

217/782-2113

CONSTRUCTION PERMIT

PERMITTEE

BioPro Rock Falls, LLC
Attn: Phil Tollefson
Post Office Box 156
Spicer, Minnesota 56288

Application No.: 08110007
Applicant's Designation: CORNSTOVER
Subject: Biomass-Fired Power Plant
Date Issued: September 16, 2009
Location: 1902 McNeil Road, Rock Falls

I.D. No.: 195045ABM
Date Received: November 5, 2008

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of a power plant fired on non-wood biomass fuel (the affected plant) including a boiler with low-NO_x combustion technology, a selective non-catalytic reduction (SNCR) system, sorbent injection system and an electrostatic precipitator, associated fuel and ash storage and handling systems with baghouses, a cooling tower, and other ancillary operations, as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following conditions.

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:psj

cc: Region 3
USEPA Region V

TABLE OF CONTENTS

	<u>Page</u>
Section 1 Project Conditions.....	3
Section 2 Unit-Specific Conditions.....	8
2.1 Biomass-Fired Boiler	
2.2 Corn Stover and Other Bulk Material Handling and Storage	
2.3 Ash Handling	
2.4 Cooling Tower	
2.5 Roadways and Other Sources of Fugitive Dust	
Section 3 General Conditions.....	46
Attachments.....	52
Tables	
Standard Permit Conditions	

1.0 PROJECT CONDITIONS

1.1 Emission Limitations

- a. Annual emissions from the affected plant shall not exceed the following limits, in tons per year:

<u>PM*</u>	<u>SO₂</u>	<u>NO_x</u>	<u>VOM</u>	<u>CO</u>
41.7	59.2	240.0	25.2	240.0

* Emissions of filterable particulate matter as would be measured by USEPA Method 5, excluding fugitive particulate emissions from roadways at the plant.

- b. The source's emissions of hazardous air pollutants (HAPS) from the affected plant shall not exceed the following limitations:

- A. Emissions of any individual HAP shall not exceed 9.9 tons per year.
- B. Emissions of total HAPS shall not exceed 24.9 tons per year.

- c. Unless otherwise specified in a particular provision of this permit, compliance with annual limitations established by this permit shall be determined from a running total of 12 months of data, i.e., from the sum of the data for the current month plus the preceding 11 months (12 month total).

1.2 Emission units at the affected plant 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 toward the zenith 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 large, new fuel combustion 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 a. i. This permit is based on the affected plant not being a major source for purposes of 40 CFR 52.21, Prevention of Significant Deterioration (PSD). The

limits in this permit are intended to maintain this status for the plant, thereby ensuring that this project does not constitute construction of a major new source pursuant to these rules.

- ii. For this purpose, this permit is issued based on the affected plant not being in one of the 28 listed categories of sources for which the major source threshold under PSD is 100 tons/year. This is because the plant is designed to burn biomass, which is not a fossil fuel, and the natural gas fired burners in the boiler will have a rated heat input capacity of only 73.0 mmBtu/hour, which is consistent with their role as auxiliary burners.
- b. This permit is issued based on the affected plant not being 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. Since this plant will not be a major source of hazardous air pollutants (HAP), the provisions of 40 CFR Part 63, Subpart B and Section 112(g) of the Clean Air Act will not apply. Therefore a case-by-case determination of Maximum Achievable Control Technology (MACT) for emissions of HAP is not required for the units that are part of this project.
- c. This permit is issued based on the affected plant not constituting a "pollution control facility", as defined by Section 3.330 of the Environmental Protection Act. Accordingly, local siting approval pursuant to Section 9.2 of the Environmental Protection Act was not required before construction of the plant (See also Condition 2.1.5-1).

Note: Prior to changes in the manner of operation of the plant that would result in it becoming a pollution control facility, the plant would have to undergo local review and approval as a pollution control facility.

1.4 Good Air Pollution Control Practices

The Permittee shall operate and maintain the emission units at the affected plant, 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.

1.5 Records for Required Monitoring Systems and Instrumentation

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:

- a. 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.
- b. 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.

1.6 Records of Opacity Measurements

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 affected operations, the observed opacity, and copies of the raw data sheets for the measurements.

1.7 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 revised record.

1.8 General Reporting Requirements

1.8.1 Annual Emission Report

On an annual basis, 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. Notwithstanding general requirements for submittal of reports, only a single copy of this report needs to be submitted to the Illinois EPA.

1.8.2 Annual Compliance Certification

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 source.

1.8.3 Deviation Reporting

The Permittee shall notify the Illinois EPA of deviations with the permit requirements of Section 1 of this permit

within 30 days of the event. Reports shall include the information specified in Condition 3.4(a).

1.9 Other Requirements

This approval to construct does not relieve the Permittee of the responsibility to comply with all Local, State and Federal Regulations which are part of the applicable Illinois State Implementation Plan, as well as all other applicable Federal, State and Local requirements.

- 1.10 a. Under this permit, the biomass-fired boiler and associated equipment may be operated for a period that ends 180 days after the boiler first fires biomass 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.
- b. Upon successful completion of emission testing of the biomass-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 application for a Clean Air Act Permit Program (CAAPP) permit for the source, provided that the Permittee has properly applied for such permit in a timely fashion. In accordance with Section 39.5(5)(x) of the Environmental Protection Act, a complete CAAPP application must be submitted within 12 months of commencing operation of the source.
- c. This condition supersedes Standard Condition 6.

2.0 UNIT-SPECIFIC CONDITIONS

CONDITION 2.1: UNIT-SPECIFIC CONDITIONS FOR THE BIOMASS-FIRED BOILER

2.1.1 Description

The affected boiler is a biomass-fired boiler that will serve a generator with a nameplate capacity of 25 MW of electricity. The boiler would be designed to fire corn stover, a biomass fuel that can be produced from the stalk and leaves of the corn plant during the harvesting of the grain. Natural gas would be used as the auxiliary fuel for the boiler, primarily for startup.

The NO_x emissions from the boiler will be controlled by low-NO_x combustion and selective noncatalytic reduction (SNCR). An electrostatic precipitator (ESP) will be used to control PM. A sorbent injection system using Trona (sodium sesquicarbonate) or other similar mineral will reduce emissions of hydrogen chloride (HCl).

