Matter (PM)	Method 5 or another Method specified in 40 CFR 60, Part Db, where applicable
PM ₁₀ (filterable) ¹	Method 201, 201A

	<u>Method</u>
PM ₁₀ (condensable)	Method 202
Volatile Organic Material ²	Method 18, 25 or 25A
Sulfuric Acid Mist	Method 8
Hydrogen Chloride	Method 26

¹ After the initial emission tests required by Conditions 2.1.7-2(a)(i) and (ii), with the approval of the Illinois EPA, the Permittee may report all PM emissions measured by USEPA Method 5 as PM₁₀ (filterable), in which case separate testing for PM₁₀ (filterable) using USEPA Method 201 or 201A need not be performed, unless specifically requested by the Illinois EPA.

² The Permittee may exclude methane, ethane and other exempt organic compounds from the results of any VOM test provided that the test protocol to quantify and correct for such compounds is included in the test plan approved by the Illinois EPA.

ii. Testing for emissions of PM_{2.5} shall be conducted using an applicable Recommended Test Method adopted by USEPA in 40 CFR Part 51, Appendix M. If USEPA has not adopted a Recommended Method for testing of PM_{2.5} when testing must be performed, testing for PM_{2.5} shall be conducted using an appropriate Conditional Test Method developed by USEPA, e.g., Conditional Test Method 39 or 40, or a Recommended Test Method proposed by USEPA, subject to review by the Illinois EPA as part of the review of the test plan (refer to Condition 3.3(a)).

c. The Permittee shall submit test plans, notifications of testing dates and reports for this testing in accordance with Condition 3.3. In addition to other required information, reports for testing of emissions of PM_{2.5} shall include information confirming proper design for control of PM_{2.5}; information confirming proper operation of the control system for effective control of PM_{2.5} emissions while emission data was being collected; and other relevant information related to the PM_{2.5} emissions from the boiler.

2.1.8-1 Emissions and Opacity Monitoring Requirements

a. Emissions monitoring for SO₂ and NO_x:

i. Pursuant to 40 CFR 60.47b and 60.48b, for the affected boiler, the Permittee shall install, operate and maintain continuous emission monitoring systems (CEMS) for measuring SO₂ and NO_x emissions and either oxygen (O₂) or carbon dioxide (CO₂) from the affected boiler. These CEMS shall be installed and operational prior to initial firing of fuel in the affected boiler, and certified promptly thereafter. The procedures under 40 CFR 60.13 shall be

followed for the installation, evaluation, and operation of these CEMS.

- ii. For purposes of determining compliance with NSPS limits, these CEMS shall be operated during all periods of operation of the affected boiler except for CEMS breakdowns and repairs. This CEMS shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive boiler operating days as specified by 40 CFR 60.47b(c) and 60.48b(f). Data is to be obtained during calibration checks, and zero and span adjustments as specified in the NSPS.
- iii. In addition to being used to calculate emissions for purposes of the NSPS (as provided by 40 CFR 60.13(h), 60.47b and 60.48b(b)(2)), the data collected by these CEMS shall also be used to determine compliance with applicable mass emission limitations for SO₂ and NO_x established by this permit.

b. Emissions monitoring for CO:

- i. The Permittee shall install, calibrate, operate and maintain CEMS for measuring CO emissions from the affected boiler. The relevant monitoring procedures in 40 CFR 60.48b(j)(4) shall be followed for these CEMS until and unless USEPA adopts procedures that would be directly applicable for continuous monitoring of CO emissions from the affected boiler.
- ii. These CEMS shall be used to determine one-hour average values to determine compliance with the CO limits in Conditions in 2.1.2(b), 2.1.3-2(a) and 2.1.6.

c. Opacity Monitoring:

- i. Pursuant to 40 CFR 60.48b, the Permittee shall install, operate, and maintain continuous opacity monitoring systems (COMS) for the affected boiler. These COMS shall meet the performance specifications and operating requirements in Sections 3.1 through 3.8 of 40 CFR 51, Appendix P. These COMS shall be operated pursuant to formal monitoring procedures that include a quality assurance/control plan, which procedures shall reflect the manufacturer's instructions as adopted by the Permittee based on its experience. These COMS shall be installed and operational prior to initial firing of solid fuel in the boiler, and certified promptly thereafter.
- ii. The Permittee shall collect the opacity monitoring system data pursuant to 40 CFR 60.49b(f) and reduce the opacity monitoring data to 6-minute averages.

- d.
 - i. The Permittee shall conduct monitoring for mercury emissions from the affected boiler using the "excepted monitoring methodology" in accordance with 40 CFR 75.81(b), (c) and (d) (as adopted by USEPA, even if subsequently vacated), provided however that the initial certification test shall be conducted in conjunction with the emission testing required by Condition 2.1.7-2(a) (i).
 - ii. As an alternative to Condition 2.1.8-1(d) (i) the Permittee may install, calibrate, operate and maintain a monitoring system for mercury emissions from the affected boiler. This monitoring shall be conducted with a mercury sorbent trap monitoring system in accordance with 40 CFR 75.15 (as adopted by USEPA, even if subsequently vacated) or, alternatively, with an approved continuous mercury emissions monitoring system in accordance with 40 CFR 75.81 (as adopted by USEPA, even if subsequently vacated).
 - iii. The Permittee shall submit semi-annual monitoring reports to the Illinois EPA for this monitoring in accordance with relevant reporting requirements of 40 CFR Part 75.
- e.
 - i. Fulfillment of the above criteria for availability of emission data from a monitoring system does not shield the Permittee from potential enforcement for failure to properly maintain and operate the system.
 - ii. If the Permittee determines that a continuous emission monitoring system (CEMS) is inaccurately reporting excess emissions, the affected boiler may continue to operate provided the Permittee records the information it is relying upon to conclude that the affected boiler and associated emission control systems are functioning properly and the CEMS is reporting inaccurate data, and the Permittee takes prompt action to restore the accuracy of the CEMS.
- f. The Permittee shall keep records of maintenance, calibration and operational activity associated with each required continuous monitoring device.

2.1.8-2 Operational Instrumentation and Monitoring Requirements

- a. The Permittee shall install, operate and maintain instrumentation for the affected boiler for the following operating parameters:
 - i. Consumption of fuels (i.e., solid fuel and natural gas).
 - ii. Combustion chamber temperature.
 - iii. Temperature of the flue gas at the inlet to the SCR system and reagent feed rate by the SCR system.

- iv. Temperature at the inlet to the scrubber system and its sorbent feed rate.
 - v. Temperature at the inlet to the baghouse.
 - vi. Oxygen in the flue gas.
- b. The Permittee shall install, operate and maintain a Bag Leak Detector System (BLDS) to monitor the operation of the baghouse on the main stack. The BLDS shall be installed, operated and maintained in a manner that is consistent with the provisions of 40 CFR 63.7505(d) and 63.7525(i) (i.e., as adopted by USEPA at 69 FR 55218, September 13, 2004 and 71 FR 70651, December 6, 2006, prior to vacatur), provided however, that the Illinois EPA shall substitute for the Administrator of the USEPA.
- c. i. The Permittee shall install, operate and maintain equipment to measure the pressure drop across the baghouse on the main stack. Data measured by this device shall be recorded at least twice per day.
- ii. The Permittee shall operate and maintain this instrumentation in accordance with good monitoring practices, following the manufacturer's recommended operating and maintenance procedures or such other procedures for such devices as otherwise necessary to assure reliable operation of such devices and keeping records for the operation, maintenance and repair of this device.

2.1.9 Recordkeeping Requirements

- a. The Permittee shall maintain a file that contains the maximum rated heat input of the affected boiler, with supporting documentation.
- b. The Permittee shall maintain records of the following items related to solid-fuels used in the affected boiler:
- i. Records of the sampling and analysis of fuel supply to the affected boiler conducted in accordance with Condition 2.1.7-1.
 - ii. A. The sulfur content of coal, lbs sulfur/million Btu, supplied to the affected boiler, as determined pursuant to Condition 2.1.7-1; and
 - B. The sulfur content of coal supplied to the affected boiler on a 30-day rolling average, determined from the above data or determine SO₂ concentration utilizing an inlet SO₂ monitor.

- iii. The amount of fuel combusted in the affected boiler by type of fuel as specified in 40 CFR Part 60, Appendix A, Method 19.
- c. The Permittee shall maintain records of the following information related to the NO_x and SO₂ emissions of the affected boiler, for each boiler operating day, pursuant to the NSPS:
- i. Calendar date;
 - ii. The average hourly emission rates (expressed in lbs/million Btu heat input) measured or predicted;
 - iii. The 30-day average emission rate (lbs/million Btu heat input) calculated at the end of each boiler operating day from the measured hourly emission rates for the preceding 30 boiler operating days;
 - iv. Identification of the boiler operating days when the calculated 30-day average emission rates are in excess of an applicable standard, with the reasons for such excess emissions as well as a description of corrective actions taken;
 - v. Identification of the boiler operating days for which emission data have not been obtained, including a description of corrective actions taken;
 - vi. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;
 - vii. Identification of "F" factor used for calculations, method of determination, and type of fuel combusted;
 - viii. Identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system;
 - ix. Description of any modifications to the continuous monitoring system that could affect the ability of the continuous monitoring system to comply with Performance Specification 2 or 3; and
 - x. Results of daily CEMS drift tests and quarterly accuracy assessments as required under Appendix F, Procedure 1 of 40 CFR 60.
- d. Records for sulfur content (wt. percent) of the fuel supply to the affected boiler (as received basis). Supplier analysis of the fuel supplied to the Permittee may be used to satisfy these requirements, provided that sampling and analysis follow ASTM methods.

