



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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CONSTRUCTION PERMIT - PSD APPROVAL - REVISED NSPS SOURCE

PERMITTEE

Lincoln Land Energy Center, LLC
Attn: Environmental Manager
500 Alexander Park Drive, Suite 300
Princeton, New Jersey 08540

Application No.: 18040008

I.D. No.: 167085ABB

Date Initially Issued: July 29, 2022

Date Application for First Extension Received: December 6, 2023

Date First Extension Issued: January 22, 2024

Date Application for Second Extension Received: July 16, 2025

Date Second Extension Issued: July 21, 2025

Subject: Combustion Turbine Electric Power Plant

Location: 15000 Black Diamond Road, Pawnee, Sangamon County

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission units and air pollution control equipment consisting of an electrical generating facility with two combined-cycle combustion turbines, as described in the above referenced application. This permit is granted based upon and subject to the findings and conditions that follow.

In conjunction with this permit, approval is given with respect to the regulations for Prevention of Significant Deterioration of Air Quality (PSD) for the plant, as described in the application, in that the Illinois EPA finds that the application fulfills all applicable requirements of 35 IAC Part 204. This approval is issued pursuant to the federal Clean Air Act and the PSD rules at 35 IAC Part 204. This approval may be appealed in accordance with provisions of 415 ILCS 5/40.3 and 35 IAC Part 105. This approval is based upon the findings that follow. This approval is subject to the following conditions. This approval is also subject to the general requirement that the plant be developed and operated consistent with the specifications and data included in the application and any significant departure from the terms expressed in the application, if not otherwise authorized by this permit, must receive prior written authorization from the Illinois EPA.

Please note that this permit has been revised to provide an additional 18 months, until January 21, 2027, to commence construction.

If you have any questions on this permit, please call Jason Schnepf at 217/524-3724.

William D. Marr JMS 7/21/2025

William D. Marr
Manager, Permit Section
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WDM:JMS:tan

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FINDINGS

1. Lincoln Land Energy Center, LLC (Lincoln Land) has applied for a permit to construct a combined-cycle electric generating plant (the "plant"). The plant would have a nominal capacity of about 1,100 MW. The plant would have two natural gas-fired generating units, each consisting of a combustion turbine, a heat recovery steam generator, a steam turbine and an electrical generator. Each electrical generator would be powered by both the combustion turbine and the steam turbine, with the two turbines situated at opposite ends of the electrical generator. The generating units would be equipped with "duct burners" in the ductwork between the combustion turbines and the heat recovery steam generators so as to be able to increase electricity output during periods of high demand. Other emission units at the plant would include a natural gas-fired auxiliary boiler, emergency diesel-fired engines, natural gas piping and piping components, circuit breakers and roadways. The plant would have dry cooling towers rather than wet cooling towers, reducing the water consumption of the plant, as well as its particulate emissions.
2. The plant would be located in Pawnee Township in Sangamon County, in an area that is designated as attainment or unclassifiable for all criteria pollutants.
3.
 - a. The plant would be a major source under the rules for Prevention of Significant Deterioration (PSD), 35 IAC Part 204. In particular, the plant's potential emissions of nitrogen oxides (NO_x), carbon monoxide (CO) and particulates (as PM, PM₁₀ and PM_{2.5}), would exceed 100 tons per year, the applicable threshold for a major source under the PSD rules.
 - b. The plant would also be a major project under PSD for emissions of volatile organic material (VOM), sulfur dioxide (SO₂), sulfuric acid mist (SAM) and greenhouse gases (GHGs), because the potential emissions of each of these pollutants would be above the applicable significant emission rate under the PSD rules.
 - c. The plant would not be a major project under the PSD rules for other pollutants. This is because the potential emissions of these other pollutants would be below the applicable significant emission rates under the PSD rules.
4. The plant would not be a major source for emissions of hazardous air pollutants (HAPs). As limited by this permit, the potential HAP emissions of the plant would be less than 10 tons per year of an individual HAP and less than 25 tons per year for total HAPs. Therefore, the plant would not be subject to National Emission Standards for Hazardous Air Pollutants (NESHAP), adopted by USEPA under 40 CFR 63 that only apply to major sources of HAPs. A case-by-case determination of Maximum Achievable Control Technology (MACT) would also not be required for any emission units at the plant pursuant to Section 112(g) of the federal Clean Air Act.
5. After reviewing the materials submitted by Lincoln Land, the Illinois EPA determined that the plant will be designed to: (i) comply with applicable state emission standards, (ii) comply with applicable federal emission standards, and (iii) utilize Best Available Control Technology (BACT) on emission units as required by PSD.

Note: For the pollutants that are subject to PSD, the determinations of BACT made by the Illinois EPA for the various emission units at the proposed plant are generally contained in the permit conditions for specific emission units that are headed by "Control Technology Determination - BACT."

6.
 - a. The air quality analyses submitted by Lincoln Land, and reviewed by the Illinois EPA, shows that the proposed project will not cause or contribute to violations of the National Ambient Air Quality Standards for NO₂, PM₁₀, PM_{2.5}, CO, SO₂ or ozone. The air quality analysis also shows compliance with the applicable allowable increments for NO₂, CO, PM₁₀ and PM_{2.5} under the PSD rules.
 - b. Other impact analyses were also submitted by Lincoln Land, as required by the PSD rules, to address other potential impacts from the emissions of the plant.
7. The Illinois EPA has determined that the application for the proposed plant complies with the requirements of the PSD rules, 35 IAC Part 204 and the requirements of applicable state air pollution regulations.
8. In conjunction with the issuance of this permit, the Illinois EPA is also issuing a separate Acid Rain permit for the turbine-generators, to address requirements under the Acid Rain Control Program pursuant to Title IV of the Clean Air Act. Under the Acid Rain Program, Lincoln Land must hold allowances each year for the actual SO₂ emissions of the generating units. Lincoln Land must also continuously monitor the NO_x emissions of the generating units.
9. A copy of the application, the Project Summary prepared by the Illinois EPA for this application, and a draft of this construction permit were made available in a nearby public repository, and the public was given notice and an opportunity to examine this material, to submit comments on the draft permit, and to participate in a public hearing on this matter.

PART 1: SOURCE-WIDE PERMIT CONDITIONS

Condition 1.1: Effect of Permit

- a. This permit does not relieve the Permittee of the responsibility to comply with all local, state, and federal regulations that 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 sprays to unpaved traffic areas, as necessary, to reduce fugitive dust and prevent an air pollution nuisance from fugitive dust, as prohibited by 35 IAC 201.141.

Condition 1.2: Validity of Permit and Commencement of Construction

- a. This permit shall become invalid if construction is not commenced within 18 months after this permit becomes effective, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable period of time, pursuant to 35 IAC 204.830. The Illinois EPA may extend the 18-month period upon a satisfactory showing that an extension is justified. This condition supersedes Standard Condition 1.
- b. For purposes of the above provisions, the definitions of "construction" and "commence" at 35 IAC 204.340 and 204.320 shall apply, which requires that a source must enter into a binding agreement for on-site construction or begin actual on-site construction. (See also the definition of "begin actual construction," 35 IAC 204.270.)

Condition 1.3: Natural Gas Used by the Plant

- a. The natural gas used as fuel in the combustion turbines and auxiliary boiler shall be "pipeline natural gas," with a sulfur content of no more than 0.5 grains of total sulfur per 100 standard cubic feet.
- b. The Permittee shall keep copies of fuel receipts from the suppliers of natural gas to the plant or other documentation for the natural gas fired in the emission units at the plant that confirms that the gas meets the criteria in the definition of pipeline natural gas in 40 CFR 72.2.

Condition 1.4: Storage Tanks

- a. The emissions of volatile organic material (VOM) from the storage tanks for organic liquids at the plant, including the tanks for storing ultra-low sulfur diesel fuel, shall not exceed 0.01 tons/year.

Note: This condition constitutes the determination of BACT for VOM emissions of these tanks, as required under the PSD rules.

- b. The Permittee shall maintain the following records for each storage tank:
 - i. Identification of material stored.

- ii. Maximum true vapor pressure of material stored, with supporting documentation.
- iii. VOM emissions (tons/year), with supporting documentation and calculations.

Condition 1.5: Emissions of Hazardous Air Pollutants (HAPs)

- a. This permit is issued based on this plant not being a major source of hazardous air pollutants (HAPs), i.e., the emissions of individual HAPs will each be less than 10 tons per year and the total emissions of HAPs will be less than 25 tons per year, so that the plant is not subject to the provisions of 40 CFR Part 63 that are applicable to major sources of HAPs.
- b. The HAP emissions from the various emission units at the plant and the plant as a whole shall not exceed the limits in Attachment 2. Compliance with these limits for various emission units shall be determined based on activity and operating data for those units and emission factors that do not understate actual emissions of those units, as developed from representative source-specific testing or analysis, USEPA methodology, or other authoritative source.
- c. The Permittee shall keep records of the HAP emissions of the various units at the plant and the plant as a whole to verify that the plant is not a major source of emissions of HAPs. For this purpose, in addition to other records required by other provisions of this permit, the Permittee shall keep a file containing the emission factors that it uses to calculate emissions of HAPs from the various emission units at the plant, with supporting documentation. The Permittee shall keep records of the actual emissions of HAPs from emissions units, which shall be compiled on at least a semi-annual basis.