2.1.2 Listing of Emission Units and Air Pollution Control Equipment

Boiler	Description	Emission Control Equipment
1	Spreader Stoker Boiler, Nominal Capacity: 338 mmBtu/hour Firing biomass, with auxiliary natural gas burners (73 mmBtu/hour)	Low NO _x combustion, SNCR, sorbent injection and electrostatic precipitator

2.1.3-1 Applicable Federal Emission Standards

- a. The affected boiler is subject to the NSPS for Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Db and applicable provisions in 40 CFR 60, Subpart A, General Provisions.
- b. At all times, the Permittee shall operate and maintain the affected boiler, including the associated control system, in a manner consistent with good air control practice, as required by the NSPS, 40 CFR 60.11(d).

2.1.3-2 Applicable State Emission Standards

The affected boiler is subject to the following state emission standards:

- a. Pursuant to 35 IAC 212.109 and 212.122(a), except as allowed by 35 IAC 212.122(b) and 212.124, the emission of smoke or other particulate matter shall not have an opacity greater than 20 percent determined by 6-minute averages of opacity, in accordance with opacity monitoring in the stack or USEPA Reference Method 9.

- b. The emissions of particulate matter (PM) attributable to firing solid fuel shall not exceed 0.1 lb/mmBtu in any one-hour period. (35 IAC 212.204)
- c. The emissions of sulfur dioxide (SO₂) attributable to firing of solid fuel shall not exceed 1.2 lbs/mmBtu in any one-hour period. (35 IAC 214.121)
- d. The emission of carbon monoxide (CO) into the atmosphere shall not exceed 200 ppm, corrected to 50 percent excess air. [35 IAC 216.121]
- e. The emissions of nitrogen oxides (NO_x) attributable to firing of gaseous fossil fuel shall not exceed 0.2 lb/mmBtu in any one-hour period. [35 IAC 217.121(a)]

2.1.4 Non-Applicability Provisions

- a. The affected boiler is not subject to the emissions standards for NO_x, PM and SO₂ of the New Source Performance Standards for Industrial-Commercial Institutional Steam Generating Units, 40 CFR 60, Subpart Db because the boiler will not burn coal, wood or oil, and firing of natural gas will not exceed an annual capacity factor of 10 percent.
- b. The affected boiler is not subject to the NSPS for Electric Utility Steam Generating Units, 40 CFR 60, Subpart Da, because it will not supply more than 25 MW net electrical output to any utility power distribution system for sale.
- c. This permit is issued based on the affected boiler being exempt from the provisions of Title IV of the federal Clean Air Act (Acid Rain) since the boiler will not generate electricity in excess of 25 MW, no coal or coal-derived fuels will be combusted and the sulfur content of the biomass fuel is less than 0.05 percent.
- d. The affected boiler is exempt from the provision of 25 IAC 225, Subparts C, D and E (CAIR) because the nameplate capacity of the generator does not exceed 25 MW and the boiler does not qualify as a cogeneration unit.
- e. The affected boiler is not subject to 35 IAC 217, Subpart U or W because the affected boiler will not be a fossil fuel fired unit as defined by 35 IAC 211.2425.

2.1.5-1 Requirements for the Fuel Supply

- a.
 - i. Corn stover shall be the principal biomass fuel handled at the plant and fired in the affected boiler.
 - ii. Wood fuel shall not be handled at the plant or fired in the boiler.

- b.
 - i. This Permit does not authorize acceptance of biomass that would qualify as acceptance of waste by the Permittee under the provisions of the Environmental Protection Act.
 - ii. This Permit does not authorize acceptance of biomass that would qualify as hazardous waste under the provisions of the Federal Resource Conservation, the Recovery Act, Environmental Protection Act, or 35 IAC Part 721.
 - iii. The Permittee shall only accept shipments of biomass in which:
 - A. The biomass is ready for use as fuel as delivered to the plant, without the need for further processing, other than grinding, by the Permittee.
 - B. The biomass is clean, that is, the biomass as delivered to the plant is free of foreign matter and does not contain any contaminants that would adversely impact the environment when the Permittee uses the biomass as fuel.
 - C. The Permittee shall implement practices for acceptance of biomass fuel to ensure that the requirements of conditions of 2.1.5(a) and (b) are met for storage and management of accepted biomass fuel so that the accepted fuel is not degraded or otherwise damaged such that it can no longer be used as fuel.

2.1.5-2 Operational Limits and Work Practices for the Affected Boiler

- a.
 - i. The rated heat input capacity of the boiler shall not exceed 338 mmBtu/hour.
 - ii. The rated heat input capacity of the natural gas auxiliary fuel burners of the boiler shall not exceed 73.0 million Btu/hour, total.
 - iii. The name plate capacity of the electrical generator served by the affected boiler shall not exceed 25.0 MWe.
- b.
 - i. The usage of solid fuel in the affected boiler shall not exceed 2,960,880 mmBtu/year.
 - ii. Natural gas usage shall not exceed 296,000 mmBtu/year or an annual capacity factor (as defined by 40 CFR 60.41b) of 10 percent, whichever is more stringent. Compliance with this limit shall be determined on a calendar year basis.
- c.
 - i. For the affected boiler, the Permittee shall develop, implement, and maintain a written Startup, Shutdown, and Malfunction Plan (Plan) that describe, in detail,

procedures for operating and maintaining the affected boiler during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process equipment and air pollution control equipment used to comply with the relevant emission standards. For purposes of this plan, the term "malfunction" shall be as defined pursuant to 40 CFR 60.2. This Plan shall be developed consistent with the provisions of 40 CFR 63.6(e)(3)(i)(A), (B) and (C), including the following. The Permittee shall develop its initial Plan prior to the initial startup of the affected boiler.

- A. During periods of startup, shutdown, and malfunction of the affected boiler, the Permittee shall operate and maintain such unit, including associated air pollution control equipment, in accordance with the procedures specified in the Plan.
 - B. 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 the Plan, the Permittee shall keep records for that event which demonstrate that the procedures specified in the Plan were followed. In addition, the Permittee shall keep records of these events as specified in Condition 2.1.9(d) through (f), including records of the occurrence and duration of each startup, shutdown, or malfunction of operation and each malfunction of the air pollution control equipment. Furthermore, the Permittee shall confirm in the periodic compliance report that actions taken during periods of startup, shutdown, and malfunction were consistent with the Plan, as specified by 40 CFR 63.10(d)(5). [40 CFR 63.6(e)(3)(iii)]
 - C. 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 Plan, and the emission unit exceeds a relevant emission standard, then the Permittee must record the actions taken for that event and must promptly report such actions as specified by Condition 2.1.9(d) through (f), unless otherwise specified elsewhere in this permit or when superseded in the CAAPP Permit.
- ii. A. The Permittee shall make changes to the Plan for the affected boiler if required by the Illinois EPA or as otherwise consistent with 40 CFR 63.6(e)(3)(viii). [40 CFR 63.6(e)(3)(vii) and (viii)]