- e. The Permittee shall maintain the following operating records for the affected boiler:
 - i. Daily records of fuel use (tons), prepared and maintained following the procedures of 40 CFR 60.49b(d);
 - ii. Amount of fuel consumed, by type (tons/month and tons/year) and the annual capacity factor, determined on a 12-month rolling basis with a new annual capacity factor calculated for each month pursuant to 40 CFR 60.49b(d);
 - iii. Amounts of reagent material (e.g., ammonia and lime) used for the SCR system and scrubber, in gallons or tons per month, by type of material;
 - iv. Operating log(s), in accordance with Condition 3.4(a), which shall also contain the information specified by the NSPS, including date and duration of each startup, and note any deviations from normal startup procedures, as set forth in the Permittee's written SSM/operating procedure.
 - v. Inspection, maintenance and repair log(s) in accordance with Condition 3.5.

- f. The Permittee shall maintain the following records for each occurrence when operation of the affected boiler continued during a malfunction or breakdown that acted to increase emissions or affect emission compliance, including the following information:
 - i. Date and duration of malfunction or breakdown.
 - ii. A description of the malfunction or breakdown.
 - iii. The corrective actions used to reduce the quantity of emissions and the duration of the occurrence.
 - iv. If excess emissions occurred:
 - A. An explanation why continued operation of the affected boiler was necessary.
 - B. The preventive measures planned or taken to prevent similar malfunctions or breakdowns or reduce their frequency and severity.
 - C. An estimate of the magnitude of excess emissions during the occurrence.

- g. The Permittee shall keep the following records related to emissions:
 - i. Records of the emissions of NO_x and SO₂ from the affected boiler and other related information as required for each

boiler operating day by the NSPS, 40 CFR 60.48b(g) and (k) or (l).

- ii. A file containing a demonstration that the maximum emission rates of different pollutants, in lbs/mmBtu, lbs/hour, and ppm, as appropriate, of the affected boiler when operating normally, comply with the applicable emission limits in Condition 2.1.2, 2.1.3-1, 2.1.3-2 and 2.1.6, with supporting documentation.
- iii. Records for any period of time including startup or malfunction/breakdown when emissions exceed an applicable limit.
- iv. Records for emissions of pollutants for which this permit contains standards or limitations, tons/month and tons/year, based on continuous emissions monitoring data or appropriate emission factors, and operating information, with supporting calculations.

2.1.10 Notification and Reporting Requirements

- a. The Permittee shall fulfill applicable notification and reporting requirements of the NSPS, 40 CFR 60.7 and 60.49b, for the affected boiler by sending required notifications and reports to the Illinois EPA, including the following reports:
 - i. Notification of the date of initial startup and other information for the affected boiler, as provided by 40 CFR 60.7(a) and 60.49b(a).
 - ii. Periodic reports containing the information specified under 40 CFR 60.7(c) or (d) and 60.49b(g) and (j). These reports shall be prepared and submitted in conformance with the requirements, content and schedule contained in 40 CFR 60.7, and may be combined with the compliance reports required by Condition 2.1.10(d).
- b. The Permittee shall promptly notify the Illinois EPA of any deviations from the requirements of this permit for the affected boiler as follows. These notifications shall include the information specified by Condition 3.4(a).
 - i. If there is an exceedance of a state SO₂, PM or opacity standard other than during startup or shutdown, e.g., due to a malfunction or breakdown event, the Permittee shall immediately notify the Illinois EPA, Regional Office and Compliance Section within 24 hours, in accordance with Condition 2.1.10(c).
 - ii. If there is a deviation from other applicable requirements for PM emissions or opacity that is not repaired or otherwise corrected within two hours (120 minutes), the Permittee shall notify the Illinois EPA within 30 days.

- iii. All other deviations shall be reported in the periodic compliance required by Condition 2.1.10(a)(ii) and (d).
- c.
 - i. Pursuant to 35 IAC 201.263, the Permittee shall immediately report to the Illinois EPA, Regional Office, by telephone or fax upon continued operation of the affected boiler during a malfunction or breakdown of the scrubber system or baghouse that has been accompanied by a violation of the applicable state SO₂, PM or opacity emission standard.
 - ii. The Permittee shall submit a written follow-up report to the Illinois EPA within five business days providing a detailed explanation of the event and explanation why continued operation of the affected boiler was necessary, the length of time during which operation continued under such conditions, the measures by the Permittee to minimize and correct deficiencies with chronology, and when the repairs were completed or the affected boiler was taken out of service.
 - d. The Permittee shall submit semi-annual compliance reports to the Illinois EPA for the affected boiler that include the following and shall be submitted no later than 30 days following the end of the reporting period:
 - i. As related to exceedances of the standards or limits for NO_x and SO₂ emissions in Conditions 2.1.2(b), 2.1.3-2 or 2.1.6, the information specified by Condition 3.4(a). If there are no such exceedances during the reporting period, the report shall state that no exceedances occurred during the reporting period. This information may be combined with the periodic reports for compliance with the NSPS standards for NO_x and SO₂. (Excess emissions are defined as any monitored or calculated emission rate that exceeds the applicable standard or limit.)
 - ii. As related to exceedances of the NSPS standards for PM or other applicable standards or limits in Condition 2.1.2(b), 2.1.3-2 or 2.1.6, the information specified by Condition 3.4(a).
 - iii. For other deviations during the reporting period that have not been individually reported, the information specified by Condition 3.4(a).
 - iv. A listing of deviations during the reporting period that were individually reported pursuant to Condition 2.1.10(b)(i), (b)(ii) or (c). A copy of those reports or the information specified by Condition 3.4(a) need not be provided for these deviations.
 - v. A summary of operation and emissions of the boiler during the reporting period, including the amounts of coal, coal

tailings and biomass used, total operating hours, number of startups by type, and average hourly emission rates for NO_x, SO₂ and CO.

- e. The Permittee shall notify the Illinois EPA of changes in the supply of solid fuel to the affected boiler, including use of fuel from a different mine or reserve. This notification shall describe the change in fuel supply and the composition/character of the new fuel. This notification shall be submitted 30 days in advance of the change, unless the change would occur with less than 30 days advance notice to the Permittee, in which case notification shall be provided as soon as reasonably possible, but in no case later than the actual change.

2.1.11 Establishment of the BACT Limit for PM_{2.5} Emissions

- a. i. The BACT limit in Condition 2.1.2(b) (ii) (C) for emissions of PM_{2.5} (filterable) from the affected boiler shall be established based on the results of the emissions testing specified by Condition 2.1.7-2(a) (ii), the evaluation addressed by Condition 2.1.11(b), and other relevant information. For this purpose, the limit shall be set at 0.008 lb/mmBtu unless the Permittee demonstrates and the Illinois EPA determines, based on this information, that a limit of 0.008 lb/mmBtu is not achievable by the emission control equipment required to be installed on the affected boiler, that is, this limit cannot be reliably met without unacceptable consequences (i.e., the inability to comply with other emission limits or requirements for the affected boiler or significant risk to equipment or personnel) or unreasonable consequences (i.e., a substantial increase in the maintenance and repair needed for the control system for the affected boiler). If it is determined that a limit of 0.008 is not achievable, following opportunity for public comment, this permit shall be revised to establish a limit that is achievable, which limit shall in no case be greater than 0.012 lb/mmBtu.
- ii. If the Permittee does not perform the specified emission testing for PM_{2.5} emissions or does not perform and submit the evaluation of PM_{2.5} emissions and a request to revise this permit in a timely manner in accordance with Condition 2.1.11(b), the BACT limit for emissions of PM_{2.5} (filterable) from the affected boiler shall immediately become 0.008 lb/mmBtu.
- b. i. The Permittee shall conduct the evaluation of PM_{2.5} emissions in accordance with a plan submitted to the Illinois EPA for review and comment. The plan shall provide for evaluation of PM_{2.5} emissions at moderate load operation of the boiler as well as operation at full load. The initial plan shall be submitted to the Illinois EPA no later than 180 days after initial start-up of the boiler.

- ii. A. This evaluation shall be completed and a detailed written report submitted to the Illinois EPA within three years after the initial startup of the boiler. This report shall include a proposed BACT limit for emissions of PM_{2.5} (filterable).
- B. This deadline will be extended for an additional year if the Permittee submits an interim report demonstrating the need for additional data to establish a BACT limit for PM_{2.5} emissions. During this additional year, at least one more test for PM_{2.5} emissions shall be conducted in accordance with Condition 2.1.7-2.
- iii. When the Permittee submits the final report for its evaluation to the Illinois EPA, the Permittee shall also apply to the Illinois EPA for a revision to this permit to include an appropriate BACT limit and other limits for the emissions of PM_{2.5} (filterable) from the affected boiler.

CONDITION 2.2: UNIT-SPECIFIC CONDITIONS FOR SOLID FUEL AND OTHER BULK MATERIAL HANDLING AND STORAGE OPERATIONS

2.2.1 Description of Emission Units

The affected units for the purpose of these unit-specific conditions are equipment and facilities handling solid fuel and other bulk materials, other than boiler ash, that are involved with the operation of the solid fuel-fired boiler and that have the potential for particulate matter (PM) emissions. Affected units include receiving, transfer, storage, preparation (crushing, screening, etc.) and loading operations, as relevant for particular materials.

Emissions of particulate matter from affected units must be controlled by appropriate measures given the nature of the material. In particular, units handling dry materials must be enclosed and aspirated to control equipment if it is practical to do so. For receiving and storage of coal and coal tailings, for which total enclosure is not practicable, measures must be used to very effectively reduce the generation of emissions.

2.2.2 Control Technology Determination

- a. Particulate matter emissions from an affected unit handling a wet material shall be controlled by the following measures. For this purpose, wet material is a material that has sufficient moisture during normal operation to minimize the potential for direct emissions.
 - i. Maintaining the material with adequate moisture to prevent visible emissions directly from such unit during the handling, storage or load out of the material.
 - ii. Collection of spilled material that could become airborne if it dried or were subject to vehicle traffic as part of a Program for Control of Fugitive Dust (See Condition 2.4.5).
- b. Particulate matter emissions from an affected unit handling a dry material shall be controlled by:
 - i. Enclosure of the unit so as to prevent visible fugitive emissions, as defined by 40 CFR 60.671, from the affected unit.
 - ii. Aspiration to a control device designed to emit no more than 0.005 grains/dry standard cubic foot (gr/dscf), which device shall be operated in accordance with good air pollution control practice to minimize emissions. For this purpose, the control device shall be a baghouse or other filtration type device unless the Permittee demonstrates and the Illinois EPA concurs that another type of control device is preferable due to considerations of operational safety.

