217/782-2113

CONSTRUCTION PERMIT

PERMITTEE

Jo-Carroll Energy, Inc.
Attn: Russ Simpson
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Post Office Box 390
Elizabeth, Illinois 61028

Application No.: 09120002 I.D. No.: 015813AAD
Applicant's Designation: BIOMASS Date Received: December 2, 2009
Subject: Wood and Other Biomass Fuel-Fired Power Plant
Date Issued:
Location: 4341 Sand Ridge Road, Thomson

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 wood and other biomass fuels (the affected plant), including a boiler with a selective non-catalytic reduction (SNCR) system and a baghouse, a cooling tower, fuel storage and handling, ash handling, and 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. Date Signed: _____
Manager, Permit Section
Division of Air Pollution Control

ECB:RPS:psj

cc: Region 2
USEPA Region V

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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:

PM*	PM^{**}_{10}	SO_2	NO_x	VOM	CO
57.5	57.5	198.3	198.9	49.5	140.0

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

** Emissions of filterable and condensable particulate as would be measured by USEPA Methods 201 or 201A and Method 202, excluding fugitive particulate emissions from roadway at the plant. For this purpose, filterable emissions may be measured by Method 5 or other similar method for particulate matter provided that the measurement of particulate shall all be considered PM_{10}.

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

i. Emissions of any individual HAP shall not exceed 7.9 tons per year.

ii. Emissions of HAPS, in aggregate, shall not exceed 19.7 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 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.

Note: The only emission unit at the affected plant that is not subject to this standard is the boiler, which is subject to 35 IAC 212.122, which limits opacity to 20 percent.

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 gas fuel fired burner(s) in the boiler will have a rated heat input capacity of only 80.0 mmBtu/hour, which is consistent with their role as auxiliary burner(s).

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.

1.4 Applicability of Requirements for Local Approval of Siting

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 39.2 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.

1.5 Requirements for Miscellaneous Ancillary Operations

a. Stationary engines at the plant are subject to the following requirements:

i. The engines shall comply with all applicable emission standards and control requirements of applicable federal New Source Performance Standards (NSPS), 40 CFR Part 60, including the NSPS for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60, Subpart IIII, for the engines at the plant.

ii. A. Diesel engines shall only be used as emergency equipment, as defined at 35 IAC 211.1920.

B. The power output of each engine shall be no more than 1,500 horsepower.

C. Ultra-low sulfur diesel shall be the only fuel oil fired in the emergency engines.

D. Operation of each engine shall not exceed 100 hours per year, provided, however, that the Illinois EPA may authorize temporary operation of engine(s) in excess of 500 hours per year to address extraordinary circumstances that require operation of engine(s), by issuance of a separate State construction permit addressing such circumstances.

ii. This permit is issued based on minimal emissions of NSR pollutants from the wastewater treatment plant. For this purpose, emissions of VOM shall not exceed nominal emission rates of 1.1 tons/year.

b. i. The ancillary operations shall comply with all applicable emission standards and control requirements of applicable state emission regulations at Title 35, Subtitle B, Chapter I, Subchapter c.

ii. The Permittee shall fulfill applicable requirements of applicable regulations, including provisions for testing, monitoring, recordkeeping, notification and reporting.

1.6 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.

1.7 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.

1.8 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 any condition of 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.

1.9 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.

1.10 General Reporting Requirements

1.10.1 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.

1.10.2 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.

1.10.3 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).

1.11 Other Requirements

a. 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.

b. In particular, this permit does not relieve the Permittee from the responsibility to carry out practices during the construction and operation of the plant, such as application of water or dust suppressant or vacuum sweeping of roadways, as necessary to minimize fugitive dust and prevent an air pollution nuisance from fugitive dust, as prohibited by 35 IAC 201.141.

1.12 Authorization to Operate

a. Under this permit, the boiler and associated equipment may be operated for a period that ends 180 days after the boiler first fires wood fuel to allow for equipment shakedown and required emissions testing. This period may be extended by the Illinois EPA upon request of the Permittee if additional time is needed to complete shakedown or perform emission testing.

b. Upon successful completion of emission testing of the boiler demonstrating compliance with applicable short term emissions limits, 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 BOILER

2.1.1 Description

The affected boiler will serve a generator with a nameplate capacity of 20 MW of electricity. The boiler would be designed to primarily fire clean wood fuel and secondarily, corn stover, a biomass fuel that can be produced from the stalk and leaves of the corn plant during the harvesting of the grain. Switchgrass may also be used as a secondary fuel. Natural gas or propane would be used as the auxiliary fuel for the boiler, primarily for startup.