- B. This 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 Plan, the Permittee must also retain and make available the previous (i.e., superseded) version of the Plan for a period of at least 5 years after such revision. [40 CFR 63.6(e)(3)(v) and Condition 2.1.9(d) through (f)]
- C. The Permittee shall submit a copy of the plan to the Illinois EPA prior to startup of the boiler.

d. Startup Provisions

- i. 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 boiler;
 - B. Use of natural gas burners as needed to heat the boiler prior to initiating burning of solid fuel;
 - C. Use of the ESP as soon as solid fuel is introduced into the boiler unless special circumstances are present, in which case the ESP shall be used as soon as it can be done without risk to the integrity of the device;
 - D. Manage the load of the boiler until all control systems are functioning normally; and
 - E. Review of the operational parameters of an affected boiler during each startup as necessary to make appropriate adjustments to the startup to reduce or eliminate excess emissions.
- e. Pursuant to 35 IAC 201.149, 201.161 and 201.262 the Permittee is authorized to operate the affected boiler in violation of the CO standard in 35 IAC 216.121 during startup. This authorization is subject to the following terms and conditions.
 - i. This authorization does not relieve the Permittee from the continuing obligation to demonstrate that all reasonable efforts are made to minimize startup emissions, duration of individual startups and frequency of startups.

- ii. The Permittee shall conduct startup of the affected boilers in accordance with a Startup, Shutdown and Malfunction Plan, as further addressed by Condition 2.1.5-2(c).
 - iii. The Permittee shall fulfill applicable recordkeeping and reporting requirements of Conditions 2.1.9(e), 2.1.10-1(a)(ii), 2.1.10-2(b)(ii) and (iii).
 - iv. As provided by 35 IAC 201.265, an authorization in a permit for excess emissions during startup does not shield a Permittee from enforcement for any violation of applicable emission standard(s) that occurs during startup and only constitutes a prima facie defense to such an enforcement action provided that the Permittee has fully complied with all terms and conditions connected with such authorization.
- f. Malfunction/Breakdown Provisions
- i. 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 standards of Condition 2.1.3-2. This authorization is made pursuant to 35 IAC 201.262 and is subject to the following requirements:
 - A. 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.
 - B.
 - 1. 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 boiler for a short period until repairs can be made.
 - 2. 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 boiler within 4 hours unless the malfunction is expected to be repaired within 8 hours. In such case, the shutdown of the system shall be undertaken when it is apparent that the repair will not be accomplished within 8 hours.

- ii. The Permittee shall fulfill applicable recordkeeping and reporting requirements of Conditions 2.1.9(f), 2.1.10-1 and 2.1.10-2.
- iii. 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.

2.1.6 Emission Limitations

The emissions of the affected boiler shall not exceed the following limits. The annual limits address all emissions from the affected boiler, including emissions during startup, malfunction and breakdown, as addressed by Condition 2.1.3. Compliance with hourly emission limits shall be based on daily averages (24-hour block averages) for pollutants for which continuous emissions monitoring is performed (NO_x and CO). For other pollutants compliance shall be determined on a 3-hour block average.

Pollutant	Pounds/Hour	Tons/Year
CO	54.8	240.0
NO _x	54.8	240.0
SO ₂	13.5	59.2
PM (Filterable) ^a	8.5	37.0
VOM	5.8	25.2
Sulfuric Acid Mist	1.0	4.4
Hydrogen Chloride	2.3	9.9
Formaldehyde	2.3	9.9
Benzene	2.3	9.9
Total HAP	5.7	24.9

Notes:

^a All particulate matter (PM), as measured by USEPA Method 5, shall be considered PM₁₀ and PM_{2.5} unless PM emissions are also tested by USEPA Method 201 or 201A. These PM limits do not address condensable particulate matter.

2.1.7-1 Testing Requirements

- a. i. Within 60 days after achieving the maximum rate at which the affected boiler will be operated, but not later than

180 days after initial startup. Unless an extension is approved by the Illinois EPA, pursuant to Condition 1.10(a), the Permittee shall have tests conducted for emissions of VOM, PM, NO_x, CO, SO₂, hydrogen chloride, and sulfuric acid mist, at its expense, by an approved testing service while the affected boiler is firing solid fuel at maximum load and other representative operating conditions.

ii. In addition to the emission testing required above, the Permittee shall perform emission tests as requested by the Illinois EPA 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 maximum percentages of specific fuel materials.

b. The following methods and procedures shall be used for testing of emissions of the boiler, unless another established method is approved by the Illinois EPA.

	<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
Nitrogen Oxides	Method 7, 7E or 19
Opacity	Method 9
Carbon Monoxide	Method 10
Sulfur Dioxide	Method 6C and 19
PM (Filterable) ¹	Methods 5, 201 and 201A
PM (Condensable) ¹	Method 202
Volatile Organic Material ²	Method 18, 25, 25A or 320
Sulfuric Acid Mist (H ₂ SO ₄)	Method 8
Hydrogen Chloride	Method 19 and 26
Formaldehyde	Method 320
Benzene	Method 320

¹ The Permittee may report all PM emissions measured by USEPA method 5 as PM₁₀ and PM_{2.5}, in which case separate testing using USEPA Method 201 or 201A need not be performed.

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.

c. The Permittee shall submit an initial test plan to the Illinois EPA within 30 days of the initial startup of the boiler.

- d. 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 30 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. 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.
- e. 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 summary of results which includes:
 - Process rates e.g., firing rate and usage rate, of solid fuel.
 - Boiler operating parameters (i.e., steam produced and oxygen content in the flue gas leaving the boiler)
 - 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
 - Compliance demonstrated - Yes/No
 - Opacity measured during period of testing
 - ii. Description of test methods and procedures used, including description of sampling train, analysis equipment, and test schedule.
 - iii. Detailed description of test conditions, including:
 - Pertinent process information (e.g. fuel, firing rates and results of analysis in accordance with Condition 2.1.7-2(b)(i)).
 - Control equipment information, e.g., pressure drop, sorbent injection rates, and other operating parameters during testing.
 - iv. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.

- f. 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.