2.2.3-1 Applicable Federal Emission Standards

- a. Affected units engaged in handling and processing coal shall comply with applicable requirements of the NSPS for coal Preparation Plants, 40 CFR 60, Subpart Y, and related provisions of 40 CFR 60, Subpart A.
- b. Pursuant to the NSPS, the opacity of the exhaust from coal processing and conveying equipment, coal storage systems (other than open storage piles), and coal loading systems shall not exceed 20 percent. [40 CFR 60.252(c)]
- c. At all times, the Permittee shall maintain and operate affected units that are subject to NSPS, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions, pursuant to 40 CFR 60.11(d).

2.2.3-2 Applicable State Emission Standards

- a. The emissions of PM from affected units other than units excluded by 35 IAC 212.323 (see Condition 2.2.4) shall comply with the applicable limit pursuant to 35 IAC 212.321, which rule limits emissions based on the process weight rate of emission units and allows a minimum emission rate of 0.55 lb/hour for any individual unit.
- b. The affected units are subject to the limitations of 35 IAC 212.123 and 212.301 (see also Condition 1.2).

2.2.4 Non-Applicability Provisions

This permit is issued based on the solid-fuel handling operations not being subject to 35 IAC 212.321 pursuant to 35 IAC 212.323, which provides that 35 IAC 212.321 shall not apply to emission units, such as stock piles, to which, because of the disperse nature of such emission units, such rules cannot reasonably be applied.

2.2.5 Operating Requirements

- a.
 - i. Bulk materials other than coal and coal tailings that have the potential for PM emissions shall be stored in silos, bins, and buildings, without storage of such materials in outdoor piles except on a temporary basis during breakdown or other disruption in the capabilities of the enclosed storage facilities.
 - ii. Coal storage piles and temporary piles for other materials shall be equipped and operated with adjustable stacker(s), rotary stacker(s), coal ladders or other comparable devices to minimize the distance that material drops when added to the pile and minimize the associated PM emissions.

- b. The Permittee shall operate and maintain control measures for the affected units with the control measures identified in the records required by Condition 2.2.10(b) (iii), so as to provide assurance of compliance with the applicable limits and standards in Conditions 2.2.2 and 2.2.3-1.
- c. The affected units, including associated control equipment shall be operated and maintained in accordance with good air pollution control practice to minimize emissions.

2.2.6 Emission Limitations

Emissions of PM and PM₁₀ from the affected units shall not exceed the following limitations. Compliance with these limits shall be determined from the amount of material handled, other operating information for affected units, and appropriate emission factors.

Unit(s)	PM/PM ₁₀ Limitations	
	Lbs/Hour	Tons/Year
Coal Unloading, Crushing and Storage (Baghouse System)	0.51/0.25	1.50/0.73
Coal Bunkers (Baghouse System)	0.24/0.24	1.06/1.06
Lime Unloading and Silo (Bin Vent Filter)	0.10/0.10	0.17/0.17
	Totals	2.73/1.96

2.2.7-1 Initial Opacity Observations

- a.
 - i. Within 60 days after achieving the maximum production rate at which each affected unit subject to NSPS will be operated, but not later than 180 days after initial startup of each such unit, the Permittee shall have observations conducted at its expense as follows by a certified observer testing service under unit operating conditions that are representative of maximum emissions.
 - ii. USEPA Method 9 shall be used for PM and opacity measurements as specified in 40 CFR 60.254.
 - iii. Test plan(s), test notifications, and test reports shall be submitted to the Illinois EPA in accordance with Condition 3.3 and 3.6.

2.2.7-2 Periodic Opacity Observations

- a. The Permittee shall have the opacity of the emissions of the affected units during representative weather and operating conditions determined by a qualified observer in accordance with USEPA Test Method 9, as further specified below.
 - i. If emissions are normally visible from a unit when it is in operation, as determined by USEPA Reference Method 22, opacity testing shall be conducted at least annually.

- ii. Upon written request by the Illinois EPA, such testing shall be conducted for specific affected units within 45 calendar days of the request or on the date agreed upon by the Illinois EPA, whichever is later.
- b. The duration of opacity observations for each test shall be at least 30 minutes (five 6-minute averages) unless the average opacities for the first 12 minutes of observations (two six-minute averages) are both less than 5.0 percent.
- c.
 - i. The Permittee shall notify the Illinois EPA at least 7 days in advance of the date and time of these tests, in order to allow the Illinois EPA to witness testing. This notification shall include the name and employer of the qualified observer(s).
 - ii. The Permittee shall promptly notify the Illinois EPA of any changes in the time or date for testing.
- d. The Permittee shall provide a copy of its observer's readings to the Illinois EPA at the time of testing, if Illinois EPA personnel are present.
- e. The Permittee shall submit a written report for this testing within 15 days of the date of testing. This report shall include:
 - i. Date and time of testing.
 - ii. Name and employer of qualified observer.
 - iii. Copy of current certification.
 - iv. Description of observation conditions, including recent weather.
 - v. Description of the operating conditions of the affected processes.
 - vi. Raw data.
 - vii. Opacity determinations.
 - viii. Conclusions.

2.2.7-3 Emission Testing Requirements

Unless otherwise specified for the affected units by the source's CAAPP permit:

- a. Within 90 days of a written request from the Illinois EPA, the Permittee shall have the PM emissions at the stacks or vents of affected units, as specified in such request, measured during representative operating conditions, as set forth below.

- b. Testing shall be conducted using appropriate USEPA Test Methods, including Method 5 or 17 for PM emissions.
- c. All other testing requirements shall be addressed pursuant to Section 3.3.

2.2.8 Operational Instrumentation

- a. The Permittee shall install, operate and maintain systems to measure the pressure drop across each baghouse used to control affected units, other than bin vent filters and other similar filtration devices.
- b. The Permittee shall maintain the records of the measurements made by these systems and records of maintenance and operational activity associated with the systems.

2.2.9 Inspections

- a.
 - i. The Permittee shall conduct inspections of affected units on at least a monthly basis with supervisory personnel or other personnel who are not directly involved in the day-to-day operation of these units, for the specific purpose of verifying that the measures identified in the operating program and other measures required to control emissions from affected units are being properly implemented.
 - ii. These inspections shall include observation for the presence of visible emissions, performed in accordance with USEPA Method 22, from buildings in which affected units are located and from units from which the Permittee has elected to demonstrate no visible emissions.
- b. The Permittee shall perform detailed inspections of the dust collection equipment for affected units while the units are out of service, with an initial inspection performed before any maintenance and repair activities are conducted during the period the unit is out of service and a follow-up inspection performed after any such activities are completed. These inspections shall be conducted at least every 15 months.

2.2.10 Recordkeeping

- a. For affected units that are subject to NSPS, the Permittee shall fulfill applicable recordkeeping requirements of the NSPS, 40 CFR 60.7.
- b. The Permittee shall maintain file(s), which shall be kept current, that contain:
 - i. The maximum operating capacity of each affected unit or group of related units (tons/hour).

- ii. A. For the baghouses and other filter devices associated with affected units, design specifications for each device (type of unit, maximum design exhaust flow (acfm and scfm), filter area, type of filter cleaning, performance guarantee for particulate exhaust loading in gr/scf, etc.), the manufacturer's recommended operating and maintenance procedures for the device, and design specification for the filter material in each device (type of material, surface treatment(s) applied to material, weight, performance guarantee, warranty provisions, etc.).
 - B. For each baghouse, the normal range of pressure drop across the device and the minimum and maximum safe pressure drop for the device, with supporting documentation.
 - iii. For affected units that are not controlled with baghouses or other filter-type devices, a detailed description of the work practices used to control emissions of PM pursuant to Condition 2.2.2. These control measures are referred to as the "established control measures" in this subsection of this permit.
 - iv. The designated PM emission rate, in pounds/hour and tons/year, from affected units, either individually or grouped by related units, with supporting calculations and documentation, including detailed documentation for the level of emissions control achieved through the work practices that are used to control PM emissions. For each category of affected unit (e.g., coal handling), the sum of these emission rates shall not exceed the totals in Table 1 for the category of affected unit.
 - v. A demonstration that confirms that the above established control measures are sufficient to assure compliance with the above emissions rates and, for units to which it applies, Condition 2.2.3-2(a), at the maximum process weight rate at which each affected unit can be operated (tons/hour), with supporting emission calculations and documentation for the emission factors and the efficiency of the control measures being relied upon by the Permittee. Except as addressed by Condition 2.2.10(b)(ii) or testing of PM emissions from an affected unit is conducted in accordance with Condition 2.2.7-3, this demonstration shall be developed using emission factors for uncontrolled PM emissions, efficiency of control measures, and controlled PM emissions published by USEPA.
- c. The Permittee shall keep records for the amount of bulk materials received by or loaded out from the solid fuel-fired boiler facility by category or type of material (tons/month), including coal, biomass, lime receipts and bottom ash and fly ash shipments.