The NO_x emissions from the boiler will be controlled by selective noncatalytic reduction (SNCR). A baghouse will be used to control PM.

2.1.2 Listing of Emission Units and Air Pollution Control Equipment

Boiler	Description	Emission Control Equipment
1	Bubbling Fluidized Bed Boiler, Nominal Capacity: 266 mmBtu/hour Firing wood and other biomass fuel, with auxiliary gas burners (80.0 mmBtu/hour)	SNCR and Baghouse

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. The boiler shall comply with applicable emission standards, as follows, on and after the date on which the initial performance test is completed or is required to be completed under 40 CFR 60.8, whichever date comes first:

   i. Opacity shall not exceed 20 percent (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity pursuant to 40 CFR 60.43b(f). This standard shall apply at all times, except during periods of startup, shutdown or malfunction as provided by 40 CFR 60.46b(a).

   ii. PM emissions (filterable only) shall not exceed 13 ng/J per actual heat input in any one hour period (0.030 lb/million Btu), pursuant to 40 CFR 60.43b(h)(1), except during periods of startup, shutdown or malfunction as provided by 40 CFR 60.46b(a).

iii. NO_x emissions shall not exceed 130 ng/J (0.30 lb/million Btu) heat input on a 30-day rolling average, pursuant to 40 CFR 60.44b(d).

b. i. The affected boiler is subject to the NESHAP for area sources: Industrial, Commercial, and Institutional Boilers, 40 CFR 63, Subpart JJJJJJ and applicable provisions in 40 CFR 63, Subpart A, General Provisions. The boiler shall comply with applicable emission standards, as follows, on and after the date on which the initial performance test is completed or is required to be completed under 40 CFR 63.7, whichever date comes first:

PM emissions (filterable only) shall not exceed 13 ng/J per actual heat input in any one hour period (0.030 lb/million Btu), except during periods of startup, shutdown or malfunction as defined by 40 CFR 63.2, pursuant to 40 CFR 63.11201 and Table 1 of 40 CFR 63 Subpart JJJJJJ.

ii. For the affected boiler, the Permittee shall meet all applicable requirements of the General Provisions of the NESHAP, 40 CFR 63 Subpart A, as specified in 40 CFR 63.11205.

c. 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) and NESHAP, 40 CFR 63.6(e) and 63.11205(a).

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, 6-minute average determined by continuous opacity monitoring or by observations in accordance with USEPA 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 (SO_2) 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]

2.1.3-3 State Provisions for Startups and Malfunction/Breakdown

a. Startup Provisions

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 boiler in accordance with a Startup, Shutdown and Malfunction Plan, as further addressed by Condition 2.1.5-2(b). At a minimum, this plan shall provide for the following measures to minimize emissions during startup:

A. Review of the operational condition of the affected boiler prior to initiating startup of the boiler;

B. Use of natural gas/propane burners as needed to heat the boiler prior to initiating burning of solid fuel;

C. Manage the load of the boiler until all control systems are functioning normally; and

D. Review of the operational parameters of the affected boiler during each startup as necessary to make appropriate adjustments to the startup to reduce or eliminate excess emissions.

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

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.

b. Malfunction/Breakdown Provisions

In the event of a malfunction or breakdown of the affected boiler, the Permittee is authorized to continue operation of the affected boiler in violation of the applicable standards of 35 IAC 212.122(b), 212.204 and 216.121 (Conditions 2.1.3-2(a), (b) and (d)). This authorization is made pursuant to 35 IAC 201.262 and is subject to the following requirements:

i. This authorization only allows such continued operation as necessary to prevent risk of injury to personnel or severe damage to equipment, provided however, that operation shall not continue solely for the economic benefit of the owner or operator of the plant. As provided by 35 IAC 201.265, this authorization does not shield the Permittee from enforcement for any such violation and shall only constitute a prima facie defense to such an enforcement action.

ii. Upon occurrence of excess emissions due to malfunction or breakdown, in accordance with a Startup, Shutdown and Malfunction Plan, as addressed by Condition 2.1.5-2(b), 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.