2.1.7-2 Sampling and Analysis of Solid Fuel Supplies

- a. The Permittee shall analyze representative samples of solid fuel supplies to the affected boiler as follows:
 - i. Analysis for sulfur and heat content shall be conducted in accordance with USEPA Reference Method 19 (40 CFR 60, Appendix A, Method 19).
 - ii. Analysis for mercury and other metals, chlorine and ash content shall be conducted in accordance with USEPA Reference Methods or other method approved by USEPA.
- b. Sampling and analysis shall be conducted in the following circumstances and/or frequency:
 - i. Analysis of the fuel supply to the affected boiler shall be conducted in conjunction with emission testing of the boiler (see Condition 2.1.7-1).
 - ii. Analysis of representative samples of solid fuel shall be conducted in conjunction with acceptance of a new class or type of solid fuel.
 - iii. Analysis of representative samples of specific fuel(s) shall be conducted following a written request from the Illinois EPA.
 - iv. Analysis of representative samples of solid fuel shall be conducted at least every five years, if a more frequent analysis is not needed pursuant to the above requirements.
- c. Analyses of the fuel provided to the Permittee by persons supplying fuel may be used to satisfy these requirements, provided that documentation for the analysis shows that sampling and analysis follow appropriate methods and the Illinois EPA has not specifically requested analysis by the Permittee pursuant to Condition 2.1.7-2(b)(iii).
- d. The Permittee shall keep records for this sampling and analysis activity.

2.1.8-1 Emissions and Opacity Monitoring Requirements

- a. Emissions Monitoring for NO_x:
 - i. The Permittee shall install, operate and maintain continuous emission monitoring systems (CEMS) for measuring NO_x emissions and a diluent (either oxygen (O₂))

or carbon dioxide (CO₂) from the boiler) or stack flow. These CEMS shall be installed and operational prior to initial firing of fuel in a boiler, and certified promptly thereafter. The procedures under 40 CFR 60.13 and 60.48b or 40 CFR Part 75 shall be followed for the installation, evaluation, and operation of these CEMS.

- ii. These CEMS shall be operated during all periods of operation of a 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 60.48b(f). Data is to be obtained during calibration checks, and zero and span adjustments as specified in the NSPS.
- iii. The data collected by these CEMS shall also be used to determine compliance with applicable mass emission limitations for NO_x established by this permit.

b. Emissions Monitoring for CO:

- i. The Permittee shall install, calibrate, operate, and maintain a CO continuous emissions monitoring system on the affected boiler within one year after the initial emission testing required by this permit unless this testing or further testing conducted by the Permittee demonstrates that the boiler normally complies by a margin of at least 5 percent with the NO_x and CO emission limit in this permit or the Illinois EPA approves further time for the Permittee to achieve this level of performance.
- ii.
 - A. This monitoring system shall be operated during all periods of operation of the affected boiler except for continuous monitoring system maintenance, breakdowns and repairs.
 - B. The Permittee shall maintain records for the continuous monitoring system, including recorded emission concentrations and records of maintenance, calibration, and operational activity associated with the system.
 - C. The Permittee shall submit periodic monitoring reports to the Illinois EPA for this emission monitoring system that are consistent with the reporting provisions in 40 CFR 60.7(d) and Condition 2.1.10-1(d).
- iii. The CO continuous emission monitoring may be discontinued if a parametric monitoring plan is approved by the Illinois EPA in a revised construction permit or the operating permit for the plant.

- iv. The requirement for a CO monitoring system may be revised or waived in the operating permit for the source if the Illinois EPA determines that compliance with requirements for CO emissions is not facilitated to a significant degree by such monitoring.
- c. Opacity Monitoring:
 - i. The Permittee shall install, operate, and maintain a continuous opacity monitoring systems (COMS) for the affected boiler. This COMS shall meet the performance specifications and operating requirements in Sections 3.1 through 3.8 of 40 CFR 51, Appendix P. This 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. This 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 in accordance with 40 CFR 60.49b(f) and reduce the opacity monitoring data to 6-minute averages.
- d.
 - i. 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 CEMS is inaccurately reporting excess emissions, an affected boiler may continue to operate provided the Permittee records the information it is relying upon to conclude that the 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.

2.1.8-2 Operational Monitoring and Instrumentation Requirements

- a. The Permittee shall install, operate and maintain operational monitoring for the affected boiler to measure and record the following operating parameters. These monitoring systems shall display instantaneous or minute-by-minute data and record hourly average data.
 - i. Combustion chamber temperature.
 - ii. Temperature of the flue gas at the inlet to the SNCR system.
 - iii. Reagent feed rate by the SNCR system.

- iv. Amount of sorbent (trona) injected.
- v. Steam flow.
- b. The Permittee shall install, operate and maintain instrumentation for the ESP on the affected boiler and record the following twice per day (at least 10 hours apart): secondary voltage, current and sparking rate of each field in the ESP.

2.1.9 Recordkeeping Requirements

- a. The Permittee shall maintain a file that contains the following information:
 - i. The rated heat input of the affected boiler and the rated heat input for natural gas, with supporting documentation.
 - ii. The Permittee's established operating, maintenance and monitoring procedures for the affected boiler.
- b. The Permittee shall maintain the following operating records for the affected boiler:
 - i. Total operating hours;
 - ii. Daily records of the usage of biomass and natural gas, prepared and maintained in a manner consistent with the provisions of 40 CFR 60.49b(d);
 - iii. Amount of fuel consumed, by type (mmBtu/month and mmBtu/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); and
 - iv. Usage of reagent for the SNCR system and sorbent (tons/month).
- c.
 - i. The Permittee shall maintain a file containing the identity and address of each independent company or other entity other than the Permittee or a company in common control with the Permittee that supplies and delivers biomass to the plant, accompanied by the type(s) of biomass supplied and a description of the origin of material, if the party does not produce the material itself.
 - ii. The Permittee shall maintain records for the amount of biomass accepted (tons).
 - iii. The Permittee shall maintain records of biomass shipments presented to the plant that are rejected (identification

of shipment, amount and type of material, and reason for rejection).

d. Records of Emissions Monitoring

The Permittee shall maintain records of the following information for NO_x emissions and, if monitored, CO emissions, from the affected boiler, for each boiler operating day:

- i. Calendar date;
- ii. The measured average hourly emission rates (expressed in lbs/million Btu heat input or ppmv);
- iii. The calculated hourly emission rates (lbs/hour);
- iv. The calculated daily average emission rate (lbs/hour);
- 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. If stack flow is not monitored, identification of "F" factor used for calculations, and type of fuel combusted or if stack flow is monitored, records of monitored flow rate, scf/hour;
- 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 or 40 CFR 75, Appendix B.

e. Records for Startups

The Permittee shall maintain records for each startup of the affected boiler. These records shall contain the date and duration of each startup, and note any deviations from normal startup procedures, as set forth in the Permittee's Startup Shutdown and Malfunction Plan.

f. Records for Continued Operation during Malfunctions or Breakdowns:

The Permittee shall maintain 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; and
 - C. An estimate of the magnitude of excess emissions during the occurrence.

g. Records for Inspection and Maintenance

The Permittee shall keep a maintenance and repair log for the affected boiler and associated control equipment, listing each activity performed with date.

h. Emissions

The Permittee shall keep the following records related to emissions of the affected boiler:

- i. Any period of time including startup or malfunction/breakdown when emissions exceed an applicable limit.
- ii. The emissions of NO_x, VOM, CO, PM, SO₂, and HAP (tons/month and tons/year), based on continuous emissions monitoring data, fuel consumption or applicable emission factors with supporting calculations.