- d.
 - i. The Permittee shall keep inspection and maintenance log(s) or other records for the control measures associated with the affected units, including buildings and enclosures, dust suppression systems and control devices.
 - ii. These records shall include the following information for the inspections required by Condition 2.2.9(a):
 - A. Date and time the inspection was performed and name(s) of inspection personnel.
 - B. The observed condition of the control measures for each affected unit, including the presence of any visible emissions.
 - C. A description of any maintenance or repair associated with established control measures that are recommended as a result of the inspection and a review of outstanding recommendations for maintenance or repair from previous inspection(s), i.e., whether recommended action has been taken, is yet to be performed or no longer appears to be required.
 - D. A summary of the observed implementation or status of actual control measures, as compared to the established control measures.
 - iii. These records shall include the following information for the inspections required by Condition 2.2.9(b):
 - A. Date and time the inspection was performed and name(s) of inspection personnel.
 - B. The observed condition of the dust collection equipment.
 - C. A summary of the maintenance and repair that is to be or was conducted on the equipment.
 - D. A description of any maintenance or repair that is recommended as a result of the inspection and a review of outstanding recommendations for maintenance or repair from previous inspection(s), i.e., whether recommended action has been taken, is yet to be performed or no longer appears to be required.
 - E. A summary of the observed condition of the equipment as related to its ability to reliably and effectively control emissions.
- e. The Permittee shall maintain records of the following for each incident when any affected unit operated without the control measures required by Condition 2.2.2 or 2.2.5(b) or (c):

- i. The date of the incident and identification of the unit(s) that were involved.
 - ii. A description of the incident, including: the established control measures that were not present or implemented; the established control measures that were present, if any; and other control measures or mitigation measures that were implemented, if any.
 - iii. The time at and means by which the incident was identified, e.g., scheduled inspection or observation by operating personnel.
 - iv. Operational data for the incident, e.g., the measured pressure drop of a baghouse, if the pressure drop of the baghouse, as measured pursuant to Condition 2.2.8, deviated outside the levels set as good air pollution control practices.
 - v. The corrective action(s) taken and the length of time after the incident was identified that the unit(s) continued to operate before established control measures were in place or the operations were shutdown (to resume operation only after established control measures were in place) and, if this time was more than one hour, an explanation why this time was not shorter, including a detailed description of any mitigation measures that were implemented during the incident.
 - vi. The estimated total duration of the incident, i.e., the total length of time that the unit(s) ran without established control measures and the estimated amount of material processed during the incident.
 - vii. A discussion of the probable cause of the incident and any preventative measures taken.
 - viii. An estimate of any additional emissions of PM (pounds) above the PM emissions associated with normal operation that resulted from the incident, if any, with supporting calculations.
 - ix. A discussion whether any applicable emission standard, as listed in Condition 2.2.2, 2.2.3-1, or 2.2.3-2 or any applicable emission rate, as identified in the records pursuant to Condition 2.2.10(b), may have been violated during the incident, with an estimate of the amount of any excess PM emissions (lbs) and supporting explanation.
- f. The Permittee shall maintain the following records for the emissions of the affected units:

- i. A file containing the standard emission factors used by the Permittee to determine PM emissions from the units, with supporting documentation.
 - ii. Records of PM emissions based on operating data for the unit(s) and appropriate emission factors, with supporting documentation and calculations.
- g. The Permittee shall keep records for all opacity measurements made in accordance with USEPA Method 9 for affected units that it conducts or that are conducted at its behest by individuals who are qualified to make such observations. For each occasion on which such measurements are made, these records shall include the formal report for the measurements if conducted pursuant to Condition 2.2.7 or otherwise the identity of the observer, a description of the measurements that were made, the operating condition of the affected unit, the observed opacity, and copies of the raw data sheets for the measurements.

2.2.11 Notifications and Reporting Requirements

- a. The Permittee shall notify the Illinois EPA within 30 days of deviations from applicable emission standards or operating requirements for the affected units that continue* for more than 24 hours. These notifications shall include the information specified by Condition 3.4.

* For this purpose, time shall be measured from the start of a particular event. The absence of a deviation for a short period shall not be considered to end the event if the deviation resumes. In such circumstances, the event shall be considered to continue until corrective actions are taken so that the deviation ceases or the Permittee takes the affected unit out of service for repairs.

- b. The Permittee shall submit semi-annual reports to the Illinois EPA for all deviations from emission standards, including standards for visible emissions and opacity, and operating requirements set by this permit. These notifications shall include the information specified by Condition 3.4.
- c. These reports shall also address any deviations from applicable compliance procedures established by this permit for affected units.

2.2.12 Operational Flexibility

The Permittee is authorized, as follows, to construct and operate affected units that differ from those described in the application in certain respects without obtaining further approval by the Illinois EPA. This condition does not affect the Permittee's obligation to comply with all applicable requirements for affected units:

- a. This authorization only extends to changes that result from the detailed design of the project and any refinements to that design of the affected units that occur during construction and the initial operation of the plant.
- b. With respect to air quality impacts, these changes shall generally act to improve dispersion and reduce impacts, as emissions from individual units are lowered, units are moved apart or away from the fence line, stack heights are increased, and heights of nearby structures are reduced.
- c. The Permittee shall notify the Illinois EPA prior to proceeding with any changes. In this notification, the Permittee shall describe the proposed changes and explain why the proposed changes will act to reduce impacts, with detailed supporting documentation.
- d. Upon written request by the Illinois EPA, the Permittee shall promptly have air quality dispersion modeling performed to demonstrate that the overall effect of the changes is to reduce air quality impacts, so that impacts from affected units remain at or below those predicted by the air quality analysis accompanying the application.

CONDITION 2.3: UNIT-SPECIFIC CONDITIONS FOR ASH HANDLING

2.3.1 Description

The affected units are the various ash handling, transfer and storage units. Fly ash recovered by the baghouse on the solid fuel-fired boiler is transferred to the fly ash storage silo. Displaced air from the fly ash storage silo is filtered through the bin vent filter. Stored fly ash is loaded out by trucks either wet, after mixing with water, or dry in an enclosed system, with displaced air passed through a baghouse. Bottom ash collected at the bottom of the solid fuel-fired boiler and at other points in the boiler, is handled as a wet material.

2.3.2 Control Technology Determination

Particulate matter emissions from affected units shall be controlled by:

- a. Enclosure of the unit so as to prevent visible emissions, as defined by 40 CFR 60.671, from the affected unit.
- b. Aspiration to filter-type control devices designed to emit no more than 0.005 grains/dry standard cubic foot (gr/dscf), which device shall be operated in accordance with good air pollution control practice to minimize emissions.

2.3.3 Applicable State Emission Standards

- a. The affected units are subject to 35 IAC 212.321(b), which provides that no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar new process emission units, at a source or premises, exceeds the allowable emission rates specified in 35 IAC 212.321.
- b. The affected units are subject to the limitations of 35 IAC 212.123, 212.301 and 212.307. (See also Condition 1.2.)

2.3.4 Non-Applicability Provisions

None

2.3.5 Operational and Production Limits, and Work Practices

- a. The Permittee shall maintain the affected units and associated air pollution control equipment in accordance with good air pollution practice to minimize emissions.
- b. Proper maintenance shall include the following minimum requirements:

- i. Visual inspection of air pollution control equipment on a regular basis;
- ii. Maintenance of an adequate inventory of spare parts; and
- iii. Expeditious repairs, unless the unit is shutdown.

2.3.6 Emission Limitations

The emissions of PM and PM₁₀ from the affected units shall not exceed 0.10 pounds per hour and 0.17 tons per year.

2.3.7 Testing Requirements

- a. Within 90 days of a written request from the Illinois EPA, the Permittee shall have the PM emissions at the stacks or vents of affected units, as specified in such request, measured during representative operating conditions, as set forth below.
- b. Testing shall be conducted using appropriate USEPA Test Methods, including Method 5 or 17 for PM emissions.
- c. All other testing requirements shall be addressed pursuant to Section 3.3.

2.3.8 Instrumentation Requirements

- a. The Permittee shall install, operate and maintain systems to measure the pressure drop across each baghouse used to control affected units, other than bin vent filters and other similar filtration devices.
- b. The Permittee shall maintain the records of the measurements made by these systems and records of maintenance and operational activity associated with the systems.

2.3.9 Inspections

- a.
 - i. The Permittee shall conduct inspections of affected units on at least a monthly basis with supervisory personnel or other personnel who are not directly involved in the day-to-day operation of these units, for the specific purpose of verifying that the measures identified in the operating program and other measures required to control emissions from affected units are being properly implemented.
 - ii. These inspections shall include observation for the presence of visible emissions, performed in accordance with USEPA Method 22, from buildings in which affected units are located and from units from which the Permittee has elected to demonstrate no visible emissions.
- b. The Permittee shall perform detailed inspections of the dust collection equipment for affected units while the units are out

of service, with an initial inspection performed before any maintenance and repair activities are conducted during the period the unit is out of service and a follow-up inspection performed after any such activities are completed. These inspections shall be conducted at least every 15 months.

2.3.10 Recordkeeping Requirements

The Permittee shall maintain records of the following items for affected units:

- a. A file containing the manufacturer's specifications and recommended operation and maintenance procedures for each fabric filter, including the design level of PM emissions, in gr/scf.
- b. An operating log or other operating records that, at a minimum, identify any period during which an affected unit was in operation when the air pollution control equipment was not in operation or was malfunctioning so as to cause an emissions level in excess of the emissions limitation. These records shall include documentation of causes for pollution control equipment not operating or such malfunction and shall state what corrective actions were taken and what repairs were made.
- c. Records of the total amounts of fly and bottom ash handled, in tons/month and tons/year.
- d. A maintenance log or other records for inspections, maintenance, and repairs of all associated air pollution control equipment.
- e. Records of monthly and annual emissions of PM with supporting calculations to be calculated on at least a quarterly basis.

2.3.11 Notifications and Reporting Requirements

- a. The Permittee shall notify the Illinois EPA within 30 days of deviations from applicable emission standards or operating requirements for the affected units that continue* for more than 24 hours. These notifications shall include the information specified by Condition 3.4(a).

* For this purpose, time shall be measured from the start of a particular event. The absence of a deviation for a short period shall not be considered to end the event if the deviation resumes. In such circumstances, the event shall be considered to continue until corrective actions are taken so that the deviation ceases or the Permittee takes the affected unit out of service for repairs.