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

iv. Following notification to the Illinois EPA of a malfunction or breakdown that resulted in excess emissions, the Permittee shall comply with all reasonable directives of the Illinois EPA with respect to such incident, pursuant to 35 IAC 201.263.

2.1.4 Non-Applicability Provisions

a. 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 and because it will not be capable of combusting more than 250 mmBtu/hour heat input of fossil fuel.

b. This permit is issued based on the affected boiler qualifying for the new unit exemption pursuant to 40 CFR 72.7 under Title IV of the federal Clean Air Act (Acid Rain). This is because the boiler will serve during the entire year a generator with a nameplate capacity that is less that 25 MWe, no coal or coal-derived fuels will be burned, and it will burn gaseous fuel with an average sulfur content of 0.05 percent or less by weight and nongaseous biomass fuel with an annual average sulfur content of 0.05 percent or less by weight determined in accordance with 40 CFR 72.7(d).

c. This permit is issued based on the affected boiler not being subject to various emission standards for incinerators, e.g., 40 CFR 60 Subparts Eb or Ec or 35 IAC 212.181, because the boiler is fired on fuel material and does not burn waste as defined by 40 CFR Part 60 or the Environmental Protection Act.

d. The affected boiler is exempt from the provision of 35 IAC 225, Subparts C, D and E (CAIR) because the nameplate capacity of the associated 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 “fossil fuel-fired” as defined by 35 IAC 211.2425.

f. The Permittee would not be required to conduct an energy assessment for the plant pursuant to the NESHAP because the affected boiler would be a new boiler pursuant to the NESHAP.

2.1.5-1 Requirements for the Fuel Supply

a. Clean wood shall be the principal biomass fuel handled at the plant and fired in the affected boiler.

b. i. This Permit does not authorize acceptance of biomass material 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 material that would qualify as hazardous waste under the provisions of the federal Resource Conservation and Recovery Act, Environmental Protection Act, or 35 IAC Part 721.

iii. The Permittee shall only accept shipments of biomass material in which:

A. The biomass material is ready for use as fuel as delivered to the plant, without the need for further processing, other than grinding and chipping, by the Permittee.

B. The biomass material 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 material to ensure that the accepted material is not degraded or otherwise damaged such that it can no longer be used as fuel.

c. i. The annual usage of solid fuel in the affected boiler shall not exceed 17,000 tons (equivalent to 2,170,000 mmBtu, based on 4,600 Btu/pound of fuel).

ii. The gas usage of the affected boiler shall not exceed 276,000 mmBtu/year. Compliance with this limit shall be determined on a calendar year basis.

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

a. i. The rated heat input capacity of the gas burners of the affected boiler shall not exceed 80.0 million Btu/hour, total.

ii. The name plate capacity of the electrical generator served by the affected boiler shall not exceed 25.0 MWe.

b. Pursuant to 40 CFR 63.11201(b) and (c), the Permittee shall comply with the following for the affected boiler. Compliance with these requirements shall be based on the applicable methods in 40 CFR 63.11214 through 11223:

i. The applicable work practice standards, emission reduction measures, and management practices as specified in Table 2 of the NESHAP.

ii. Operating limits specified in Table 3 of the NESHAP.

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 63.2. 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 (h), 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 (h), 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 (h)]

C. The Permittee shall submit a copy of the plan to the Illinois EPA prior to startup of the boiler.

2.1.6 Emission Limits

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	Limits	
	Pounds/Hour	Tons/Year
CO	31.9	139.8
NO_x	45.2	198.1
SO_2	45.2	198.1
PM (Filterable)	8.0	35.0
PM_{10} (Filterable[a] and Condensable)	16.8	73.5
VOM	10.7	46.6
Sulfuric Acid Mist	1.4	6.1
Hydrogen Chloride	1.8	7.9
Other Individual HAP	1.1	4.5
Total HAP	4.6	19.7

Notes:

[a] All particulate matter (PM), as measured by USEPA Method 5, shall be considered filterable PM_{10} unless filterable emissions of PM_{10} are 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 1.12(a), the Permittee shall have tests conducted for emissions of VOM, PM/PM_{10}, NO_x, CO, SO_2, 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.

Note: For PM emission testing required by the NSPS, an extension of this timing for testing can only be provided by USEPA.

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.

iii. Subsequent emission tests shall be conducted in accordance with 40 CFR 63.11220.