Condition 1.6: Good Air Pollution Control Practice

The Permittee shall operate and maintain all emission units at this 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.

Condition 1.7: Compliance with Emission Standards and Emission Limits

- a. The emission limits set by this permit, including BACT limits and other permit limits for emissions, apply at all times unless otherwise specified in a particular provision.

- b.
 - i. Unless otherwise provided by applicable rules, emission standards for particulate matter (PM) under applicable regulations that are referenced in the conditions of this permit address only filterable particulate, as would be measured by USEPA Method 5 or 5I or other appropriate USEPA Test Methods.
 - ii. Emission limits for particulate matter₁₀ (PM₁₀) and particulate matter_{2.5} (PM_{2.5}) set by this permit address both filterable and condensable particulate.
- c. Emission limits for greenhouse gases (GHGs) set by this permit address GHGs as carbon dioxide equivalents (CO₂e).
- d. Emission limits set by this permit in pounds/million Btu (lbs/mmBtu) are in terms of the higher heating value of the fuel fired in the emission unit.
- e. When emission testing is conducted, compliance with hourly limits set by this permit shall be determined from the average of the test results, commonly three runs, each nominally one hour in duration.
- f. For annual limits set by this permit, unless otherwise specified in a particular provision of this permit, compliance shall be determined as follows:
 - i. Compliance with annual emission limits for emission units and pollutants for which continuous emissions monitoring is required by the permit shall be determined from emission data collected by such monitoring systems and representative emission data for periods when such systems do not provide acceptable data.
 - ii. Compliance with annual emission limits for emission units and pollutants for which continuous emission monitoring is not required shall be determined from emission data calculated as the product of activity or operating data and emission factors that do not understate emissions, as developed from representative source-specific testing or analysis, USEPA methodology, or other authoritative source.
 - iii. Compliance with annual limits established by this permit shall be calculated monthly from a running total of 12 months of data, i.e., from the sum of the data for the current month and data for the preceding 11 months (12 month total) and shall consider all emissions, including emissions during startup, shutdown, and malfunction and breakdown, provided however, that for the first year (12 months) of operation compliance shall be calculated for a cumulative total of monthly data, i.e., from the sum of the data for the current month and data for all preceding months. In addition, until emissions data is available from certified continuous emissions monitoring systems or from performance or emission testing, in lieu of such data, appropriate emission factors provided by the manufacturer or other authoritative source may be used to determine emissions.

Condition 1.8: Records for Monitoring Systems and Instrumentation

- a. The Permittee shall keep records of the data measured by required monitoring systems and instrumentation. Unless otherwise provided in a

particular condition of this permit, the following requirements shall apply to such recordkeeping:

- i. For required monitoring systems, data shall be automatically recorded by a central data system, dedicated data logging system or other electronic data recording device. If an electronic data logging system is used, the recorded data shall be the hourly average value of the particular parameter for each hour. During periods when the automatic recording device is out of service, data shall be recorded at least once per shift for periods when the associated emission unit(s) are in service.
- ii. For required instrumentation, the measured data shall be recorded manually at least once per day, unless otherwise specified, with data and time both recorded, for periods when the associated emission unit(s) are in service, provided however that if data from an instrument is recorded automatically, the above provisions for recording of data from monitoring systems shall apply and manual recording of data is not required.
- b. The Permittee shall keep records for the operation, calibration maintenance and repair of required monitoring systems and instrumentation. These operating records shall, at a minimum, identify the date and duration of any time when a required monitoring instrument or device was not in operation, with explanation; the performance of manual quality control and quality assurance procedures for the system; and maintenance and repair activities performed for the system.
- c. The Permittee shall maintain a file containing a copy of the specifications for each required monitoring device or instrument and the recommended operating and maintenance procedures for the device as provided by its manufacturer.

Condition 1.9: Records for Opacity Measurements

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

Condition 1.10: Retention and Availability of Records

- a. The Permittee shall retain all records and logs required by this permit for at least five years from the date of entry (unless a longer retention period is specified by a particular provision), keep the records at a location at the plant that is readily accessible to the Illinois EPA and USEPA, and make records available for inspection and copying by the Illinois EPA or USEPA upon request.
- b. The Permittee shall retrieve and print on paper during normal plant office hours any records retained in an electronic format (e.g., computer) in response to an Illinois EPA or USEPA request for records

during the course of a plant inspection or provide an electronic copy of such information in a format that is acceptable to the agency making the request.

Condition 1.11: Addresses for the Illinois EPA

- a. All 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
Bureau of Air
Compliance and Enforcement Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

Telephone: 217/782-5811 Fax: 217/524-4710

- b. One copy of notifications and reports required by this permit that concern emission testing or emission monitoring shall also be sent electronically to the Illinois EPA, Bureau of Air, Compliance Section, Source Monitoring Unit, using the State of Illinois's File Transfer Website, unless otherwise instructed by the Illinois EPA:

<http://filet.illinois.gov>

Recipient Email Address: EPA.BOA.SMU@illinois.gov

File Transfer Email Subject: Lincoln Land Energy Center, Pawnee, ID
167085ABB

Message to Recipient: "A description of the submittal, with date"

Condition 1.12: Authorization to Operate Emission Units

- a. Other than the two combustion turbines, the emissions units at this plant may be operated under this permit until the operation of the plant is addressed by a Clean Air Act Permit Program (CAAPP) permit, provided that the Permittee submits a complete and timely application for a CAAPP permit for the plant as provided for by Section 39.5(5) of the Environmental Protection Act.
- b. Each combustion turbine may be operated under this permit:
- i. For an initial period that ends 180 days after initial startup to allow for equipment shakedown and the performance testing required by the NSPS (see Condition 2.1.7-1(a)). This initial period of operation may be extended by the Illinois EPA for up to an additional 365 days upon request of the Permittee if additional time is needed to complete shakedown or complete performance testing of the combustion turbine.
 - ii. Upon successful completion of the performance testing required by the NSPS, the Permittee may continue thereafter to operate a combustion turbine pursuant to this permit until the operation of the turbine is addressed by a CAAPP permit for the plant emission units at the plant, provided that the Permittee has submitted a complete and timely application for a CAAPP permit for the plant that addresses the combustion turbine or an appropriate revision to its pending application for a CAAPP permit to address the

combustion turbine, as provided for by Section 39.5(5) of the Environmental Protection Act.

c. Conditions 1.12(a) and (b) supersede Standard Condition 6.

Condition 1.13: Standard Conditions

Standard conditions for issuance of construction permits, attached hereto and incorporated herein by reference, shall apply to this project, unless superseded by other conditions in the permit. (Refer to Attachment 3)

PART 2: UNIT-SPECIFIC CONDITIONS FOR PARTICULAR EMISSION UNITS

SUBPART 2.1: UNIT-SPECIFIC CONDITIONS FOR THE COMBUSTION TURBINES

2.1.1 Introduction

The two electrical generating units at the plant would each have a natural gas-fired combined-cycle combustion turbine (affected turbine). The heat recovery steam generator (HRSG) on each turbine would have small supplemental burners or "duct burners." The inlets of the turbines would have evaporative cooling systems so as to be able to cool the inlet air during warm weather to increase power output. NOx emissions would be controlled by combustion technology (i.e., dry low-NOx (DLN) combustion with ultra low-NOx combustors, low-NOx duct burners and add-on selective catalytic reduction (SCR) systems. CO and VOM emissions would be controlled by add-on catalytic oxidation systems.

2.1.2 Control Technology Determination - BACT

- a. i. Each affected turbine shall be operated and maintained with the following features to control or reduce emissions:
 - A. NOx: Dry low-NOx (DLN) combustion with ultra low-NOx combustors; low-NOx duct burners and selective catalytic reduction (SCR).
 - B. CO and VOM: Oxidation catalyst and good combustion practices.
 - C. PM, PM₁₀ and PM_{2.5}: Good combustion practices.
 - D. SO₂ and Sulfuric Acid Mist: Good combustion practices; use of only natural gas with a sulfur content of no greater than 0.5 gr/100 scf.
 - E. GHGs: Inherently lower-polluting design, good combustion practices and operational energy efficiency.
- ii. For the affected turbines, the Permittee shall implement good air pollution control practices to minimize emissions during startup, shutdown and shakedown, including the following:
 - A. Operation of the affected turbines with good combustion practices.
 - B. Operation of the affected turbines and associated air pollution control equipment in accordance with written operating procedures that include startup, shutdown and shakedown.
 - C. Inspection, maintenance, and repair of the affected turbines and associated air pollution control equipment in accordance with written maintenance procedures.