- b. The Permittee shall submit semi-annual reports to the Illinois EPA for all deviations from emission standards, including standards for visible emissions and opacity, and operating requirements set by this permit. These notifications shall include the information specified by Condition 3.4(a).

- c. These reports shall also address any deviations from applicable compliance procedures established by this permit for affected units.

CONDITION 2.4: UNIT-SPECIFIC CONDITIONS FOR ROADWAYS AND OTHER OPEN AREAS

2.4.1 Description of Emission Units

The affected units for the purpose of these unit-specific conditions are roadways, parking areas, and other open areas at the existing plant associated with the operation of the solid fuel-fired boiler, which may be sources of fugitive particulate matter due to vehicle traffic or wind-blown dust. These emissions are controlled by paving and implementation of work practices to prevent the generation and emissions of particulate matter.

2.4.2 Control Technology Determination

- a. The opacity of fugitive particulate matter emissions from affected units, except during periods of high wind speeds, shall not exceed 10 percent opacity (6 minute average) for new roads associated with the solid fuel-fired boiler facility. For this purpose, opacity and the presence of high wind speeds shall be determined in accordance with 35 IAC 212.109 and 35 IAC 212.314, respectively.
- b.
 - i. Good air pollution control practices shall be implemented to minimize particulate matter emissions from affected units. After construction of the plant is complete, these practices shall provide for pavement on all regularly traveled roads and treatment (flushing, vacuuming, dust suppressant application, etc.) of roadways and areas that are routinely subject to vehicle traffic for very effective and effective control of dust, respectively (nominal 90 percent control for paved roads and areas and 85 percent control for unpaved roads and areas).
 - ii. For this purpose, roads that serve any office building, employee parking areas or are used on a daily basis by operating and maintenance personnel for the solid fuel-fired boiler facility in the course of their typical duties, roads that experience heavy use during regularly occurring maintenance of the plant during the course of a year, shall all be considered to be subject to regular travel and are required to be paved. Regularly traveled roads shall be considered to be subject to routine vehicle traffic except as they are used primarily for periodic maintenance and are currently inactive or as traffic has been temporarily blocked off. Other roads shall be considered to be routinely traveled if activities are occurring such that they are experiencing significant vehicle traffic.
- c. The handling of material collected from any affected unit associated with the plant by sweeping or vacuuming trucks shall be enclosed or shall utilize spraying, pelletizing, screw conveying or other equivalent methods to control PM emissions.

2.4.3 Applicable State Emission Standards

All affected units shall comply with 35 IAC 212.301, which provides that emissions of fugitive particulate matter shall not be visible from any process, including material handling or storage activity, when looking generally toward the zenith at a point beyond the property line of the source, except when the wind speed is greater than 25 miles per hour, as provided by 35 IAC 212.314.

2.4.4 Non-Applicability Provisions

None

2.4.5 Operational and Production Limits and Work Practices

a. The Permittee shall carry out control of fugitive particulate matter emissions from affected units in accordance with a written operating program describing the measures being implemented in accordance with Conditions 2.4.2 and 2.4.3 to control emissions at each unit with the potential to generate significant quantities of such emissions, which program shall be kept current.

i. The written operating program shall include:

A. Maps or diagrams indicating the location of affected units with the potential to generate significant quantities of fugitive particulate matter, with description of the unit (length, width, surface material, etc.) and volume and nature of expected vehicle traffic, or other activity on such unit, and an identification of any roadways that are not considered routinely traveled, with justification.

B. A detailed description of the emissions control technique(s) (e.g., vacuum truck, water spray, surfactant spray, water flushing, dust suppressant application, or sweeping) for the affected unit, including: typical application rate; type and concentration of additives; normal frequency with which measures would be implemented; circumstances, in which the measure would not be implemented, e.g., recent precipitation; triggers for additional control, e.g., observation of 9 percent opacity on new roadways; and calculated control efficiency for PM emissions.

ii. The Permittee shall submit copies of the written operating program to the Illinois EPA for review as follows:

A. A program addressing affected units during the construction of the plant shall be submitted within 30 days of beginning actual construction of the plant.

- B. A program addressing affected units with the operation of the affected plant shall be submitted within 90 days of initial start up of the plant.
 - C. Significant amendments to the program by the Permittee shall be submitted within 30 days of the date that the amendment is made.
- iii. A revised operating program shall be submitted to the Illinois EPA for review within 90 days of a request from the Illinois EPA for revision to address observed deficiencies in control of fugitive particulate matter emissions.
- b. The Permittee shall conduct inspections of affected units on at least a weekly basis during construction of the plant and on a monthly basis thereafter with personnel not directly responsible for the day-to-day implementation of the fugitive dust control program, for the specific purpose of verifying that the measures identified in the operating program and other measures required to control emissions from affected units are being properly implemented.

2.4.6 Emission Limitations

- a. The emissions of particulate matter from affected units associated with traffic for the boiler facility shall not exceed the following limits. Compliance with these limits shall be determined by vehicle traffic and other operating data for the plant, as it relates to the operation of the solid fuel-fired boiler, information for the implementation of the operating program, appropriate emission factors, and engineering calculations:
- PM - 0.48 tons per year
 - PM₁₀ - 0.10 tons per year
 - PM_{2.5} - 0.07 tons per year

2.4.7 Opacity Observations

- a. The Permittee shall conduct performance observations, which include a series of observations of the opacity of fugitive emissions from the affected units as follows to determine the range of opacity from affected units and the change in opacity as related to the amount and nature of vehicle traffic and implementation of the operating program. For performance observations, the Permittee shall submit test plans, test notifications and test reports, as specified by General Condition 3.0.
- i. Performance observations shall first be completed no later than 30 days after the date that initial emission testing of the affected boiler is performed, as required by

Condition 2.2.7-2, in conjunction with the measurements of silt loading on the affected units required by Condition 2.4.8.

- ii. Performance observations shall be repeated within 30 days in the event of changes involving affected units that would act to increase opacity (so that observations that are representative of the current circumstances of the affected units have not been conducted), including changes in the amount or type of traffic on affected units, changes in the standard operating practices for affected units, such as application of salt or traction material during cold weather, and changes in the operating program for affected units.
- b. Compliance observations shall be conducted for affected units on at least a quarterly basis to verify opacity levels and confirm the effectiveness of the operating program in controlling emissions.
- c. Upon written request by the Illinois EPA, the Permittee shall conduct performance or compliance observations, as specified in the request. Unless another date is agreed to by the Illinois EPA, performance observations shall be completed within 30 days and compliance observations shall be completed within 5 days of the Illinois EPA's request.

2.4.8 Operational Measurements

The Permittee shall conduct measurements of the silt loading on various affected roadway segments and parking areas, as follows:

- a. Sampling and analysis of the silt loading shall be conducted using the "Procedures for Sampling Surface/Bulk Dust Loading," Appendix C.1 in Compilation of Air Pollutant Emission Factors, USEPA, AP-42. A series of samples shall be taken to determine the average silt loading and address the change in silt loadings as related to the amount and nature of vehicle traffic and implementation of the operating program.
- b. Measurements shall be performed by the following dates:
 - i. Measurements shall first be completed no later than 30 days after the date that initial emission testing of the affected boiler is performed, as required by Condition 2.2.7.
 - ii. Measurements shall be repeated within 30 days in the event of changes involving affected units that would act to increase silt loading (so that data that is representative of the current circumstances of the affected units has not been collected), including changes in the amount or type of traffic on affected units, changes in the standard operating practices for affected units, such as application

of salt or traction material during cold weather, and changes in the operating program for affected units.

iii. Upon written request by the Illinois EPA, the Permittee shall conduct measurements, as specified in the request, which shall be completed within 75 days of the Illinois EPA's request.

c. The Permittee shall submit test plans, test notifications and test reports for these measurements as specified by General Condition 3.3, provided, however, that once a test plan has been accepted by the Illinois EPA, a new test plan need not be submitted if the accepted plan will be followed or a new test plan is requested by the Illinois EPA.

2.4.9 Records

a. The Permittee shall keep a file that contains:

i. The operating factors, if any, used to determine the amount of activity associated with the affected units or the PM emissions from the affected units, with supporting documentation.

ii. The designated PM emission rate, in tons/year, from each category of affected units (e.g., traffic associated with receiving of coal, with supporting calculations and documentation. The sum of these rates shall not exceed the annual limit on emissions in Condition 2.4.6.

b. The Permittee shall maintain records documenting implementation of the operating program required by Condition 2.4.5, including:

i. Records for each treatment of an affected unit or units:

A. The identity of the affected unit(s), the date and time, and the identification of the truck(s) or treatment equipment used;

B. For application of dust suppressant by truck: target application rate or truck speed during application, total quantity of water or chemical used and, for application of a chemical or chemical solution, the identity of the chemical and concentration, if applicable;

C. For sweeping or cleaning: Identity of equipment used and identification of any deficiencies in the condition of equipment; and

D. For other type of treatment: A description of the action that was taken.

- ii. Records for each incident when control measures were not implemented and each incident when additional control measures were implemented due to particular activities, including description, date, a statement of explanation, and expected duration of such circumstances.
- c. The Permittee shall record any period during which an affected unit was not properly controlled as required by this permit, which records shall include at least the information specified by General Condition 3.4 and an estimate of the additional PM emissions that resulted, if any, with supporting calculations.
- d. The Permittee shall keep records for the measurements conducted for affected units pursuant to Condition 2.4.8, including records for the sampling and analysis activities and results.
- e. The Permittee shall maintain records for the PM emissions of the affected units to verify compliance with the limits in Condition 2.4.6, based on operating data for the affected units and other activities at the plant (the above records for the affected units include data for implementation of the operating program, and appropriate USEPA emission estimation methodology and emission factors, with supporting calculations).

2.4.10 Notifications

The Permittee shall notify the Illinois EPA within 30 days of deviations from applicable requirements for affected units that are not addressed by the regular reporting required below. These notifications shall include the information specified by General Condition 3.4 and 3.6.