2.1.10-1 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 required notifications and reports to the Illinois EPA, including the following. These reports shall be prepared and submitted in conformance with the requirements, content and schedule contained in 40 CFR 60.7:

- i. Written notification of commencement of construction, no later than 30 days after such date. [40 CFR 60.7(a)(1)]
 - ii. Notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date, as provided by 40 CFR 60.7(a)(3) and 60.49b(a). This notification shall include: (1) the design heat input of the affected boiler and identification of the fuels to be combusted in the affected facility, (2) the annual capacity factor at which the Permittee anticipates operating the affected boiler, and (3) a copy of any federally enforceable requirements that limits the annual capacity factor for any fuel or mixture of fuels.
- b. The Permittee shall promptly notify the Illinois EPA of any deviations from the requirements of this permit for the affected boilers as follows. These notifications shall include the information specified by Condition 3.4(a).
 - i. If there is an exceedance of a state emission standard other than during startup or shutdown, e.g., due to a malfunction or breakdown event, the Permittee shall notify the Illinois EPA within 30 days.
 - ii. If there is a deviation from other applicable requirements for PM emissions or requirements for opacity that is not repaired or otherwise corrected within two hours (120 minutes), the Permittee shall notify the Illinois EPA within 30 days.
 - iii. The deviations addressed above and all other deviations shall be reported in the periodic compliance report.
- 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 an affected boiler during a malfunction or breakdown of the boiler or associated control equipment when such continued operation would cause an exceedance or violation of the applicable state 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 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 boiler was taken out of service.
- d. The Permittee shall submit periodic compliance reports to the Illinois EPA for the affected boiler. Such reports shall include the following information. These reports shall

initially be submitted on a calendar quarter basis, with each report submitted no later than 45 days following the end of the reporting period. Beginning one year after shakedown of the affected boiler is complete, these periodic compliance reports may be submitted on a calendar semi-annual basis:

- i. As related to exceedances of applicable emission limits in Condition 2.1.3-2 or 2.1.6, the information specified by Condition 3.4(a).
 - ii. Information for other deviations from applicable permit requirements during the reporting period, with the information specified by Condition 3.4(a).
 - iii. A summary of operation and emissions of each affected boiler during the reporting period, including the amounts of biomass used, total operating hours, number of startups, and average hourly emission rates for NO_x and, if applicable, CO.
 - iv. The list of fuel shipments presented to the plant and rejected, based on the records required under Condition 2.1.9(c).
 - v. The results of the analyses of solid fuel pursuant to Condition 2.1.7-2 obtained during the reporting period, other than results that are provided to the Illinois EPA with a report for emission testing.
- e. The Permittee shall notify the Illinois EPA of any significant changes in the nature of the biomass fuel fired in the boiler. This notification shall describe the change in the 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.

2.1.10-2 Notification and Reporting During Shakedown

- a. The Permittee shall provide the Illinois EPA 30 days advance notification prior to initial start-up of the affected boiler.
- b. The Permittee shall provide the Illinois EPA with prompt notification of any event(s) that disrupts the orderly shakedown of the affected boiler.
- c. The Permittee shall provide the Illinois EPA with periodic progress reports on a calendar quarter basis, commencing with the first quarter in which the affected boiler initially commenced operation and terminating in the final quarter that shakedown was completed. Notification and reporting shall meet

the requirements of Condition 3.4. These reports shall include the following:

- i. Overall operating level (heat input and maximum biomass 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 it considered shakedown of the affected boiler was complete.

CONDITION 2.2: UNIT-SPECIFIC CONDITIONS FOR CORN STOVER AND OTHER BULK MATERIAL HANDLING AND STORAGE

2.2.1 Description of Emission Units

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

As addressed by the following conditions, emissions of PM 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 biomass, for which total enclosure is not practicable, measures must be used to very effectively reduce the generation of emissions.

2.2.2 Listing of Emission Units and Air Pollution Control Equipment

Unit	Description	Control Equipment
Fuel Preparation Building	Receiving, Transfer System and Grinding	Baghouse
Day Bin	Storage of Corn Stover	Baghouse
Trona Silo	Trona Storage	Baghouse
Storage Piles	Corn Stover Bale Storage	None

2.2.3 Applicable State Emission Standards

- a. Pursuant to 35 IAC 212.109 and 212.123(a), except as allowed by 35 IAC 212.123(b) and 212.124, the emission of smoke or other particulate matter shall not have an opacity greater than 30 percent determined by 6-minute averages of opacity, in accordance with USEPA Reference Method 9.
- b. With respect to emissions of fugitive PM, affected units shall comply with 35 IAC 212.301, which provides that emissions of fugitive PM shall not be visible from any process, including any 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.
- c. The emissions of PM from affected units other than storage piles and associated operations excluded by 35 IAC 212.323 (see Condition 2.2.4) are subject to 35 IAC 212.321, 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 units, either alone or in combination with the emission of particulate matter from all other similar new

process emission units at a source or premises, that exceeds the allowable emission rates specified in 35 IAC 212.321(b) and (c).