- b. i. The NO_x emissions of each affected turbine shall not exceed 2.0 parts per million by volume (ppmv) in the exhaust, adjusted to 15 percent oxygen and excluding startup and shutdown. Compliance with this limit shall be determined by continuous emission monitoring in accordance with the relevant compliance procedures set forth in the New Source Performance Standards (NSPS), 40 CFR 60 Subpart KKKK, as addressed in Condition 2.1.8-1(a), provided however that compliance shall initially be determined as an average of 3-operating hours, rolled hourly, and, beginning 36 months after the completion of the shakedown of the turbine, compliance shall be determined on a 1-operating hour basis.
- ii. For an affected turbine during an hour that includes a startup, or a shutdown, or during the shakedown period, the NO_x emissions of the affected turbine shall not exceed the alternative limits for NO_x in Condition 2.1.6-1(a)(ii).
- c. i. The CO emissions of each affected turbine shall not exceed the following limits, excluding startup, shutdown and shakedown. Compliance with this limit shall be determined by continuous emission monitoring in accordance with Condition 2.1.8-1(b).
 - A. When the gas turbine load is 60% or greater: 1.5 ppmv in the exhaust without operation of the duct burners, adjusted to 15 percent O₂, rolling 3-operating hour average.
 - B. When the gas turbine load is 60% or greater: 1.8 ppmv in the exhaust with operation of the duct burners, adjusted to 15 percent O₂, rolling 3-operating hour average.
 - C. When the gas turbine load is less than 60%: 2.0 ppmv in the exhaust, adjusted to 15 percent O₂, rolling 3-operating hour average.
- ii. For an affected turbine during an hour that includes a startup or a shutdown, or during the shakedown period, the CO emissions of the affected turbine shall not exceed the alternative limits for CO in Condition 2.1.6-1(a)(ii).
- d. i. The VOM emissions of each affected turbine shall not exceed the following limits, in ppmv in the exhaust, adjusted to 15 percent O₂ (as methane), 3-operating hour average, rolled hourly, and excluding startup, shutdown and shakedown.
 - A. 1.0 ppmv without operation of the duct burners.
 - B. 1.1 ppmv with operation of the duct burners.
- ii. For an affected turbine during an hour that includes a startup, or a shutdown, or during the shakedown period, the VOM emissions of the affected turbine shall not exceed the alternative limits for VOM in Condition 2.1.6-1(a)(ii).

- e. At all times, including periods of startup, shutdown and shakedown, the Permittee shall, to the extent practicable, maintain and operate the affected turbines, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on available information, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the affected turbines.
- f.
 - i. The PM emissions of each affected turbine, without operation of the duct burners, shall not exceed 0.0031 lb/mmBtu, rolling 3-operating hour average. Compliance with this limit shall be determined by performance testing in accordance with Conditions 2.1.7-1 and 2.1.7-2, and from equipment operation. If test runs are longer than one-hour, the compliance time period during testing shall be the total duration of the test runs.
 - ii. The PM emissions of each affected turbine, with operation of the duct burners, shall not exceed 0.0032 lb/mmBtu, rolling 3-operating hour average. Compliance with this limit shall be determined by performance testing in accordance with Conditions 2.1.7-1 and 2.1.7-2, and from equipment operation. If test runs are longer than one-hour, the compliance time period during testing shall be the total duration of the test runs.
- g. The PM₁₀/PM_{2.5} emissions of each affected turbine shall not exceed 0.0041 lb/mmBtu, rolling 3-operating hour average. Compliance with this limit shall be determined by performance testing in accordance with Conditions 2.1.7-1 and 2.1.7-2, and from equipment operation. If test runs are longer than one hour, the compliance time period during testing shall be the total duration of the test runs.
- h. The SO₂ emissions of each affected turbine shall not exceed 5.5 lb/hour, rolling 3-operating hour average. Compliance with this limit shall be determined by performance testing in accordance with Conditions 2.1.7-1 and 2.1.7-2, and from equipment operation. If test runs are longer than one-hour, the compliance time period during testing shall be the total duration of the test runs.
- i. The sulfuric acid mist emissions of each affected turbine shall not exceed 2.0 lb/hour, rolling 3-operating hour average. Compliance with this limit shall be determined by performance testing in accordance with Conditions 2.1.7-1 and 2.1.7-2, and from equipment operation. If test runs are longer than one-hour, the compliance time period during testing shall be the total duration of the test runs.
- j. The GHG emissions of each affected turbine, as carbon dioxide equivalents (CO₂e), shall not exceed 850 pounds/MW-hr gross electrical output, as an annual average of 12 consecutive operating months, rolled monthly. Compliance with this limit shall be determined using the relevant procedures for

quantification of GHG emissions in 40 CFR Part 98 Subpart D except that emissions of nitrous oxide (N_2O) and methane (CH_4) shall be determined using emission factors developed from testing of these turbines, if such testing indicates that emissions are higher than the default factors in 40 CFR Part 98 Subpart D.

- k. i. The emission limits and requirements in Conditions 2.1.2(a)(i)(A) and (B), (b)(i), (c)(i) and (d)(i) shall not apply to an affected turbine during the shakedown period. For this purpose, the shakedown period is defined as the period that begins with the initial startup of an affected turbine and ends no later than either the applicable date that the performance testing of the affected turbine required by Condition 2-1.7-1(a) is completed or when the affected turbine engages in commercial dispatch or 180 days after the initial startup of the affected turbine, whichever occurs first. Commercial dispatch occurs when the Midwest Independent System Operator is first notified that the affected turbine is available for commercial electric power generation.
- ii. As soon as practicable following initial startup of each affected turbine and no later than commencement of commercial operation, of the turbine, the Permittee shall install the catalysts in the SCR and oxidation catalyst control systems for the turbine and thereafter operate and maintain these systems for control of emissions of NO_x , CO and VOM from the affected turbine and compliance with the respective emission limits in Condition 2.1.6-1(a)(ii), respectively. For purposes of this permit, "commence commercial operation" is defined as beginning to generate electricity for sale from an affected turbine, including the sale of test generation.

2.1.3-1 Applicable Federal Emission Standards

- a. i. The affected turbines, including the duct burners, are subject to the NSPS for Stationary Combustion Turbines, 40 CFR 60 Subpart KKKK, and the General Provisions of the NSPS, 40 CFR Subpart A. The Illinois EPA administers the NSPS for subject sources in Illinois pursuant to a delegation agreement with the USEPA.
- ii. Pursuant to 40 CFR 60.8(c), 60.4320 and 60.4325 and Table 1 of 40 CFR Subpart KKKK, NO_x emissions from each affected turbine, corrected to 15 percent O_2 in the exhaust, shall not exceed 15 ppm or 54 ng/J useful output (0.43 lb/MW-hr) except during periods of startup, shutdown and malfunction, as defined by 40 CFR 60.2, and as provided for by 40 CFR 60.8(c).
- iii. Pursuant to 40 CFR 60.4330(a), SO_2 emissions from each affected turbine shall comply with one of the following limits:
 - A. Emissions shall not exceed 0.90 lb/MW-hr gross output; or

- B. The total potential emissions shall not exceed 0.060 lb SO₂/mmBtu heat input for each fuel fired in the turbine.
- iv. Pursuant to the NSPS, 40 CFR 60.11(d) and 60.4333, at all times, including periods of startup, shutdown and malfunction, the Permittee must operate and maintain the affected turbines, including associated air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions.
- b.
 - i. The affected turbines are subject to the NSPS for Greenhouse Gas Emissions for Electric Generating Units, 40 CFR 60 Subpart TTTT, and for purposes of 40 CFR 60 Subpart TTTT, the related requirements of the General Provisions of the NSPS specified in Table 3 of 40 CFR 60 Subpart TTTT.
 - ii. Pursuant to 40 CFR 60.5520(a) and 60.5525(a) and Table 2 of 40 CFR 60 Subpart TTTT, the CO₂ emissions of each affected turbine on a 12-month rolling average basis shall not exceed one of the following limits:
 - A. 1,000 lb/MWh of gross energy output; or
 - B. 1,030 lb/MWh of net energy output.
 - iii. Pursuant to 40 CFR 60.5525(b), the Permittee must at all times operate and maintain each affected EGU, including associated equipment and monitors, in a manner consistent with safety and good air pollution control practice.