2.4.11 Reporting

The Permittee shall submit quarterly reports to the Illinois EPA for affected units stating the following: the dates any necessary control measures were not implemented; a listing of those control measures; the reasons that the control measures were not implemented; and any corrective actions taken. This information includes, but is not limited to, those dates when controls were not implemented based on a belief that implementation of such control measures would have been unreasonable given prevailing weather conditions. This report shall be submitted to the Illinois EPA no later than 45 calendar days from the end of each calendar quarter.

CONDITION 2.5: UNIT-SPECIFIC CONDITIONS FOR THE NATURAL GAS-FIRED BOILER

2.5.1 Description of Emission Unit

The affected unit for the purpose of these unit-specific permit conditions is a natural gas-fired boiler that will be used to supply steam to the plant when the solid fuel-fired boiler is being constructed and will then serve as an auxiliary boiler once the solid fuel-fired boiler is operational. As an auxiliary boiler, it will only be operated on an intermittent basis when the solid fuel-fired boiler is out of service and otherwise as needed to assure availability for such use. As such, this boiler would then be idle most of the time. The nominal rated capacity of this boiler is 389 million Btu/hour. Emissions from this boiler are controlled by good combustion practices and low-NO_x burners.

2.5.2 Control Technology Determination

- a. The affected boiler shall be operated and maintained with the following features to control emissions:
 - i. Use of natural gas
 - ii. Low-NO_x burner
 - iii. Flue Gas Recirculation
 - iv. Good Combustion Practices
- b.
 - i. The NO_x emissions of the affected boiler shall not exceed the following limits:
 - A. Until such time that the boiler begins operating as an auxiliary boiler, 0.03 lb/mmBtu on a 30-day rolling average (including periods of startup and shutdown).
 - B. After the boiler begins operating as an auxiliary boiler, 0.035 lb/mmBtu on a 24-hour block average or, alternatively, if the boiler operates at less than 50 percent load, 24-hour average, 11.7 pounds/hour, 24-hour average.
 - ii. The CO emissions of the affected boiler shall not exceed 0.059 lb/mmBtu on a 3-hour average.

2.5.3-1 Applicable Federal Emission Standards

- a. The affected boiler is subject to the New Source Performance Standards (NSPS) for Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Db and related provisions of 40 CFR 60 Subpart A.

- b. The affected boiler shall comply with the following standards on and after the date on which the initial performance test is completed or is required to be completed under 40 CFR 60.8, whichever date comes first:

Until the affected boiler begins operation as an auxiliary boiler, nitrogen oxide emissions shall not exceed 86 ng/J (0.20 lb/million Btu) on a 30-day rolling average, pursuant to 40 CFR 60.44b(1).

- c. At all times, the Permittee shall maintain and operate the affected boiler, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions, pursuant to 40 CFR 60.11(d).

2.5.3-2 Applicable State Emission Standards:

- a. The affected boiler is subject to 35 IAC 212.122(b), which provides that emissions of smoke or other particulate matter shall not have an opacity greater than 20 percent, except as allowed by 35 IAC 212.122(b) and 212.124. Compliance with this limit shall be determined by 6-minute averages of opacity measurements in accordance with USEPA Reference Method 9. [35 IAC 212.109 and 212.122(a)]
- b. The affected boiler is subject to 35 IAC 216.121, which provides that emissions of carbon monoxide (CO) into the atmosphere shall not exceed 200 ppm, corrected to 50 percent excess air. [35 IAC 216.121]
- c. The affected boiler is subject to 35 IAC 217.121, which provides that emissions of nitrogen oxide (NO_x) shall not exceed 0.2 lb/mmBtu of actual heat input in any one-hour period (35 IAC 217.121(a)).

2.5.4 Non-Applicability Provisions

- a. i. This permit is issued based on the affected boiler not being subject to applicable requirements of the NSPS for NO_x, as provided below, once it begins operation as an auxiliary boiler:
 - A. The NSPS emission standards for NO_x, 40 CFR 60.44b, because the annual capacity factor of the affected boiler will be limited to no more than 10 percent, as provided by 40 CFR 60.44b(1)(1).
 - B. Requirements for continuous monitoring for NO_x emissions under the NSPS because the annual capacity factor will be no more than 10 percent (see Condition 2.5.5(b)), as provided by 40 CFR 60.48b(i) and 60.44b(j).

- ii. A. The affected boiler is not subject to the PM and opacity standards of the NSPS because they do not apply when affected boiler is only fired on gaseous fuel(s)
- B. The affected boiler is not subject to the opacity monitoring requirements of the NSPS, 40 CFR 60, Subpart Db, because it only burns gaseous fuels, and will be subject to a site-specific monitoring plan for compliance with the opacity standard. [40 CFR 60.48(j) (5)]
- iii. The affected boiler is not subject to the SO₂ emission standards of the NSPS, 40 CFR 60, Subpart Db, because the boiler only fires fuels with a potential SO₂ emission rate of 0.32 lb/mmBtu heat input or less. [40 CFR 60.42b(k) (2), 60.47b(f) and 60.48b(j) (5)]
- b. The affected boiler is not subject to the Title IV (i.e., Acid Rain) provisions of the federal Clean Air Act since it does not qualify as an electrical generating unit for the purpose of the Acid Rain program.
- c. The affected boiler is not subject to the requirements of 35 IAC Part 225, Subparts C, D and E (Illinois' version of the Clean Air Interstate Rule), which will replace the NO_x control requirements under Part 217, Subpart U, since these rules do not apply to industrial boilers that are not used to generate electricity for sale.
- d. i. This permit is issued based on the affected boiler not being a major source of hazardous air pollutants (HAPs) for purposes of Section 112(g) of the Clean Air Act so that a case-by-case determination of MACT is not required for the units pursuant to Section 112(g). This is because the affected boiler is a separate process or production unit as defined by 40 CFR 63.41, and the potential annual emissions of HAPs from the unit are less than 10 tons of any individual HAP and less than 25 tons of any combination of HAPs.
- ii. The affected boiler and the Permittee shall comply in a timely manner with all applicable provisions of a NESHAP adopted by USEPA or a case-by-case MACT determination made by the Illinois EPA that applies to the affected boiler.

2.5.5 Operational Limits and Work Practices

- a. Natural gas shall be the only fuel fired in the affected boiler.
- b. i. The annual capacity factor of the affected boiler, as defined by the NSPS 40 CFR 60.41b, shall not exceed 10 percent beginning on January 1 of the calendar year for

which the Permittee notifies the Illinois EPA that the affected boiler will be operating as an auxiliary boiler.

- ii. The Permittee shall notify the Illinois EPA of the date when the affected boiler will begin operating as an auxiliary boiler. With this notification, the Permittee shall provide the expected capacity factor for the calendar year in which the status of the affected boiler will change to an auxiliary boiler, including information on the amount of operation that has already occurred in the year and the amount of operation that is projected for the remainder of the year. Until the Permittee provides such notification, the affected boiler shall be subject to and the Permittee shall comply with the NO_x emission standard and associated emissions monitoring requirements of the NSPS, (See Condition 2.5.3-1(b) (i) and 2.5.8.

2.5.6 Emission Limitations

The emissions of the affected boiler shall not exceed the following limits:

Pollutant	Hourly Limits (Lbs/Hour)	Annual Limits (Tons/Year)
NO _x	13.6, 24-Hour Daily	51.1
SO ₂	0.23, 3-Hour Block	1.0
CO	23.0, 24-Hour Daily	100.5
PM/PM ₁₀	3.0, 3-Hour Block	12.9
VOM	2.1, 3-Hour Block	9.4
Individual HAPs	0.72, 3-Hour Block	0.32
Total HAPs	0.72, 3-Hour Block	0.32

2.5.7 Testing Requirements

- a.
 - i. Within 60 days after achieving the maximum production rate at which the affected boiler will be operated, but not later than 180 days after initial startup, the Permittee shall have emission tests conducted for emissions of NO_x, CO, PM and VOM, and opacity as specified below at its expense, by an approved testing service while the affected boiler is operating at maximum load and other representative operating conditions.
 - ii. In addition to the emission testing required above, the Permittee shall perform emission tests for NO_x, CO, PM and/or VOM as requested by the Illinois EPA for the affected boiler within 45 days of a written request by the Illinois EPA or such later date agreed to by the Illinois EPA. The operating conditions during such testing shall be consistent with those specified by the Illinois EPA.
- b. The following methods and procedures shall be used for testing of emissions of the affected boiler, unless another method is approved by the Illinois EPA.

Location of Sample Points	Method 1
Gas Flow and Velocity	Method 2
Flue Gas Weight	Method 3 or 3A
Moisture Content	Method 4
Nitrogen Oxides ¹	Method 7, 7E or 19
Opacity	Method 9
Carbon Monoxide	Method 10
Volatile Organic Material ²	Method 18 and Method 25 or 25A
Particulate Matter ³	Methods 5 and 202

¹ Test in accordance with 40 CFR 60, Subparts A and Db as specified in 40 CFR 60.48b(d).

² Permittee may exclude methane, ethane and other exempt compounds from the results of any VOM test provided that the test protocol to quantify and correct for such compounds is included in the test plan approved by the Illinois EPA.

³ Testing for particulate matter (filterable and condensable) is required.

2.5.8 Monitoring Requirements

a. Emissions monitoring for NO_x:

- i. A. Pursuant to 40 CFR 60.48b, the Permittee shall install, calibrate, operate and maintain continuous emission monitoring systems (CEMS) for measuring the NO_x emissions from the affected boiler. The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems.
- B. This CEMS shall be operated during all periods of operation of the affected boiler except for CEMS breakdowns and repairs. These CEMS shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive units operating days as specified and pursuant to 40 CFR 60.48b(f). Data is to be obtained in the scheduling and course of performing calibration checks, and zero and span adjustments as specified in the NSPS. Fulfillment of the above criteria for availability of emission data from a CEMS does not shield the Permittee from potential enforcement for failure to properly maintain and operate the system.
- ii. The 1-hour average NO_x emission rates measured by the CEMS shall be expressed in lb /million Btu heat input and shall be used to calculate average emission rates pursuant to the NSPS. The 1-hour averages shall be calculated using the

data points required under 40 CFR 60.13(h), except as allowed under 60.48b(b) (2).