2.2.4 Non-Applicability of Regulations of Possible Concern

This permit is issued based on the storage piles and associated 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. PM emissions from an affected unit handling trona or ground corn stover shall be controlled by:
 - i. Enclosure of the unit so as to prevent visible fugitive emissions from the affected unit.
 - ii. Aspiration to a control device designed to emit no more than 0.010 grains/dry standard cubic foot (gr/dscf), which device shall be operated in accordance with good air pollution control practice to minimize emissions.
- b. PM emissions from handling of baled or shredded fuel shall be controlled by good air pollution control practice. For this purpose, there shall either:
 - i. Be no visible emissions from the affected unit, as determined in accordance with USEPA Method 22, or
 - ii. Use of alternate control measures such that a nominal control efficiency of 80 percent is achieved from the uncontrolled emission rate, as determined using appropriate USEPA emission factors for particulate emissions from handling of material dry, in the absence of any control of emissions, and engineering analysis and calculations for the control measures that are actually present; or
 - iii. Application of water or other dust suppressants so as to minimize fugitive emissions to the extent practicable.
- c. PM emissions from an affected unit handling a wet material shall be controlled by maintaining the material with adequate moisture to prevent visible emissions directly from such unit during the handling, storage or load out of the material. For this purpose, wet material is a material that has sufficient moisture during normal operation to minimize the potential for direct emissions.

- d. The Permittee shall implement and maintain a program of established control measures for the affected units that minimize visible emissions of PM and provide assurance of compliance with the applicable limits and standards in Conditions 2.2.5(a), (b) and (c).
- e.
 - i. The Permittee shall generally handle biomass in accordance with good air pollution control practices to minimize PM emissions.
 - ii. The Permittee shall otherwise carry out the acceptance and handling of biomass in a manner that ensures that biomass accepted at the plant satisfies applicable legal criteria for the Permittee to accept such material, including the applicable requirements of this permit, and is handled in accordance with applicable legal requirements.

2.2.6 Emission Limitations

Annual emissions of PM as PM₁₀ from the affected units shall not exceed 3.6 tons/year. Compliance with this limit shall be determined from the material handled and other operating information for affected units and appropriate emission factors.

2.2.7 Emission Testing and Opacity Observations

The Permittee shall conduct testing for the affected units in accordance with Conditions 3.2 and 3.3.

2.2.8 Operational Instrumentation

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. The Permittee shall keep records for measured pressure drop in accordance with Condition 1.5.

2.2.9 Inspections

- a.
 - i. The Permittee shall conduct inspections of affected units on at least a monthly basis with personnel who are not directly responsible for the day-to-day operation of these units, for the specific purpose of verifying that established control measures 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. 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, 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 2.2.5(b). 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 established control measures that are used to control PM emissions. For each category of affected unit, the sum of these emission rates shall not exceed the totals in Table I 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(c), 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 established control measures being relied upon by the Permittee. Except as addressed by Condition 2.2.10(a)(ii) or testing of PM emissions from an affected unit is conducted in accordance with Condition 2.2.7, this demonstration shall be developed using emission factors for uncontrolled PM emissions, efficiency of control measures, and controlled PM emissions published by USEPA.

- b. The Permittee shall keep records for the amount of bulk materials received by the plant by category or type of material (tons/month).
- c.
 - 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.
- d. 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(a), (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 2.2.3 or 2.2.5 or any applicable emission rate, as identified in the records pursuant to Condition 2.2.10(a)(iv), may have been violated during the incident, with an estimate of the amount of any excess PM emissions (lbs) and supporting explanation.
- e. 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.
- f. 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

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.

2.2.12 Reporting Requirements

- a. The Permittee shall submit periodic reports to the Illinois EPA for all deviations from emission standards and operating requirements set by this permit. These notifications shall include the information specified by Condition 3.4(a) and be submitted with periodic compliance reports required by Condition 2.1.10-1(d).
- b. These reports shall also address any deviations from applicable compliance procedures established by this permit for affected units.

2.2.13 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.

CONDITION 2.3: UNIT-SPECIFIC CONDITIONS FOR ASH HANDLING

2.3.1 Description

The affected units are all fly ash handling, transfer and storage units. Fly ash recovered by the ESP on the boiler is transferred to the fly ash storage silo (Ash Tower). Displaced air from the fly ash storage silo is filtered through a 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. Bed ash collected at the bed of the boiler and at other points in the boiler, is handled as a wet material.

2.3.2 Listing of Emission Units and Air Pollution Control Equipment

Unit	Description	Control Equipment
Ash Tower	Fly Ash Storage	Baghouse
Ash Handling and Loadout System	Ash Handling Transfer and Loadout	Baghouse

2.3.3 Applicable State Emission Standards

- a. The affected units are subject to 35 IAC 212.321, 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, that exceeds the allowable emission rates specified in 35 IAC 212.321(b) and (c).
- b. Pursuant to 35 IAC 212.109 and 212.123(a), except as allowed by 35 IAC 212.123(b) and 212.124, the emission of smoke or other particulate matter shall not have an opacity greater than 30 percent determined by 6-minute averages of opacity, in accordance with USEPA Reference Method 9.
- c. With respect to emissions of fugitive PM, the affected units shall comply with 35 IAC 212.301, which provides that emissions of fugitive PM shall not be visible from any process, including any 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 exceeds 25 miles per hour, as provided by 35 IAC 212.314.

2.3.4 Non-Applicability of Regulations of Concern

None

2.3.5 Operational and Production Limits, and Work Practices

- a. PM 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 0.010 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.
- b. PM emissions from handling of fly ash shall be controlled by good air pollution control practice. For this purpose, either
- i. There shall be no visible emissions from the affected unit, as determined in accordance with USEPA Method 22;
 - ii. Use of alternate control measures such that a nominal control efficiency of 80 percent is achieved from the uncontrolled emission rate, as determined using appropriate USEPA emission factors for particulate emissions from handling of material dry, in the absence of any control of emissions, and engineering analysis and calculations for the control measures that are actually present; or
 - iii. Application of water or other dust suppressants so as to minimize fugitive emissions to the extent practicable.
- c. Any ash that is not loaded into a fully enclosed transport vehicle (e.g., a vacuum truck or bottom discharge hopper trailer) shall be treated by the Permittee with water or dust suppressant and the load of ash shall then be tarped, covered or otherwise enclosed prior to leaving the plant so as to prevent loss of ash during transport.
- d. The Permittee shall collect any ash that is spilled during loadout so as to prevent such ash from being tracked out of the loadout area by transport vehicles or otherwise becoming airborne.

2.3.6 Emission Limitations

Annual emissions of PM from the affected units shall not exceed 0.1 tons/year.

2.3.7 Testing Requirements

The Permittee shall conduct testing for the affected units in accordance with Conditions 3.2 and 3.3.

2.3.8 Instrumentation Requirements

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. The Permittee shall keep records of measured pressure drop in accordance with Condition 1.5.