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

	Method
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/PM_{10} (Filterable)[1]	Methods 5, 201 and 201A
PM (Condensable)	Method 202
Volatile Organic Material[2]	Method 18, 25, 25A or 320
Sulfuric Acid Mist (H_2SO_4)	Method 8
Hydrogen Chloride	Method 19 and 26
Formaldehyde	Method 320
Benzene	Method 320
Metals	Method 29[3]

[1] The Permittee may report all PM emissions measured by USEPA method 5 as PM_{10}, in which case separate testing using USEPA Method 201 or 201A need not be performed.

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

[3] Metals shall include arsenic, cadmium, chromium, copper, lead, mercury and nickel.

c. The Permittee shall submit an initial test plan to the Illinois EPA no later than 30 days after 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:

- 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, and other operating parameters during testing.

- Firing rate for solid fuel.

- Boiler operating parameters (i.e., steam produced and oxygen content in the flue gas leaving the boiler)

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. Analyses as specified in 40 CFR 63.11213.

ii. Analysis for sulfur and heat content shall be conducted in accordance with USEPA Reference Method 19 (40 CFR 60, Appendix A, Method 19).

iii. Analysis for mercury and other metals (see Footnote 3 of Condition 2.1.7-1(b)), chlorine and ash content shall be conducted in accordance with USEPA Reference Methods or other ASTM method approved by the Illinois EPA.

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. Pursuant to 40 CFR 60.48b, for the affected boiler, the Permittee shall install, operate and maintain continuous emission monitoring systems (CEMS) for measuring NO_x emissions and either oxygen (O_2) or carbon dioxide (CO_2) from the boiler. 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 shall be followed for the installation, evaluation, and operation of these CEMS.

ii. For purposes of determining compliance with NSPS limits, these CEMS shall be operated during all periods of operation of 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.

b. 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.

c. 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 10 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 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.

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. Steam flow.

b. Pursuant to the NESHAP, 40 CFR 63.11201 and Table 3 of 40 CFR 63 Subpart JJJJJJ, the Permittee shall install, operate and maintain a bag leak detection system for the baghouse on the affected boiler in accordance with 40 CFR 63.11224.

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 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, natural gas, and propane 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 (gallons or tons/month).

c. The Permittee shall maintain the following logs or other similar records for the affected boiler:

i. An operating log which shall include the information specified by the NSPS, 40 CFR 60.8(b), and note any deviations from normal procedures, as set forth in the Permittee’s Plan pursuant to Condition 2.1.5-2(b).

ii. Inspection, maintenance and repair log(s) in accordance with Condition 3.1(b).

d. 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 solid fuel to the plant, accompanied by the type(s) of solid fuel 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 solid fuel accepted (tons by type).

iii. The Permittee shall maintain records of solid fuel shipments presented to the plant that are rejected (identification of shipment, amount and type of material, and reason for rejection).

e. Records of NO_x Emissions Monitoring

The Permittee shall maintain records of the following information for NO_x 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;

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 Appendix B of 40 CFR 60, 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.

f. Records for CO Emissions Monitoring

If emissions monitoring is conducted for CO, the Permittee shall maintain the records required by Condition 2.1.9(e) for CO emissions and the CO monitoring system except that data for hourly average emission rates shall be kept in terms of both lbs/mmBtu and ppm.

g. 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.

h. 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.

i. 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.

j. Emissions

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

i. The emissions of NO_x, VOM, CO, PM, SO_2, HCl, benzene, identity of specific HAPs and total HAPs (tons/month and tons/year), based on continuous emissions monitoring data, fuel consumption or applicable emission factors with supporting calculations.

ii. A file containing a demonstration that the maximum emission rates of different pollutants, in lbs/mmBtu, lbs/hour, and ppm, as appropriate, of the boiler when operating normally comply with the applicable emission limits in Conditions 2.1.3-1, 2.1.3-2 and 2.1.6, with supporting documentation.

iii. Records for any period of time including startup or malfunction/breakdown when emissions exceed an applicable limit.