2.1.3-2 Applicable State Emission Standards

- a.
 - i. The affected turbines are subject to 35 IAC 212.123(a), which provides that 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 subject emission unit, except as allowed by 35 IAC 212.123(b) or 212.124.
 - ii. Notwithstanding the above, during periods when fuel is being fired in duct burners in the affected turbines, the affected turbines are subject to 35 IAC 212.122(a), which limits opacity to 20 percent except as allowed 35 IAC 212.122(b) or 212.124(a).
- b. The affected turbines are subject to 35 IAC 217.706, which provides that no person shall cause or allow the emissions of NO_x into the atmosphere from a subject combustion turbine to exceed 0.25 lb/mmBtu of actual heat input during each ozone control period (i.e., the period from May 1 through September 30 in each calendar year, inclusive), based on a control period average for that unit.
- c. Pursuant to 35 IAC 217.388(a)(1)(E) and (F), the NO_x emissions of each affected turbine, corrected to 15 percent oxygen on a dry basis, shall not exceed 42 ppmv for gaseous fuel. Compliance

with these state standards will be addressed by compliance with the applicable limits for NOx in the NSPS, 40 CFR 60 Subpart KKKK. (See Condition 2.1.3-1(a)(ii).)

2.1.3-3 Applicable Programs for Allowance Trading

- a. The affected turbines are affected units under the Acid Rain Control Program pursuant to Title IV of the Clean Air Act and are subject to certain requirements pursuant to 40 CFR Parts 72, 73 and 75.
- b. The affected turbines qualify as Electrical Generating Units (EGU) for purposes of the Cross-State Air Pollution Rule (CSAPR), i.e., 40 CFR Part 97. As such, the Permittee must hold allowances for the NOx and SO₂ emissions of the affected turbines during each calendar year and seasonal control period (NOx only).

2.1.4 Non-Applicability Provisions

- a. This permit is issued based on the affected turbines not being subject to the NESHAP for Stationary Combustion Turbines, 40 CFR 63 Subpart YYYY (Turbine NESHAP). This is because this NESHAP only applies to emission units at major sources of HAPs and the plant will not be a major source of HAPs.
- b. This permit is issued based on the HRSGs not being subject to the NESHAP for Industrial, Commercial and Institutional Boiler Area Sources. This is because these units are defined as "waste heat boilers" and not "boilers" by 40 CFR 63.11237.
- c. This permit is issued based on the affected turbines not being subject to 35 IAC 212.321 for particulate matter emissions because this rule cannot reasonably be applied to combustion turbines.

2.1.5 Operational Limits

- a.
 - i. The combined fuel usage of the affected turbines shall not exceed 8.0 million mmBtu/month and 63.3 million mmBtu/year.
 - ii. Each affected turbine shall not operate for more than 8,600 hours/year.
- b. For the affected turbines, the duration of startups and shutdowns of the turbines shall not exceed 60 minutes per startup or shutdown event and a total of 310 hours per year for all startup and shutdown events per turbine. This limit becomes effective after shakedown period for the turbines is complete.
 - i. A startup is defined as the period of time that begins when the operational monitoring system on a turbine detects a flame or other indicator that combustion of fuel has begun in the turbine and ends 15 minutes after the temperature of the SCR inlet catalyst bed reaches 515 °F, one-minute average, or such earlier time that the Permittee determines that effective NOx control is being achieved with ammonia injection. Startup events for turbines can be categorized into "cold start" and "non-cold start" events, based on the

inlet temperature of the SCR system before startup of the turbines, as follows:

- A. Cold start: Startup event when SCR inlet temperature is less than or equal to 350 °F.
- B. Non-Cold start: Startup event when SCR inlet temperature is greater than 350 °F.

- ii. A shutdown period is defined as the period of time that begins when an affected turbine load drops below 40%.

- c. Shakedown of the turbines shall occur one turbine at a time.

2.1.6-1 Emission Limits

- a. i. Except as provided by Condition 2.1.6-1(a)(ii), the short-term emissions of each affected turbine shall not exceed the following limits. These hourly limits apply to the individual affected turbines on a rolling 3-operating hour average basis. The limits for NO_x, CO, and VOM apply to operation of a turbine other than startup, shutdown or shakedown of the turbine.

Pollutant	Limits (pounds/hour, per turbine)	
	w/o Duct Burner	w/Duct Burner
NO _x	28.20	28.40
CO	17.20	17.30
PM	11.30	11.70
PM ₁₀ /PM _{2.5}	14.80	15.20
VOM	5.00	5.70
SO ₂	5.50	
Sulfuric Acid Mist	2.00	
Individual HAP	1.00	
Total HAPs	2.14	

- ii. During startup, shutdown and shakedown of an affected turbine, the short-term emissions of NO_x, CO and VOM of the affected turbine shall not exceed the following alternative limits. These limits apply for each clock hour that includes a startup or shutdown of a turbine and for each clock hour during shakedown of a turbine.

Mode/Event	Alternative Limits (Pounds/Hour)		
	NO _x	CO	VOM
Cold Start/Shakedown	130	923	56
Non-cold Start	71	325	48
Shutdown	55	216	44

- b. i. Compliance with the limits for the emissions of NO_x and CO in Conditions 2.1.6-1(a), except during shakedown, shall be determined by monitoring in accordance with Condition 2.1.8-1.

- ii. Compliance with the limits for the emissions of NO_x and CO in Conditions 2.1.6-1(a)(ii) during shakedown shall be determined, in order of preference, by monitoring in accordance with Condition 2.1.8-1 or by using emission factors developed from manufacturer's data.
- iii. Compliance with the emission limits for other pollutants in Condition 2.1.6-1(a) shall be determined by using appropriate emission factors for the actual mode of operation of the turbines, which, in order of preference, shall be derived from emission testing conducted in accordance with Condition 2.1.7-1(b) or reflect manufacturer's data.

2.1.6-2 Annual Emission Limits

- a. The annual emissions of the affected turbines, including startup/shutdown and excluding shakedown, in total, shall not exceed the following limits:

Pollutant	Limit (tons/year)
NO _x	264.12
CO	319.97
VOM	62.76
PM	100.62
PM ₁₀ /PM _{2.5}	130.72
SO ₂	47.30
Sulfuric Acid Mist	17.20
Individual HAP	8.60
Total HAPs	18.40
GHGs, as CO ₂ e	3,580,575

- b. Compliance with the NO_x and CO emission limits in Condition 2.1.6-2(a) shall be determined by testing and monitoring in accordance with the Conditions 2.1.7-1, 2.1.7-2 and 2.1.8-1. Compliance with these emission limits for other pollutants in these conditions shall be determined by using appropriate emission factors for the actual mode of operation of the turbines, which, in order of precedence, shall be derived from emission testing conducted in accordance with Condition 2.1.7-1(b), reflect manufacturer's data or be standard USEPA emission factors.

2.1.7-1 Requirements for Performance Testing

- a. Pursuant to the NSPS, 40 CFR 60.8, the Permittee shall have initial performance tests conducted for the affected turbines for emissions of NO_x and SO₂ in accordance with 40 CFR 60.8 using applicable methods and procedures specified by 40 CFR 60.4400 and 60.4415.

Note: Testing of NO_x emissions using the procedures and methods in 40 CFR 60.4400 is also required by 35 IAC 217.394(c)(2).

- b. The Permittee shall have tests conducted for one of the affected turbines as follows at its expense by an approved testing

service. These tests shall be conducted while the subject turbine is operating in its maximum operating range and other representative operating conditions. The turbine on which testing is conducted shall be specified by the Illinois EPA or otherwise selected randomly.

i. This testing shall be conducted by the following dates:

- A. Initial testing shall be conducted within 180 days of the initial startup of the second affected turbine unless the Illinois EPA extends the shakedown period as provided for by Condition 1.11(b)(i), in which case initial testing shall be completed by the end of the extended shakedown period. For this purpose, testing shall be conducted for emissions of VOM, PM, PM₁₀/PM_{2.5}, SO₂, sulfuric acid mist, HAPs (formaldehyde), N₂O and CH₄.
- B. Within 24 months of the initial testing, follow up testing shall be conducted on one of the turbines. This testing shall be conducted for emissions of VOM and sulfuric acid mist. Testing shall also be conducted for PM, PM₁₀/PM_{2.5}, SO₂ and HAPs (formaldehyde) the pollutant unless the initial testing for this pollutant shows emissions that are 70 percent or less than the applicable permit limits in pounds/mmBtu and pounds/hour.
- C. Thereafter, until a CAAPP permit is issued that addresses periodic testing of the affected turbines, periodic testing of the turbine shall be conducted on one of the turbines as follows. For this purpose, testing shall be conducted for VOM, PM, PM₁₀/PM_{2.5}, SO₂, sulfuric acid mist and HAPs (formaldehyde) unless the previous testing shows emissions of the pollutant are 70 percent or less than the applicable permit limit. This testing shall be conducted within five years of the previous test.

ii. During the testing for PM emissions required by Condition 2.1.7-1(b)(i), unless initial opacity observations required by Condition 2.1.7-3(a)(i) have already been conducted for the turbines prior to such testing and the measured opacity of the emissions of the turbines when firing natural gas was not more than 5.0 percent, six-minute average, the Permittee shall also conduct observations for opacity by USEPA Method 9 during the testing for PM emissions required by Condition 2.1.7-1(b)(i).

iii. For purposes of this testing, the following methods and procedures shall be used unless other methods adopted by or being developed by USEPA are specified or approved by the Illinois EPA.