2.3.9 Inspections

- a.
 - i. The Permittee shall conduct inspections of affected units on at least a monthly basis with personnel who are not directly responsible for the day-to-day operation of these units, for the specific purpose of verifying that the 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.
- 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 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 any emission control requirements for the affected units that continue for more than 24 hours. These notifications shall include the information specified by Condition 3.4(a).
- b. The Permittee shall submit periodic reports to the Illinois EPA for all deviations from emission standards and operating requirements set by this permit. These reports shall include the information specified by Condition 3.4(a) and submitted with the periodic compliance reports required by Condition 2.1.10-1(d).

CONDITION 2.4: UNIT-SPECIFIC CONDITIONS FOR THE COOLING TOWER

2.4.1 Description of Emission Unit

The affected unit for the purpose of this unit-specific condition is a cooling tower associated with the steam cycle for the boiler. The cooling tower is a source of particulate matter (PM) because of mineral material present in the water, which is emitted to the atmosphere due to water droplets that escape from the cooling tower and completely evaporate. The emissions of PM are controlled by drift eliminators, which collect water droplets entrained in the air exhausted from the cooling tower.

2.4.2 Applicable Federal Emission Standards

None

2.4.3 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, that exceeds the allowable emission rates specified in 35 IAC 212.321(c).
- b. Pursuant to 35 IAC 212.109 and 212.123(a), except as allowed by 35 IAC 212.123(b) and 212.124, the emission of smoke or other particulate matter shall not have an opacity greater than 30 percent determined by 6-minute averages of opacity, in accordance with USEPA Reference Method 9.
- c. With respect to emissions of fugitive PM, the affected unit shall comply with 35 IAC 212.301, which provides that emissions of fugitive PM shall not be visible from any process, including any 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 exceeds 25 miles per hour, as provided by 35 IAC 212.314.

2.4.4 Applicability of Other Regulations

None

2.4.5 Operating Requirements

- a. The affected unit shall be equipped, operated, and maintained with drift eliminators designed to limit the loss of water droplets from the unit to not more than 0.0010 percent of the circulating water flow.

- b.
 - i. Chromium-based water treatment chemicals, as defined in 40 CFR 63.401, shall not be used in the affected unit.
 - ii.
 - A. Only non-VOM additives shall be used in the cooling tower.
 - B. Plant process wastewater shall not be introduced into cooling water, other than through unintentional leaks, which shall promptly be repaired.
- c. The Permittee shall operate and maintain the affected unit, including the drift eliminators, in a manner consistent with good air pollution control practices for minimizing emissions.
- d. The Permittee shall operate and maintain the affected unit in accordance with written operating procedures, which procedures shall be kept current. These procedures shall address the practices that will be followed as good air pollution control practices.

2.4.6 Emission Limitations

The emissions of particulate matter from the affected unit shall not exceed 0.7 tons per year, as determined from relevant operating data for the cooling tower and the efficiency of the drift eliminators, using engineering calculations for the emissions of PM₁₀ due to the drift from the unit.

2.4.7 Emission Testing

None

2.4.8 Sampling and Analysis Requirement

- a. The Permittee shall sample and analyze the water being circulated in the affected unit on at least a monthly basis for the total dissolved solids content. Measurements of the total dissolved solids content in the wastewater discharge associated with the affected unit, as required by a National Pollution Discharge Elimination System permit, may be used to satisfy this requirement if the effluent has not been diluted or otherwise treated in a manner that would significantly reduce its total dissolved solids content.
- b. Upon written request by the Illinois EPA, the Permittee shall promptly have the water circulating in the affected unit sampled and analyzed for the presence of hexavalent chromium in accordance with the procedures of 40 CFR 63.404(a).

2.4.9 Records

- a. The Permittee shall keep a file that contains:

- i. The design loss specification for the drift eliminators installed in the affected unit.
 - ii. The suppliers' recommended procedures for inspection and maintenance of the drift eliminators.
 - iii. The operating factors, if any, used to determine the amount of water circulated in the affected unit or the PM emissions from the affected unit, with supporting documentation.
 - iv. Calculations for the maximum PM₁₀ emissions from the cooling tower (pounds/hour, 24-hour average), based on maximum operating rate of the cooling tower and other factors that result in greatest emissions.
 - v. Copies of the Material Safety Data Sheets or other comparable information from the suppliers for the various water treatment chemicals that are added to the water circulated in the affected unit.
- b. Records for the actions used to routinely verify the solids contents of the water circulating in the cooling tower, such as sampling and analysis in accordance with the NPDES permit, periodic grab sampling and analysis, conductivity measurements, etc., including:
- i. If routine verification will not be conducted pursuant to the NPDES permit, a written description of the procedures, with explanation of how they act to address compliance.
 - ii. Records for implementation of the procedure, including measured value(s) of relevant parameter(s).
- c. The Permittee shall keep the following operating records for the affected unit:
- The amount of water circulated in the affected unit, gallons/month. As an alternative to direct data for water flow, these records may contain other relevant operating data for the unit (e.g., water flow to the unit) from which the amount of water circulated in the unit may be reasonably determined.
- d. The Permittee shall keep records for the sampling and analysis activity required in Condition 2.4.8, including documentation for sampling and analysis as well as the resulting data that is collected.
- e. The Permittee shall keep inspection and maintenance logs for the drift eliminators installed in the affected unit.

- f. The Permittee shall maintain records for the particulate matter emissions of the affected unit based on the above records, the measurements required by Condition 2.4.8, and appropriate emission estimation methodology and emission factors, with supporting calculations.

2.4.10 Reporting Requirements

- a. The Permittee shall notify the Illinois EPA within 30 days of deviations from applicable requirements that are not addressed by the regular reporting required below. These notifications shall include the information specified by Condition 3.4(a).
- b. The Permittee shall submit periodic reports to the Illinois EPA for all deviations from emission standards and operating requirements set by this permit. These reports shall include the information specified by Condition 3.4(a) and submitted with the periodic compliance reports required by Condition 2.1.10-1(d).

CONDITION 2.5: UNIT-SPECIFIC CONDITIONS FOR ROADWAYS AND OTHER OPEN AREAS

2.5.1 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 affected plant, 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.

2.5.2 Control Measures

- a. Good air pollution control practices shall be implemented to minimize dust emissions from affected units. After construction of the plant is complete, these practices shall provide for treatment (flushing, vacuuming, dust suppressant application, etc.) of roadways and areas that are routinely subject to vehicle traffic as necessary to prevent nuisance dust.
- b. 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.

2.5.3 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.