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 the affected boiler 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 boiler and identification of the fuels to be combusted in the boiler, (2) the annual capacity factor at which the Permittee anticipates operating the 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 boiler 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 the 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, which reports shall include the following information. Unless otherwise specified, these reports shall be submitted on a quarterly basis, with each report submitted no later than 30 days following the end of the calendar quarter:

i. As related to NSPS standards for NO_x emissions and opacity, the information required for reporting of exceedances under 40 CFR 60.7(c) or (d) and 60.49b(h) and (j) and the information specified by Condition 3.4(a). If there are no such exceedances during the reporting period, the report shall state that no exceedances occurred during the reporting period.

ii. As related to exceedances of other applicable emission limits in Condition 2.1.2(b), 2.1.3-2 or 2.1.6, the information specified by Condition 3.4.

iii. Information for other deviations during the reporting period, with the information specified by Condition 3.4.

iv. A summary of operation and emissions of the affected boiler during the reporting period, including the amounts of solid fuel used, by type, total operating hours, number of startups by type, and average hourly emission rates for NO_x and other pollutants for which continuous monitoring is conducted.

v. The list of fuel shipments presented to the plant and rejected, based on the records required under 2.1.9(d)(iii).

vi. 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 solid 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 SOLID FUEL 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 wood, corn stover, switchgrass 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 (chipping, 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, work practices will be used to reduce the generation of emissions.

2.2.2 Listing of Emission Units and Air Pollution Control Equipment

Unit	Description	Control Equipment
Fuel Chipping and Preparation Building	Receiving, Transfer System and Sizing	Baghouse
Boiler, Sand Silo, Tub Grinding, Fuel Screening, Storage Silo and Transfer Tower	Storage and Transfer of Wood, Sand, Corn Stover and Switchgrass	Baghouse
Wood Truck Unloading	Receiving of Wood	None
Storage Piles	Wood and Corn Stover/Switchgrass Bale Storage	None
Conveyors	Conveyance of Fuel and Bulk Materials	Enclosed

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 that 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 Provisions

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 wood and ground corn stover/switchgrass 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 solid fuel and other bulk materials in accordance with good air pollution control practices to minimize PM emissions.

ii. The Permittee shall otherwise carry out the acceptance and handling of solid fuel in a manner that ensures that the fuel 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 PM_{10} from the affected units shall not exceed 15.4 tons/year, total. 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 1.7.

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 baghouse on the boiler is transferred to the fly ash storage silo. Displaced air from the fly ash storage silo is filtered through a bin vent filter. Stored fly ash is loaded out by fully enclosed 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 Silo	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 Provisions

None

2.3.5 Operational and Production Limits, and Work Practices

a. PM emissions from affected units handling dry fly ash 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. 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.

c. 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, as PM_{10} from the affected units shall not exceed 4.3 tons/year, total. Compliance with this limit shall be determined from the material handled and other operating information for affected units and appropriate emission factors.

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 1.7.

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 ash handled, in tons/month and tons/year.

d. A maintenance log or other records for inspections, maintenance, and repairs of all associated air pollution control equipment.

e. Records of monthly and annual emissions of PM with supporting calculations to be calculated on at least a quarterly basis.

2.3.11 Notifications and Reporting Requirements

a. The Permittee shall notify the Illinois EPA within 30 days of deviations from 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).

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

CONDITION 2.4: UNIT-SPECIFIC CONDITIONS FOR THE COOLING TOWER

2.4.1 Description of Emission Unit

The affected unit for the purpose of this unit-specific condition is the cooling tower associated with the steam cycle for the boiler and auxiliary cooling of the balance of plant equipment. 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 Non-Applicability Provision

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. Chromium-based water treatment chemicals, as defined in 40 CFR 63.401, shall not be used in the affected unit.

c. i. Only non-VOM additives shall be used in the cooling tower.

ii. Plant process wastewater, other than boiler blowdown and demineralization blowdown, shall not be introduced into cooling water, other than through unintentional leaks, which shall promptly be repaired.

d. 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.

e. 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 Limits

The emissions of PM, as PM_{10}, from the affected unit shall not exceed 1.5 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 PM_{10} 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 quarterly 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).

c. The Permittee shall keep records for this sampling and analysis activity including documentation for sampling and analysis as well as the resulting data that is collected.

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 PM_{10} 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 windblown 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 such as, wetting (water spray) 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 Provisions

The emissions from affected units are not considered in determining PSD applicability because they are 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

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 1.8 tons/year. Compliance with this limit shall be determined by vehicle traffic and other operating data for the plant, information for the implementation of the operating program, 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 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.

b. 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.

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).

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

CONDITION 2.6: UNIT-SPECIFIC CONDITIONS FOR GASOLINE STORAGE

2.6.1 Description of Emission Unit

An above ground gasoline storage tank will be installed at the plant for onsite mobile equipment.