- iii. The CEMS shall also be used to determine compliance with the NO_x limits in Condition 2.5.2(b), 2.5.3-1(b) (i) and 2.5.6.
- iv. The CEMS shall be installed and operational prior to initial firing of fuel in the affected boiler, and certified promptly thereafter.
- v. Notwithstanding Condition 2.5.8(a) (i), beginning no earlier than one year (12 months) after the affected boiler begins operating as an auxiliary boiler and this NO_x CEMS is no longer required by the NSPS, the Permittee may monitor NO_x using a parametric monitoring plan in accordance with relevant provisions of 40 CFR 60.48b(c) if such a plan is approved by the Illinois EPA.

b. Emissions monitoring for CO:

- i. The Permittee shall install, calibrate, operate and maintain CEMS for measuring CO emissions from the affected units. The relevant monitoring procedures in 40 CFR 60.48b(j) (4) shall be followed for these CEMS until and unless USEPA adopts procedures that would be directly applicable for continuous monitoring of CO emissions from boilers.
- ii. These CEMS shall be used to determine compliance with the CO standard in Condition in 2.5.2 and the CO limits in Condition 2.5.6.

c. The Permittee shall keep records of maintenance, calibration and operational activity associated with each required continuous emissions monitoring device.

2.5.9 Recordkeeping Requirements

- a. The Permittee shall maintain a file or other records for the affected boiler that contains the following information:
 - i. The maximum rated heat input of the affected boiler with supporting documentation.
 - ii. Records of the Permittee's established operating and maintenance procedures for the affected boiler.
- b. i. Beginning on January 1 of the calendar year in which the affected boiler will be operated as an auxiliary boiler, the Permittee shall maintain records of information for the affected boiler, for each boiler operating day, pursuant to the NSPS, 40 CFR 60.49b(p):

- A. Calendar date;
 - B. The number of hours of operation; and
 - C. A record of the hourly steam load.
- ii. The Permittee shall maintain the following operating records for the affected boiler:
- A. Daily records of fuel use, in accordance with 40 CFR 60.49b(d); and
 - B. Amount of fuel consumed and the annual capacity factor, determined on a 12-month rolling basis with a new annual capacity factor calculated for each month pursuant to 40 CFR 60.49b(d). The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.
- c. The Permittee shall maintain records for sulfur content (wt. percent) of the fuel supply to the affected boiler, including copies of the supplier certification of the fuel supplied to the affected boiler, as required by 40 CFR 60.45b(k), used to satisfy these requirements.
- d. The Permittee shall maintain the following logs or other records for the affected boiler:
- i. An operating log that, at a minimum, includes:
 - A. The information required by 40 CFR 60.7(b)
 - B. Each startup of the affected boiler, including the date and duration of each startup, and note any deviations from normal startup procedures, as set forth in the Permittee's written operating procedure.
 - C. Information on any malfunction or breakdown, including cause, duration and whether the affected boiler continued to operate during that time.
 - iii. A maintenance and repair log for the affected boiler listing each activity performed with date.
- e. The Permittee shall keep the following records related to emissions:
- i. Any period of time, including startup, shutdown, or malfunction, when emissions exceed an applicable limit.
 - ii. The annual NO_x, CO, VOM, PM, SO₂ and HAP emissions from the affected boiler, based on continuous emissions monitoring

data, fuel consumption or applicable emission factors with supporting calculations.

2.5.10 Reporting and Notification Requirements

- a. The Permittee shall fulfill applicable reporting requirements of the NSPS, 40 CFR 60.7 and 60.49b, for the affected boiler by sending the following notifications and reports to the Illinois EPA:
 - i. Notification of the date of initial startup of the affected boiler, as provided by 40 CFR 60.7. This notification shall include: (1) the design heat input capacity of the affected boiler, (2) identification of the fuels to be combusted in the affected boiler, and (3) the annual capacity factor at which the Permittee anticipates operating the affected boiler.
 - ii. Reports containing the information recorded under 40 CFR 60.49b, including 60.49b(b) and 60.49b(j).
 - iii. Semi-annual reports for excess emissions (see Condition 2.5.10(c)). These reports shall be prepared and submitted in conformance with the requirements, content and schedule contained in 40 CFR 60.7, and may be combined with the compliance reports required by Condition 2.1.10(d).
- b.
 - i. The Permittee shall submit excess emission reports for any calendar quarter during which there are excess NO_x emissions from the affected boiler pursuant to the NSPS. If there are no excess NO_x emissions during the calendar quarter, the Permittee shall submit a report stating that no excess emissions occurred during the reporting period. Excess emissions are defined as any calculated emission rate that exceeds the applicable limit in Condition 2.5.6.
 - ii. Except for deviations by the affected boiler addressed by the above quarterly reports, the Permittee shall notify the Illinois EPA of any deviations of the affected boiler from any applicable requirement of this permit.
 - iii. The reporting period for the reports is quarterly. All reports shall be submitted and be postmarked by the 30th day following the end of the reporting period.

3.0 GENERAL CONDITIONS

3.1 General Reporting Requirements

- a. The Permittee shall notify the Illinois EPA of deviations with the requirements of this permit within 30 days of the event. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.
- b. On an annual basis after the plant begins operation, the Permittee shall submit an Annual Emission Report to the Illinois EPA not later than May 1 of the following year each year, as required by 35 IAC Part 254. For this notwithstanding general requirements for submittal of reports, only a single copy of this report needs to be submitted to the Illinois EPA.
- c. Until a CAAPP Permit is issued for the plant, the terms and conditions of this construction permit shall be addressed in an annual compliance certification submitted by the Permittee by May 1 of each year for the prior calendar year, as if a CAAPP permit had been issued for the plant.

3.2-1 Records for Required Monitoring Systems and Instrumentation

- a. The Permittee shall keep records of the data measured by required monitoring systems and instrumentation. Unless otherwise provided in a particular condition of this permit, the following requirements shall apply to such recordkeeping:
 - i. For required monitoring systems, data shall be automatically recorded by a central data system, dedicated data logging system, chart recorder or other data recording device. If an electronic data logging system is used, the recorded data shall be the hourly average value of the particular parameter for each hour. During periods when the automatic recording device is out of service, data shall be recorded at least once per shift for periods when the associated emission unit(s) are in service.
 - ii. For required instrumentation, the measured data shall be recorded manually at least once per day, unless otherwise specified, with data and time both recorded, for periods when the associated emission unit(s) are in service, provided however that if data from an instrument is recorded automatically, the above provisions for recording of data from monitoring systems shall apply.
- b. The Permittee shall keep records for the operation, calibration maintenance and repair of required monitoring systems and instrumentation.

3.2-2 Records of Opacity Measurements and Observations for Visible Emissions

- a. The Permittee shall keep records for all opacity measurements made in accordance with USEPA Method 9 for emission units at the plant that it conducts or that are conducted on its behest by individuals who are qualified to make such observations. For each occasion on which such measurements are made, these records shall include the formal report for the measurements if conducted pursuant to this permit or a request from the Illinois EPA, or otherwise the identity of the observer, a description of the measurements that were made, the operating condition of the relevant emission units or operations, the observed opacity, and copies of the raw data sheets for the measurements.
- b. The Permittee shall keep records for all observations for visible opacity measurements made in accordance with USEPA Method 22 for emission units at the plant that it conducts or that are conducted on its behest. For each occasion on which such observations are made, these records shall include the written report for the observations if conducted pursuant to this permit or otherwise the identity of the observer, a description of the observations that were made, the operating condition of the relevant emission units or operations, and whether visible emissions were observed.

3.3 Requirements for Testing

- a. The Permittee shall submit an initial test plan for emission testing to the Illinois EPA for review and approval at least 60 days prior to the initial startup of the unit.
- b. The Illinois EPA shall be notified prior to these tests to enable the Illinois EPA to observe these tests. Notification and test protocol for the expected date of testing shall be submitted a minimum of thirty days prior to the expected date. Notification of the actual date and expected time of testing shall be submitted a minimum of 5 working days prior to the actual date of the test. Notwithstanding 40 CFR 60.8(d), the Illinois EPA may at its discretion accept notifications with shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe testing.
- c. Three copies of the Final Report for these tests shall be promptly submitted to the Illinois EPA and in no case later than 60 days after the completion of the testing, and shall include as a minimum:
 - i. A tabular summary of results that includes:
 - Process data (e.g., fuel usage or material processing rate) and operating parameters (i.e., steam produced

and oxygen content in the flue gas leaving the boiler)

- Control device data (e.g., pressure drop across a baghouse)
 - Measured emission rates of all pollutants measured
 - Emission factor, calculated using the average test results in the terms of the applicable limits, for example, in units of lbs pollutant emitted per mmBtu
 - A statement whether compliance was demonstrated
- ii. Description of test methods and procedures used, including description of sampling points, sampling train, analysis equipment, and test schedule.
- iii. Detailed description of test conditions, including:
- Pertinent process information (e.g., fuel type, quantity, operating rate)
 - Control equipment information, i.e., equipment condition and pressure drop, flow rates, and other operating parameters during testing
- iv. Detailed data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.
- v. Representative opacity data (6-minute average) measured during testing.
- c. Copies of emission test reports shall be retained for at least five years after the date that an emission test is superseded by a more recent test.