VOM	USEPA Method 18, 25A or 320
Filterable PM	USEPA Method 5
Filterable PM ₁₀ /PM _{2.5}	USEPA Method 201A
Condensable PM	USEPA Method 202

Sulfuric Acid Mist
Formaldehyde
N₂O and CH₄

USEPA Method 8
USEPA Method 320 or 323
USEPA Method 320

- iv. The Permittee shall submit test plans, test notifications, and test reports to the Illinois EPA in accordance with Condition 3.1. In addition to other required information, if test runs that are longer than one-hour in duration are planned, the expected duration of the runs and the reason for extended runs shall be explained in the test plans and test reports. The test reports shall include information on the heat and sulfur content of fuel that is representative of the fuel burned during the period of testing.
- c. Testing of affected turbine(s) shall also be conducted following a written request by the Illinois EPA for pollutants as specified in the request, with such testing conducted either within 60 days, the date that a turbine next operates or on the date agreed to by the Illinois EPA, whichever is later.

2.1.7-2 Periodic Performance Testing of Emissions

- a. The Permittee shall conduct periodic performance tests for NO_x emissions in accordance with 40 CFR 60.4340(a) if it does not conduct operational or emissions monitoring in accordance with 40 CFR 60.4340(b).
- b. For each affected turbine, the Permittee shall conduct periodic performance testing of the NO_x emissions as required by 35 IAC 217.394(d).
- c. The Permittee shall perform emission tests as specified by Condition 2.1.7-1(a) or (b) as requested by the Illinois EPA for an affected turbine within 45 days of a written request by the Illinois EPA or such later date agreed to by the Illinois EPA.

Note: Further requirements for periodic emission testing may be established in the CAAPP Permit for the plant.

2.1.7-3 Requirements for Opacity Observations

- a. The Permittee shall have the opacity of the emissions from the affected turbines during representative weather and operating conditions determined by a qualified observer in accordance with USEPA Method 9, as further specified below.
 - i. Initial observations of opacity shall be conducted no later than the initial testing for PM emissions required by Condition 2.1.7-1(b) (i) (A). (See also Condition 2.1.7-1(b) (ii).)
 - ii. Thereafter, observations of opacity shall be conducted in each calendar year unless: 1) Observations for visible emissions conducted for the turbines in accordance with Condition 2.1.7-4 during the previous year show that visible emissions were "normally not present" when the turbines were operating; or 2) The measured opacity of

emissions during observations of opacity conducted pursuant to this condition during the previous year were not more than 5.0 percent, six-minute average.

- iii. Upon written request by the Illinois EPA, observations of the opacity of the affected turbines shall be conducted within 60 calendar days of the request or by the date agreed upon by the Illinois EPA, whichever is later.
- b. The duration of opacity observations shall be at least 30 minutes (five 6-minute averages) unless the average opacities for the first 12 minutes of observations (two six-minute averages) are both less than 10.0 percent.
- c. The Permittee shall submit a written report for required opacity observations within 15 days of the date of observation. This report shall include:
 - i. Date and time of observation.
 - ii. Name and employer of qualified observer.
 - iii. Copy of current certification.
 - iv. Description of observation conditions.
 - v. Description of the operating conditions of the affected turbine.
 - vi. Raw data.
 - vii. Opacity determinations.
 - viii. Conclusions.

2.1.7-4 Requirements for Observations for Visible Emissions

- a. If the Permittee elects to show that visible emissions were "normally not present" during the operation of the turbines in a calendar year for purposes of Condition 2.1.7-3(a)(ii), the Permittee shall have conducted observations for the turbines for visible emissions during representative operating conditions in accordance with USEPA Method 22 as follows.
 - i. For such calendar year, the Permittee shall have conducted an observation for visible emissions for each affected turbine in each quarter in which the turbine operated on more than five operating days.
 - ii. The duration of each of these observations shall have been 25 consecutive minutes (1500 seconds) and visible emissions shall be considered to have normally not been present during an observation if the total duration of visible emissions during the observation did not exceed one minute (60 seconds).
 - iii. Notwithstanding Condition 2.1.7-4(a)(ii), if the total duration of visible emissions during the first 10 minutes

of an observation did not exceed 20 seconds, the observation may have been concluded and visible emissions shall be considered to have normally not been present during the observation.

- b. If the criteria for visible emissions to be normally not present were met by each of the required observations in a calendar year, visible emissions are considered to have normally not been present during the operation of the turbines in that year.
- c. If the Permittee elects to conduct observations for visible emissions pursuant to this condition, the Permittee shall keep the following records:
 - i. Records for the individual observations for visible emissions, which shall be kept for the observations that are conducted in a year even if the Permittee ceases to conduct further observations in such year, as could occur when an observation does not meet the criteria for visible emissions to be "normally not present." These records shall include the date and time of observations, the name and position of the observer(s), information confirming that observations were conducted consistently with USEPA Method 22 (including a description of the location from which observations were made), information confirming that observations were made during representative operating conditions of the turbine, and the total duration of visible emissions during the period of observation, in seconds.
 - ii. If the Permittee considers that these observations show that visible emissions were "normally not present," records for the operation of the turbines to confirm that an observation was conducted for the emissions of each turbine in each calendar quarter for which an observation was required and confirmation that these observations were appropriately conducted and the duration of visible emissions during each required observation was such that the criterion for visible emissions to be normally not present were met.

2.1.8-1 Emission Monitoring Requirements

- a.
 - i. For each affected turbine, the Permittee shall calibrate, maintain, and operate continuous emissions monitoring systems (CEMS) for NO_x emissions in accordance with the applicable monitoring requirements of 40 CFR 60.4340(b)(1), the federal Acid Rain Program, 40 CFR Part 75, and the Cross-State Air Pollution Rule, 40 CFR 96 Subpart HHH.
 - ii. A. Except during shakedown, for an affected turbine, this monitoring shall also be used to determine compliance with the limits for NO_x emissions in Conditions 2.1.2(b) and 2.1.6-1(a).
 - B. During shakedown, for an affected turbine, this monitoring shall also be used to determine compliance with the limits for NO_x emissions in Conditions

2.1.2(b)(ii) and 2.1.6-1(a)(ii) after the NO_x CEMS is installed and certified in accordance with 40 CFR 60.4345.

- C. The provisions for substitution of missing data shall not be used.
- b.
 - i. For each affected turbine, the Permittee shall calibrate, maintain, and operate a CEMS for CO emissions in accordance with the relevant monitoring requirements of 40 CFR 60.13. Quality assurance for these CEMS shall be in accordance with Appendix B to 40 CFR Part 75, Quality Assurance and Control Procedures.
 - ii.
 - A. Except during shakedown, for an affected turbine, this monitoring shall be used to determine compliance with the limits for CO emissions in Conditions 2.1.2(c) and 2.1.6-1(a).
 - B. During shakedown, for an affected turbine, this monitoring shall also be used to determine compliance with the limits for CO emissions in Conditions 2.1.2(c)(ii) and 2.1.6-1(a)(ii) after the CO CEMS is installed and certified in accordance with 40 CFR 60.13.
- c. In addition to meeting relevant regulatory requirements for NO_x and CO, the CEMS required by Condition 2.1.8-1(a) and (b) shall be equipped and operated as "dual range" monitors if it is necessary to provide credible emission data during startup and shutdown of the turbines.

2.1.8-2 Fuel Sampling and Analysis Requirements

- a.
 - i. The Permittee shall determine the total sulfur content of the fuels combusted in the affected turbines in accordance with 40 CFR 60.4360, 60.4365 and 60.4370.
 - ii. In addition to the NSPS sampling and analysis requirements provided above, for purposes of demonstrating compliance with the sulfur content limit in Condition 2.1.2(a)(i)(D), the Permittee shall also determine the sulfur content of the fuel according to the custom schedules in 40 CFR 60.4370(c) except that the limit for sulfur content of fuel in 40 CFR 60.4370(c)(2) shall be 0.5 gr/100 scf rather than 20 gr/100 scf.
- b. The Permittee shall keep records for this sampling and analysis activity, including both collected data and documentation for the sampling and analysis activities. The Permittee may use representative sampling and analytical results from the fuel supplier(s) to demonstrate compliance with fuel sulfur content.

2.1.8-3 Operational Monitoring

- a. The Permittee shall equip, operate, and maintain continuous operational monitoring systems on the affected SCR system to

measure the following operating parameters, with data recorded on at least a block hourly average:

- i. The inlet temperature to the system.
- ii. The reagent injection rate to the system.
- b. The Permittee shall equip, operate, and maintain continuous operational monitoring systems on the affected oxidation catalyst system to measure the operating temperature, with data recorded on at least a block hourly average.
- c. In addition to recording the data collected by these systems, the Permittee shall also maintain records for maintenance and operational activity associated with these systems and for outages of these systems.