2.6.2 List of Emission Units

Emission Unit	Description	Emission Control Equipment
Gasoline Tank	Gasoline Storage Tank	Submerged Fill

2.6.3 Applicability State Emission Standards

a. The “affected tank” for the purpose of these unit-specific conditions is the gasoline tank described in Conditions 2.6.1 and 2.6.2.

b. The affected tank is subject to 35 IAC 215.122(b), which provides that no person shall cause or allow the loading of any organic material into any stationary tank having a storage capacity of greater than 946 liters (250 gallons), other than a pressure tank or a tank equipped with a vapor recovery system, unless such tank is equipped with a permanent submerged loading pipe or an equivalent device approved by the Illinois EPA according to the provisions of 35 IAC 201. [35 IAC 215.122(b)]

Note: The exception to this standard at 35 IAC 215.122(c) is not applicable because the vapor pressure of gasoline is greater than 17.24 kPa (2.5 psia) at 294.3°K (70°F).

2.6.4 Non-Applicability Provisions

a. This permit is issued based on the affected tank not being subject to the NSPS for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels), 40 CFR Part 60, Subpart Kb, because the capacity of the affected tank is less than 40 cubic meters (10,566 gallons).

b. This permit is issued based on the affected tank not being subject the NESHAP from Petroleum Refineries, 40 CFR 63, Subpart CC, because the capacity of the tank is less than 40 cubic meters, as addressed by 40 CFR 63.641.

c. This permit is issued based on the affected tank not being subject to the requirements of 35 IAC 215.583 for gasoline dispensing operations pursuant to 35 IAC 215.583(b)(4), because the plant would be located in Carroll County.

d. The affected tank is not subject to the limitations of 35 IAC 215.121, Control Requirements for Storage Containers of

volatile organic liquids, because the affected tank is used to store a petroleum liquid and its capacity is less than 151 cubic meters (40,000 gallons).

e. The affected tank is not subject to 35 IAC 215.121 or 215.122(a) because the capacity of the affected tank is less than 40,000 gallons and the throughput of the affected tank is less than 40,000 gallons/day.

2.6.5 Control Requirements and Work Practices

At all times the Permittee shall, to the extent practicable, maintain and operate the affected tank in a manner consistent with good air pollution control practices for minimizing emissions.

2.6.6 Production and Emission Limitations

a. i. The capacity of the affected tank shall not exceed 5,000 gallons.

ii. The throughput of the affected tank shall not exceed 26,000 gallons of gasoline per calendar year.

b. The emissions of VOM from the affected tank shall not exceed 0.3 tons/month and 0.7 tons/year.

2.6.7 Recordkeeping Requirements

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

a. A file for the affected storage tank, which shall be kept current that contains design information for the capacity of the tank and the presence of a permanent submerged loading pipe.

b. Records for either the throughput of the tank or the amount of gasoline delivered to the tank, gallons/month and gallons/year.

c. Maintenance and repair records for the tank, including records related to the repair or replacement of the loading pipe.

d. Records for the VOM emissions of the tank (tons/month and tons/year), with supporting calculations.

e. All records required by this permit shall be retained on site for a period of at least five years and shall be readily available for inspection and copying by the Illinois EPA upon request. Any record retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to

respond to an Illinois EPA request for records during the course of a source inspection.

2.6.8 Reporting Requirements

The Permittee shall notify the Illinois EPA of deviations of the affected tank with permit requirements within 30 days or as otherwise provided by the CAAPP permit for the source. Reports shall describe the deviations, the probable cause of such deviations, the corrective actions taken, and any preventive measures taken.

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, 201A 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 PM_{10} 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 Submission of Notifications and Reports

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[a]	PM_{10}	SO_2
Boiler	198.1	139.9	46.6	35.0	35.0	198.1
Fuel/Material Handling, Fuel Sizing and Storage	----	----	----	15.4	15.4	----
Ash Handling	----	----	----	3.7	3.7	----
Cooling Tower	----	----	----	1.5	1.5	----
Gasoline Tank	----	----	0.7	----	----	----
Wastewater Treatment	----	----	1.1	----	----	----
Other Operations (Diesel Engines)	0.8	0.1	1.1	0.1	0.1	0.2
Subtotal	198.9	140.0	49.5	55.7	55.7	198.3
Roadways[b]				1.8	1.8	
Total	198.9	140.0	49.5	57.5	57.5	198.3

[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.