3.4 Requirements for Records and Reports for Deviations

- a. Except as specified in a particular provision of this permit or as superseded in a subsequent CAAPP Permit, records for deviations from applicable emission standards and control requirements shall include at least the following information: the date, time and estimated duration of the event; a description of the event; the applicable requirement(s) that were not met; the manner in which the event was identified, if not readily apparent; the probable cause for deviation, if known, including a description of any equipment malfunction/breakdown associated with the event; information on the magnitude of the deviation, including actual emissions or performance in terms of the applicable standard if measured or readily estimated; confirmation that standard procedures were followed or a description of any event-specific corrective

actions taken; and a description of any preventative measures taken to prevent future occurrences, if appropriate.

- b. Notifications and reports for deviation from applicable emission standards, control requirements, and compliance procedures shall be submitted as follows:
 - i. Notification and reports for deviations shall be submitted within 30 days of the deviation if not otherwise specified in a particular provision of this permit or in a subsequent CAAPP Permit.
 - ii. Notification and reports for deviations shall include the applicable information recorded under Condition 3.4(a).
 - iii. Exceedances of applicable emissions standards or limitations during periods of startup, malfunction or breakdown, or shutdown shall be considered deviations for purposes of notification and reporting, even if exceedance of the standard or limitation is otherwise provided for by applicable rule or this permit.

3.5 Opacity Observations

- a. Upon written request by the Illinois EPA, the Permittee shall conduct opacity observations for specific affected operation(s) or unit(s) within 45 calendar days of the request or on the date agreed upon by the Illinois EPA, whichever is later.
- b. Opacity of emissions shall be determined during representative weather and operating conditions by a qualified observer in accordance with USEPA Test Method 9, as further specified below.
- c. The duration of opacity observations for each test shall be at least 30 minutes (five 6-minute averages) unless the average opacities for the first 12 minutes of observations (two six-minute averages) are both no more than half of the most stringent requirement applying to opacity.
- d.
 - i. The Permittee shall notify the Illinois EPA at least 7 days in advance of the date and time of these tests, in order to allow the Illinois EPA to witness testing. This notification shall include the name and employer of the qualified observer(s).
 - ii. The Permittee shall promptly notify the Illinois EPA of any changes in the time or date for testing.
- e. The Permittee shall provide a copy of its observer's readings to the Illinois EPA at the time of testing, if Illinois EPA personnel are present.

- f. The Permittee shall submit a written report for this testing within 15 days of the date of testing. This report shall include:
 - i. Date and time of testing.
 - ii. Name and employer of qualified observer, with a copy of his or her current certification.
 - iii. Description of observation condition, including recent weather.
 - iv. Description of the operating conditions of the affected operation or unit.
 - v. Opacity determinations, accompanied by raw data.
 - vi. Conclusions.
- g. The Permittee shall retain copies of test reports for at least three years after the date that a test is superseded by a more recent test.

3.6 General Requirements for "Logs" Or Similar Records

- a. Operating logs or other similar records required by this permit shall, at a minimum, include the following information related to the emission units and associated control system:
 - i. Information identifying periods when an emission unit or group of related emission units was not in service.
 - ii. For periods when a unit or group of related units is in service and operating normally, relevant process and control system information to generally confirm normal operation,
 - iii. For periods when a unit or group of related units is in service and is not operating normally, identification of each such period, with detailed information describing the operation of the unit(s), the potential consequences for additional emissions from the unit(s), the potential of any excess emissions from the affected unit(s), the actions taken to restore normal operation, and any actions taken to prevent similar events in the future.
 - iv. Other information as may be appropriate to show that the emission unit or group of related emission units is operated in accordance with good air pollution control practices.
- b. Inspection, maintenance and repair logs or other similar information required by this permit shall, at a minimum, include

the following information related to the emission units and associated control system:

- i. Identification of equipment, with date, time, responsible employee and type of activity.
 - ii. For inspections, a description of the inspection, findings, and any recommended actions, with reason.
 - iii. For maintenance and repair activity, a description of actions taken, reason for action, e.g., preventative measure or corrective action as a result of inspection, probable cause for requiring maintenance or repair if not routine or preventative, and the condition of equipment following completion of the activity.
 - iv. Other information as may be appropriate to show that the emission unit or group of related emission units is maintained in accordance with good air pollution control practices, including prompt repair of defects that interfere with effective control of emissions.
- c. The logs required by this permit may be kept in manual or electronic form, and may be part of a larger information database maintained by the Permittee provided that the information required to be kept in a log is readily accessible.

3.7 Retention and Availability of Records

- a. Except as specified in a particular provision of this permit or as superseded in a subsequent CAAPP Permit, the Permittee shall keep all records, including written procedures and logs, required by this permit at a readily accessible location at the plant for at least five years and shall make such records available for inspection and copying upon request by the Illinois EPA and USEPA.
- b. Upon written request by the Illinois EPA for copies of records or reports required to be kept by this permit, the Permittee shall promptly submit a copy of such material to the Illinois EPA. For this purpose, material shall be submitted to the Illinois EPA within 30 days unless additional time is provided by the Illinois EPA or the Permittee believes that the volume and nature of requested material would make this overly burdensome, in which case, the Permittee shall respond within 30 days with the explanation and a schedule of the requested material.
- c. For certain records required to be kept by this permit as specifically identified in the recordkeeping provisions in each Section of this permit, which records are a basis for control practices or other recordkeeping required by this permit, the Permittee shall promptly submit a copy of the record to the Illinois EPA when the record is created or revised. For this

purpose, the initial record shall be submitted within 30 days of the effectiveness of this permit. Subsequent revisions shall be submitted within 10 days of the date the Permittee begins to rely upon the record revised.

- 3.6 a. Any reports and notifications required by this permit shall be sent to the Illinois EPA at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Enforcement Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

- b. A copy of these reports and notifications shall also be sent directly to the Illinois EPA's regional office at the following address:

Illinois Environmental Protection Agency
Division of Air Pollution Control
2009 Mall Street
Peoria, Illinois 61614

- c. A copy of these reports and notifications concerning emission testing and initial installation and certification of continuous emission monitoring systems shall also be sent directly to the Illinois EPA's Source Monitoring Unit at the following address:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Source Monitoring Unit
9511 West Harrison
Des Plaines, Illinois 60016

If you have any questions on this permit, please call Bob Smet at 217/782-2113.

Edwin C. Bakowski, P.E.
Manager, Permit Section
Division of Air Pollution Control

Date Signed: _____

ECB:RPS:jws

cc: Region 2
USEPA Region V

ATTACHMENTS

Table I: Annual Emissions Limitations - Tons/Year

Emission Units	NO _x	CO	VOM	PM	PM ₁₀	SO ₂	H ₂ SO ₄	Lead	Fluorides
Boilers ¹	183.4	323.6	7.8	64.7	64.7	323.6	< 1.0	< 0.1	< 1.0
Fuel and Material Handling	---	---	---	2.6	1.8	---	---	---	---
Ash Handling	---	---	---	0.2	0.2	---	---	---	---
Roadways	---	---	---	0.5	0.1	---	---	---	---
Heaters	1.1	1.0	0.1	0.1	0.1	0.1	---	---	---
Total	184.5	324.6	7.9	68.1	66.9	323.7	< 1.0	< 0.1	< 1.0

Note: 1. The limitations for emissions from the boilers reflect continuous operation of the solid-fuel fired boiler. This is because the operation of the natural gas boiler will not result in any additional emissions beyond those allowed for the solid-fuel boiler. In particular, the natural gas fired boiler, which is smaller than the solid fuel boiler, is only allowed to operate on a continuous basis when the solid-fuel fired boiler is being constructed and undergoing shakedown. Thereafter, the boiler will be operated as an auxiliary boiler.

ATTACHMENT A - STANDARD PERMIT CONDITIONS

STANDARD CONDITIONS FOR CONSTRUCTION/DEVELOPMENT PERMITS ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

The Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111-1/2, Section 1039) authorizes the Environmental Protection Agency to impose conditions on permits which it issues.

The following conditions are applicable unless superseded by special condition(s).

1. Unless this permit has been extended or it has been voided by a newly issued permit, this permit will expire one year from the date of issuance, unless a continuous program of construction or development on this project has started by such time.
2. The construction or development covered by this permit shall be done in compliance with applicable provisions of the Illinois Environmental Protection Act and Regulations adopted by the Illinois Pollution Control Board.
3. There shall be no deviations from the approved plans and specifications unless a written request for modification, along with plans and specifications as required, shall have been submitted to the Illinois EPA and a supplemental written permit issued.
4. The Permittee shall allow any duly authorized agent of the Illinois EPA upon the presentation of credentials, at reasonable times:
 - a. To enter the Permittee's property where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit,
 - b. To have access to and to copy any records required to be kept under the terms and conditions of this permit,
 - c. To inspect, including during any hours of operation of equipment constructed or operated under this permit, such equipment and any equipment required to be kept, used, operated, calibrated and maintained under this permit,
 - d. To obtain and remove samples of any discharge or emissions of pollutants, and
 - e. To enter and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.

5. The issuance of this permit:
 - a. Shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are to be located,
 - b. Does not release the Permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities.
 - c. Does not release the Permittee from compliance with other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations.
 - d. Does not take into consideration or attest to the structural stability of any units or parts of the project, and
 - e. In no manner implies or suggests that the Illinois EPA (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.
- 6a. Unless a joint construction/operation permit has been issued, a permit for operation shall be obtained from the Illinois EPA before the equipment covered by this permit is placed into operation.
- b. For purposes of shakedown and testing, unless otherwise specified by a special permit condition, the equipment covered under this permit may be operated for a period not to exceed thirty (30) days.
7. The Illinois EPA may file a complaint with the Board for modification, suspension or revocation of a permit.
 - a. Upon discovery that the permit application contained misrepresentations, misinformation or false statement or that all relevant facts were not disclosed, or
 - b. Upon finding that any standard or special conditions have been violated, or
 - c. Upon any violations of the Environmental Protection Act or any regulation effective thereunder as a result of the construction or development authorized by this permit.

July, 1985, Revised, May, 1999