2.1.9 Recordkeeping Requirements

- a.
 - i. For the affected turbines, the Permittee shall comply with the applicable recordkeeping requirements of the NSPS, 40 CFR 60 Subparts A, KKKK and TTTT.
 - ii. For the affected turbines, the Permittee shall keep applicable records required by 35 IAC 217.396(a).
 - iii. For the affected turbines, the Permittee shall comply with the applicable recordkeeping requirements of 35 IAC 217.712.
- b. For the affected turbines, the Permittee shall maintain a file or other records that include:
 - i. The manufacturer's data for the affected turbines for emissions and rated heat input capacity (mmBtu/hour) and operating and maintenance procedures suggested by the manufacturer.
 - ii. Documentation for the rated output of the electrical generator associated with each affected turbine (MWe at ISO conditions).
 - iii. The Permittee's established startup, shutdown and shakedown procedures for the affected turbines.
- c. The Permittee shall maintain the following records for each affected turbine:
 - i. An operating log or other records that include:
 - A. The information specified by Condition 3.2(a); and
 - B. An identification of each operating mode for each hour of operation including: 1) shakedown, 2) startup, 3) shutdown, 4) operating above 40% load and below 60% load, 5) operating with duct burner, 6) operating without duct burner, 7) operating at or

above 60% load with duct burners, and 8) operating at or above 60% load without duct burners.

- ii. An inspection, maintenance and repair log that includes the information specified by Condition 3.2(b).
- d. The Permittee shall maintain records of the following information for the affected turbines:
 - i. The following information for fuel usage:
 - A. Fuel usage for each affected turbine and for both affected turbines, combined (mmBtu/month and mmBtu/year).
 - B. Fuel usage for each duct burner and for all duct burners, combined (mmBtu/month and mmBtu/year).
 - C. Total fuel usage considering both affected turbines including the duct burners (mmBtu/month and mmBtu/year).
 - ii. The total hours of operation for each affected turbine (hours/month and hours/year).
 - iii. The following information related to startup and shutdown of each affected turbine:
 - A. The total number of startups (startups/month).
 - B. For each startup, the date and time that the startup began and the duration of the startup (minutes).
 - C. For each shutdown, the date and time that the shutdown began and the duration of the shutdown (minutes).
 - D. The total duration of startups and shutdowns (hours/month and hours/year).
 - iv. The following information related to electrical output:
 - A. The gross electrical output (MW-hr/month and MW-hr/year).
 - B. If the Permittee is complying by means of a limit that is in terms of the net electrical output of the turbine, the net electrical output (MW-hr/month and MW-hr/year).
- e. The Permittee shall maintain records of the following information related to the emissions of the affected turbines:
 - i. A file containing the maximum emission rates and the emission factors used by the Permittee to determine the emissions of different pollutants from the affected turbines for different modes of operation (as identified by Condition 2.1.9(c)(i)(B)), with supporting documentation:

- A. For VOM, PM, PM₁₀/PM_{2.5}, SO₂, sulfuric acid mist, N₂O, CH₄ and HAPs, information addressing all modes of operation of the turbines.
 - B. For NO_x and CO, information addressing operation of the turbines during the period before the CEMS are certified and during any subsequent period when emissions of the pollutant cannot be appropriately determined from data collected by a CEMS.
 - ii. The short-term emissions of NO_x and CO of each turbine, as measured by the required continuous emission monitoring systems (see Conditions 2.1.8-1(a) and (b)), in the following terms:
 - A. Emissions in ppmv at 15 percent oxygen to address the limits in Condition 2.1.2(b) (i) and (c) (i) that apply to operation of a turbine during periods other than startup, and shutdown.
 - B. Emissions in pounds per hour to address the applicable limits in Condition 2.1.6-1(a) (See also Condition 2.1.2(b) (ii) and (c) (ii)).
 - iii. The monthly and annual emissions of NO_x, CO, PM, PM₁₀/PM_{2.5}, VOM, SO₂, sulfuric acid mist, individual HAP and total HAPs of the affected turbines (tons/month and tons/year), with supporting documentation and calculations. These records shall include emissions during startup and shutdown.
 - iv. For each affected turbine for CO₂ emissions:
 - A. The CO₂ emissions of the affected turbine (tons/month and tons/year), with supporting documentation and calculations.
 - B. The CO₂ emission rate of the affected turbine (lb/MWh gross or net energy output, annual average), with supporting data and calculations.
 - v. For each affected turbine for emissions of GHGs, as CO₂e:
 - A. The GHG emissions of the affected turbines based on the operational monitoring for fuel consumption (scf/month and scf/year), and considering emissions of CO₂, N₂O and CH₄ (tons/month and tons/year), with supporting documentation and calculations.
 - B. The actual GHG emission rate of each affected turbine, as CO₂e, in lb/MW-hr, annual average, with supporting data and calculations.
- f. The Permittee shall maintain the following records for shakedown of an affected turbine:
 - i. Records for the affected turbines that include the operating and maintenance procedures utilized by the Permittee to minimize emissions.

- ii. For NO_x, CO and VOM, a file containing the maximum hourly emission rates and the emission factors used by the Permittee to determine the emissions of different pollutants, with supporting documentation.
- iii. Duration of the shakedown period for each affected turbine (days).

2.1.10 Notification and Reporting Requirements

- a. For the affected turbines, the Permittee shall comply with the applicable notification and reporting requirements of the NSPS, 40 CFR 60 Subparts A, KKKK and TTTT. (See also Condition 2.1.10(c) (i) and (d) (i).)
- b. For the affected turbines, the Permittee shall comply with the applicable reporting requirements of 35 IAC 217.396(c) and 217.712.
- c. The Permittee shall notify the Illinois EPA of any deviations from the requirements of this permit for the affected turbines as follows. These notifications shall include the information specified by Condition 3.4.
 - i. Deviations from the NO_x limits in Conditions 2.1.2(b), 2.1.3-1(a) (ii) and 2.1.6-1(a) shall be reported with the periodic compliance reports required by the NSPS, as addressed below in Condition 2.1.10(d).
 - ii. Deviations from the CO limits in Conditions 2.1.2(c) and 2.1.6-1(a) shall also be reported with the periodic compliance reports required by the NSPS.
 - iii. Other deviation of the requirements of this permit, as determined by the records required by this permit or other applicable means, shall be reported to the Illinois EPA within 30 days of occurrence. This report shall include a description of the deviation, the probable cause of the deviation, corrective actions taken, and any preventive measures taken.
- d. The Permittee shall submit periodic compliance reports to the Illinois EPA for the affected turbines, which reports shall include the following information related to excess emissions and deviations. These reports shall be submitted on a semi-annual basis, with each report submitted no later than 30 days following the end of the reporting period:
 - i. As related to the NSPS for NO_x (Condition 2.1.3-1(a)) and the NO_x limits in Conditions 2.1.2(b) and 2.1.6-1(a), the information required for reporting of exceedances under 40 CFR 60.7(c) or (d), 40 CFR 60.4380 and 60.4385. If there are no such exceedances during the reporting period, the report shall state that no exceedances occurred during the reporting period.

- ii. Information for other deviations during the reporting period, if any, which shall include the information specified by Condition 3.4.
- iii. When no excess emissions or deviations have occurred or the CEMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
- e. For each affected turbine, the Permittee shall notify the Illinois EPA within 30 days of the date that shakedown begins for each affected turbine.
- f. For each affected turbine, the Permittee shall notify the Illinois EPA within 30 days of the date that the performance testing of the affected turbine required by Condition 2-1.7-1(a) has been completed or the date that the affected turbine engages in commercial dispatch, whichever occurs first.
- g. For each affected turbine, the Permittee shall notify the Illinois EPA within 30 days of the date that it commences commercial operation of the turbine.

SUBPART 2.2: UNIT-SPECIFIC CONDITIONS FOR THE AUXILIARY BOILER

2.2.1 Description

The natural gas-fired auxiliary boiler (the affected boiler) will operate on an intermittent basis to produce intermediate pressure steam for heating the heat recovery steam generators and steam turbines in the electrical generating units. This will enable the combustion turbines to start up more quickly because the steam generator and steam turbine will be at or near their operating temperatures when startups of the combustion turbines begin. The affected boiler will not need to operate when the combustion turbines have completed startup. Instead, the affected boiler will be used in advance of scheduled operation of the combustion turbines. It will also be used when the operation of the combustion turbines would be interrupted for a few days. Otherwise, the affected boiler will not need to be routinely operated.