2.5.4 Non-Applicability of Regulations of Concern

The emissions from affected units are not used to determine PSD applicability because they are considered fugitive emissions and the source is not in one of the source categories listed in 40 CFR 52.21(b)(1)(iii).

2.5.5 Operational and Production Limits and Work Practices

Upon request of the Illinois EPA, 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 Condition 2.5.2 to control emissions at each unit with the potential to generate significant quantities of such emissions, which program shall be kept current.

- a. The written operating program shall include:

- i. 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.
 - ii. 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 12 percent opacity; and calculated control efficiency for PM emissions.
- b. Upon request of the Illinois EPA, the Permittee shall submit copies of the written operating program to the Illinois EPA for review.
- c. 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.

2.5.6 Emission Limitations

The emissions of PM from affected units, as PM_{10} , shall not exceed 3.6 tons/year. Compliance with these limits shall be determined by appropriate emission factors and engineering calculations:

2.5.7 Opacity Observations

None

2.5.8 Inspection Requirements

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.

2.5.9 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 corn stover, with supporting calculations and documentation. The sum of these rates shall not exceed the annual limit on emissions in Condition 2.5.6.
- b. The Permittee shall maintain records documenting implementation of the operating program required by Condition 2.5.5, 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 Condition 3.4(a) and an estimate of the additional PM emissions that resulted, if any, with supporting calculations.
- d. The Permittee shall maintain records for the PM emissions of the affected units to verify compliance with the limits in Condition 2.5.6, 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).

2.5.10 Reporting Requirements

- a. The Permittee shall submit periodic 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 with the periodic compliance report, pursuant to Condition 2.1.10-1(d).
- b. The Permittee shall notify the Illinois EPA of deviations from applicable requirements for affected units. These notifications shall include the information specified by Condition 3.4(a) and be submitted with the periodic compliance reports required by Condition 2.5.10(a).

3.0 GENERAL CONDITIONS

3.1 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.

3.2 Emission Testing Requirements

- a. Upon written request by the Illinois EPA, the Permittee shall have emissions testing for particulate matter conducted at its expense by an approved testing service, which testing shall be completed within 90 calendar days of the request or on the date agreed upon by the Illinois EPA, whichever is later. Unless otherwise specified by this permit or a request from the Illinois EPA for the performance of emission testing, emission testing shall be conducted while affected unit(s) are operating at maximum rate(s) and during other representative operating conditions of the unit(s) and associated control system(s).

- b. i. USEPA test methods and procedures shall be used for measurement of emissions, including the following methods, unless other methods are specified in unit-specific condition of this permit or are approved by the Illinois EPA as part of the approval of a test plan. Refer to 40 CFR 60, Appendix A and 40 CFR 51, Appendix M for USEPA test methods.

PM (Filterable)	Method 5
PM (Condensable)	Methods 5 or 202

Notes:

- a. Unless otherwise specified, PM tests shall include measurements of condensable particulate, as collected in the back half of the Method 5 sampling train or by separate measurements using USEPA Method 202 (40 CFR Part 51, Appendix M). For emission units for which the average stack gas temperature is less than 250°F, testing may be conducted at actual stack gas temperature without heating of the probe or filter holders.
- ii. During measurements of PM or PM₁₀ emissions, observations of opacity shall also be conducted in accordance with USEPA Method 9.
- c. The Permittee shall submit a written test plan to the Illinois EPA for review and approval for initial testing of an emission unit and if a significant change in the procedures for testing is planned from the procedures followed in the previous testing of an emission unit. This plan shall be submitted at least 60 days prior to the actual date of testing and include the following information as a minimum:
 - i. A description of the planned emission test.

- ii. The person(s) who will be performing sampling and analysis and their experience with similar tests.
 - iii. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of the maximum emissions, the levels of operating parameters at or within which compliance is intended to be shown, if parameters for the process and any control equipment will be determined.
 - iv. The specific determination of emissions and operations intended to be made, including sampling and monitoring locations.
 - v. The test methods that will be used, with the specific analysis method.
 - vi. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification.
 - vii. A statement that the testing will be performed by a qualified independent testing service.
- d.
- i. Prior to carrying out emission tests, the Permittee shall notify the Illinois EPA a minimum of 30 days prior to the scheduled date of these tests with the exact date, time and place of these tests, to enable the Illinois EPA to witness these tests.
 - ii. If the scheduled date for the test is changed, the Permittee shall inform the Illinois EPA within 5 working days of the scheduled test date and must specify the date and time of the rescheduled test.
 - iii. Notwithstanding the above, 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.
- e. The Permittee shall submit three copies of the Final Report(s) for emissions tests to the Illinois EPA no later than 60 days after completion of sampling. The Final Report shall include as a minimum:
- i. General information, i.e., date of test, names of testing personnel, and names of Illinois EPA observers.
 - ii. A summary of the measured emissions of different pollutants in pounds per hour and other appropriate terms, e.g., lbs/ton, lbs/ton, gr/dscf or ppmv.

- iii. A statement whether compliance was demonstrated.
 - iv. A detailed description of operating conditions of the emission unit(s) during testing, including:
 - A. Process information, e.g., type of fuel or material handled and operating rate.
 - B. Control system operating parameters during testing
 - v. Description of test method(s), including description of sampling points, sampling train, analysis equipment, and test schedule
 - vi. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.
 - vii. Conclusions.
- f. The Permittee shall retain copies of emission test reports for at least five years beyond the date that an emission test is superseded by a more recent test.

3.3 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.

3.4 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 deviations 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.

c. Except as superseded in a subsequent CAAPP permit, the Permittee shall submit periodic reports, with each report submitted no later than 45 days following the end of the calendar period. The reports shall contain information as required by the unit-specific provisions in Section 2.0 of this permit. During shakedown and one year after, the period of reports shall be quarterly; thereafter reporting shall be conducted semi-annually.

3.5 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
5415 North University
Peoria, IL 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

ATTACHMENTS

Table I: Potential Emissions of the Affected Plant - Tons/Year

Emission Unit(s)	NO _x	CO	VOM	PM/PM ₁₀ ^a	SO ₂
Boiler	240.0	240.0	25.2	37.0	59.2
Fuel/Material Handling	-----	-----	-----	3.9/3.6	-----
Ash Handling	-----	-----	-----	0.1	-----
Cooling Tower	-----	-----	-----	0.7	-----
Subtotal				41.7/41.4	
Roadways ^b				3.6/0.7	
Total	240.0	240.0	25.2	45.3/42.1	59.2

^a Filterable PM

^b Fugitive emissions

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