2.2.2 Control Technology Determination - BACT

- a. The affected boiler shall be operated and maintained with the following features:
 - i. Ultra-low-NO_x burners and flue gas recirculation.
 - ii. Air preheater.
 - iii. Good burner design, good combustion practices.
 - iv. An automated combustion management system, with an oxygen trim system and an automated water blowdown system.
 - v. Use of only natural gas with a sulfur content of no greater than 0.5 gr/100 scf.
- b. The emissions of NO_x, CO and VOM from the affected boiler shall not exceed the following limits, in lb/mmBtu. Compliance with these limits shall be determined on a rolling 3-operating hour average. For NO_x and CO, compliance with these limits shall be determined consistent with the procedures for emission testing in Condition 2.2.7. For VOM, compliance with this limit shall be determined based on the recordkeeping requirements in 2.2.9(e) (i) (A).

Pollutant	Limit (lb/mmBtu)
NO _x	0.010
CO	0.037
VOM	0.0015

- c. The design emission rates of the affected boiler for PM and PM₁₀/PM_{2.5} shall not exceed 0.0019 and 0.0075 lb/mmBtu, respectively, on a rolling 3-operating hour average. Compliance with these limits shall be determined based on the recordkeeping requirements in 2.2.9(e) (i) (A).
- d. The design emission rate of the affected boiler for sulfur dioxide and sulfuric acid mist shall not exceed 0.0014 lb/mmBtu and 0.02 lb/hr, respectively, on a rolling 3-operating hour

average. Compliance with these limits shall be determined based on the recordkeeping requirements in 2.2.9(e) (i) (A).

- e. The annual emissions of GHGs from the affected boiler shall not exceed 5,059 tons/year, as CO₂e. Compliance with this limit shall be determined using the relevant procedures for quantification of GHG emissions in 40 CFR Part 98 Subpart D.

2.2.3-1 Applicable Federal Emission Standards

- a. The affected boiler is an affected facility under the federal NSPS for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60 Subpart Dc. For the affected boiler, the Permittee must comply with applicable requirements of this NSPS and the applicable requirements of the General Provisions of the NSPS, 40 CFR 60 Subpart A.
- b. Pursuant to the NSPS, 40 CFR 60.11(d), at all times the Permittee shall, to the extent practicable, maintain and operate the affected boiler in a manner consistent with good air pollution control practice for minimizing emissions.

2.2.3-2 Applicable State Emission Standards

- a. Pursuant to 35 IAC 212.123(a), the emission of smoke or other particulate matter from the affected boiler shall not have an opacity greater than 30 percent, 6-minute average, except as allowed by 35 IAC 212.123(b) or 212.124.
- b. Pursuant to 35 IAC 216.121, the CO emissions of the affected boiler shall not exceed 200 ppm, corrected to 50 percent excess air.

2.2.4 Non-Applicability Provisions

- a. The affected boiler is not subject to the NSPS for Electric Utility Steam Generating Units, 40 CFR 60 Subpart Da. This is because this boiler is not a "steam electric steam generating unit" since it does not produce steam that is used to power a steam turbine generator.
- b. The affected boiler is not subject to the Acid Rain Control Program pursuant to Title IV of the federal Clean Air Act. This is because the affected boiler does not qualify as a utility unit or an electrical generating unit for the purposes of this program.
- c. The affected boiler is not subject to requirements of the NESHAP for Industrial, Commercial, and Institutional Boilers at Area Sources, 40 CFR 63 Subpart JJJJJJ. This is because the affected boiler is a gas-fired boiler and 40 CFR 63.11195(e) provides that gas-fired boilers are not subject to 40 CFR 63 Subpart JJJJJJ.
- d. The affected boiler is not subject to the provisions of 35 IAC 217 Subpart E pursuant to 35 IAC 217.162. This is because the NO_x emissions of the affected boiler are limited to less than 15 tons per year and less than five tons per ozone season.

2.2.5 Design Requirements and Operational Limits

- a.
 - i. The only fuel fired in the affected boiler shall be natural gas.
 - ii. The sulfur content of the fuel fired in the affected boiler shall not exceed 0.5 gr/100 scf.
- b. The rated design heat input capacity of the affected boiler shall not exceed 80 mmBtu/hour.
- c. The affected boiler shall not be operated for more than 1,080 hours/year.
- d. The steam from the affected boiler shall not be used to power the electrical generators in the electrical generating units.

2.2.6 Emission Limits

- a. The emissions of the affected boiler shall not exceed the following limits. Compliance with the hourly limits shall be based on a 3-hour average.

Pollutant	Limits	
	Pounds/Hour	Tons/Year
NOx	0.80	0.43
CO	2.96	1.60
VOM	0.12	0.06
PM	0.15	0.08
PM ₁₀ /PM _{2.5}	0.60	0.32
SO ₂	0.11	0.06
SAM	0.02	0.01
Total HAP	0.15	0.08
GHGs, as CO ₂ e	---	5,059

2.2.7 Emission Testing Requirements

- a. For the affected boiler, the Permittee shall have emissions testing conducted as follows, at its expense by a qualified testing service under representative operating conditions, for emissions of NOx and CO.
- b. The timing of testing shall be as follows:
 - i. Testing shall initially be conducted within one year after the first initial startup of the affected boiler.
 - ii. Unless the initial testing of the affected boiler shows emissions that are 80 percent or less of the applicable permit limits for NOx and CO in pounds per mmBtu and in pounds per hour, follow up testing of the affected boiler, shall be conducted within three years of the initial testing.
 - iii. In addition, the Permittee shall have testing performed as requested by the Illinois EPA for the affected boiler

within 90 days of a written request by the Illinois EPA or such later date agreed to by the Illinois EPA.

- c. Appropriate USEPA test methods, including the following methods, shall be used for testing, unless other methods adopted by or being developed by USEPA or other alternative test methods are approved by the Illinois EPA.

NOx	USEPA Method 7E
CO	USEPA Method 10

- d. The Permittee shall submit test plans, test notifications, and test reports to the Illinois EPA in accordance with Condition 3.1.
- e. In addition to other information required in a test report, test reports shall include detailed information on the operating conditions of the affected boiler during testing, including:
 - i. Firing rate (mmBtu/hour); and
 - ii. Opacity of the exhaust, 6-minute averages, as determined by USEPA Method 9, if visible emissions are normally present, as determined in accordance with 35 IAC 212.107.

2.2.8-1 Operational Instrumentation

- a. The Permittee shall install, operate and maintain instrumentation to measure the fuel usage of the affected boiler, scf/hour.

2.2.8-2 Opacity Observations

- a. In conjunction with the emissions testing required pursuant to Condition 2.2.7:
 - i. The Permittee shall perform a visual determination of fugitive emissions of the affected boiler using Method 22.
 - ii. If visible emissions, as determined by Method 22, are present when the affected boiler is operating, the Permittee shall perform opacity observations for the affected boiler in accordance with Method 9.

2.2.9 Recordkeeping Requirements

- a. For the affected boiler, the Permittee shall maintain a file or other record containing the following information:
 - i. The rated design heat input capacity of this boiler, mmBtu/hour, with supporting documentation, if this is not provided by the nameplate attached to the unit.
 - ii. Documentation that the fuel for this boiler meets the definition of natural gas in 40 CFR 60.41c.
 - iii. The Permittee's established operating and maintenance procedures for the affected boiler.

- b. For the affected boiler, the Permittee shall maintain an operating log or other records that includes the information specified in Condition 3.2 and the following information:
 - i. Information for each startup and shutdown, including date, time and duration, as required by 40 CFR 60.7(b).
 - ii. Information for any malfunction in the operation of the affected boiler or its air pollution control equipment, as also required by 40 CFR 60.7(b).
 - iii. Information for any incident in which the operation of the affected boiler continued during malfunction or breakdown, including: date, time, and duration; a description of the incident; whether emissions exceeded or may have exceeded any applicable standard or limit; a description of the corrective actions taken to reduce emissions and the duration of the incident; and a description of the preventative actions taken.
 - iv. Record of the amount of fuel combusted on a calendar month basis, pursuant to 40 CFR 60.48c(g).
- c. For the affected boiler, the Permittee shall maintain records for the following information:
 - i. Fuel usage (scf/month and scf/year).
 - ii. Operating hours (hours/month and hours/year).
- d. The Permittee shall keep inspection, maintenance and repair log(s) or other similar records for the affected boiler that contain the information specified in Condition 3.2(b).
- e. For the affected boiler, the Permittee shall keep the following records related to the boiler's emissions of NO_x, CO, VOM, SO₂, SAM, PM, PM₁₀/PM_{2.5}, total HAPs and GHGs:
 - i. A file containing the following information, with supporting documentation:
 - A. The emission factors used by the Permittee to determine the boiler's emissions of NO_x, CO, VOM, SO₂, SAM, PM, PM₁₀/PM_{2.5}, total HAPs, and N₂O and CH₄.
 - B. The maximum hourly emission rates of the boiler for NO_x, CO, VOM, SO₂, SAM, PM and PM₁₀/PM_{2.5} and total HAPs.
 - ii. Records of the emissions of NO_x, CO, VOM, SO₂, SAM, PM, PM₁₀/PM_{2.5}, total HAPs, and GHGs, as CO₂e, of the affected boiler (tons/month and tons/year), with supporting documentation and calculations.

2.2.10 Notification and Reporting Requirements

- a. i. For the affected boiler, the Permittee shall fulfill applicable notification and reporting requirements of the

NSPS by sending required notifications and reports to the Illinois EPA.

- ii. In particular, pursuant to 40 CFR 60.7(a)(3) and 60.48c(a), the Permittee shall submit a notification to the Illinois EPA for the actual date of initial startup of the boiler postmarked within 15 days after such date that includes the following information:
 - A. The design heat input capacity of the boiler and identification of the fuels to be combusted. [40 CFR 60.48c(a)(1)]
 - B. The annual capacity factor at which the Permittee anticipates operating the boiler. [40 CFR 60.48c(a)(3)]
- b. For the affected boiler, the Permittee shall notify the Illinois EPA of deviations from the requirements of this permit for this boiler in accordance with Condition 3.4. For this purpose, deviations shall be reported with the periodic compliance reports for the combustion turbines required by Conditions 2.1.10(d).

SUBPART 2.3: UNIT-SPECIFIC CONDITIONS FOR EMERGENCY ENGINES

2.3.1 Description

Diesel engines will supply emergency power to the plant. The generator engines (affected generator engines) will power an electrical generator to provide power to critical equipment during power outages. A third engine (the affected fire pump engine) will power the pump in the plant's firewater system. The fuel for these engines (collectively, the affected engines) will be ultra-low sulfur diesel (ULSD). Other than during actual emergencies, the affected engines will only be operated for purposes of operational testing, normally for less than an hour per week.

2.3.2 Control Technology Determination - BACT

- a. i. The affected generator engines shall be designed and operated to comply with the applicable limits of the NSPS for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60 Subpart IIII, for emergency engines other than fire pump engines. (See Condition 2.3.3-1(a)(ii) and (iv)).
- ii. The affected fire pump engine shall be designed and operated to comply with the applicable limits of the NSPS, 40 CFR 60 Subpart IIII, for fire pump engines. (See Condition 2.3.3-1(a)(iii) and (iv)).

Note: For subject engines, 40 CFR 60 Subpart IIII sets limits for the combined emission of NO_x and nonmethane hydrocarbons (NMHC), the emissions of CO and the emissions of PM. The emission limits for NO_x + NMHC serve as BACT for NO_x and VOM; the emission limits for CO serve as BACT for CO; and the emission limits for PM serves as BACT for PM, PM₁₀ and PM_{2.5}.

- b. The only fuel used in the affected engines shall be ULSD, with a sulfur content of no more than 15 ppm.
- c. The GHG emissions of the affected engines shall not exceed the following limits:
 - i. For each affected generator engine: 508 tons/year, as CO₂e; and
 - ii. For the affected fire pump engine: 92 tons/year, as CO₂e.
- d. The affected engines shall not exceed the operational limit in Condition 2.3.4(d) for maintenance checks and readiness testing of each engine.

2.3.3-1 Applicable Federal Emission Standards

- a. i. The affected engines are subject to the NSPS for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60 Subpart IIII, and applicable requirements in the General Provisions of the NSPS, 40 CFR 60 Subpart A.
- ii. Each affected generator engine, as it would be a new emergency stationary compression ignition internal

combustion engine with a rated power output of 1500 kW and displacement of less than 10 liters per cylinder that is not a fire pump engine, must comply with the NSPS standards for new emergency stationary internal combustion engines with a rated output of greater than 560 kW in 40 CFR Part 60 Subpart IIII, as follows. The Permittee shall comply with these standards by purchasing an engine certified to these standards for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications. [40 CFR 60.4205(b) and 60.4211(c) and 40 CFR 89.112(a) and 89.113(a)]

A. NO_x + NMHC: 6.4 g/kW-hr.

B. CO: 3.5 g/kW-hr.

C. PM: 0.20 g/kW-hr.

iii. The affected fire pump engine, as it would be a new fire pump engine with a displacement of less than 30 liters per cylinder, must comply with the emission standards in Table 4 of 40 CFR 60 Subpart IIII applicable to units with a maximum engine power greater than 175 hp but less than 750 hp, as follows. The Permittee shall comply with these standards by purchasing an engine certified to these standards for the same model year and maximum (i.e., National Fire Protection Association nameplate) engine power. The engine must be installed and configured according to the manufacturer's specifications. [40 CFR 60.4205(c) and 60.4211(c)]

A. NO_x + NMHC: 4.0 g/kW-hr.

B. CO: 3.5 g/kW-hr.

C. PM: 0.20 g/kW-hr.

iv. The diesel fuel used in the affected engines shall meet the requirements of 40 CFR 80.510(b) for nonroad diesel fuel. [40 CFR 60.4207(b)].

b. As new stationary engines located at an area source for HAPs, the affected engines must meet the requirements of the NESHAP for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63 Subpart ZZZZ, by meeting the requirements of the NSPS, 40 CFR 60 Subpart IIII, for compression ignition engines. No other requirements apply for the affected engines under 40 CFR 63 Subpart ZZZZ. [40 CFR 63.6590(c)]

2.3.3-2 Applicable State Emission Standards

a. The affected engines are subject to 35 IAC 212.123(a), which provides that no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, 6-minute average, from any emission unit, except as allowed by 35 IAC 212.123(b) and 212.124.

- b. Pursuant to 35 IAC 214.305(a)(2), the sulfur content of the fuel oil used by the affected engines shall not exceed 15 ppm.
- c. The affected engines are subject to 35 IAC 214.301, which limits emissions of SO₂ to no more than 2000 ppm.

2.3.4 Operational Limits and Work Practices

- a. Each affected engine shall not operate for more than 2 hours/day and 500 hours/year.
- b. The rated capacities of the affected engines shall not exceed the following limits:
 - i. Each generator engine: 1,250 kW.
 - ii. Fire pump engine: 320 horsepower.
- c. Except as provided by 40 CFR 60.4211(g), the Permittee shall operate and maintain the affected engines according to the manufacturer's written instructions related to emissions. In addition, the Permittee may only change those emission-related settings that are permitted by the manufacturer. The Permittee must also meet the requirements of 40 CFR Parts 89, 94 and/or 1068, as applicable. [40 CFR 60.4211(a)]
- d. Pursuant to the NSPS, 40 CFR 60.4211(f), and this permit, each affected engine may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of each engine shall not exceed 100 hours per year. The affected engines may also operate up to 50 hours per year in non-emergency situations, but those 50 hours count towards the 100 hours per year provided for maintenance and testing. This operation in non-emergency situations cannot be for peak shaving or to generate income for a source to supply power to an electric grid or otherwise supply non-emergency power as part of a financial arrangement with another entity. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as provided herein, is prohibited.
- e.
 - i. Operational testing of the affected engines to confirm their readiness for emergency operation shall be conducted during daylight hours.
 - ii. The duration of operational testing of an affected engine to confirm readiness shall only exceed one hour in a day if operational problems are encountered during initial operational testing of the engine and further testing of the engine is needed to confirm readiness after corrective actions have been taken.
 - iii. Testing of the affected engines shall not be conducted concurrently.

2.3.5 Emission Limits

- a. The emissions of each affected generator engine shall not exceed the following limits:

Pollutant	Limits	
	Pounds/Hour	Tons/Year
NOx	17.81	4.45
CO	10.82	2.71
PM	0.62	0.15
PM ₁₀ /PM _{2.5}	0.72	0.18
VOM	1.98	0.49
SO ₂	0.02	0.01
SAM	0.01	0.01
Total HAP	0.02	0.01
GHG, as CO ₂ e	---	508

- b. The emissions of the affected fire pump engine shall not exceed the following limits:

Pollutant	Limits	
	Pounds/Hour	Tons/Year
NOx	1.90	0.48
CO	1.83	0.46
PM	0.11	0.03
PM ₁₀ /PM _{2.5}	0.7	0.18
VOM	0.21	0.05
SO ₂	0.01	0.01
SAM	0.01	0.01
Total HAP	0.01	0.01
GHG, as CO ₂ e	---	92

2.3.6 Operational Monitoring

- a. The Permittee shall operate and maintain a non-resettable hour meter on each affected engine.

2.3.7 Recordkeeping Requirements

- a. If an affected engine does not also meet the standards of the NSPS, 40 CFR 60 Subpart IIII, applicable to non-emergency engines for the applicable model year, the Permittee must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The Permittee must record the time of operation of the engine and the reason the engine was in operation during that time. [40 CFR 60.4214(b)]
- b. The Permittee shall keep a file for the affected engines containing copies of the certifications from the manufacturers for the CO, PM and the combination of NOx + NMHC emission rates of each engine and their fuel consumption rates, in gallons per kW-hr.
- c. Pursuant to 35 IAC 214.305(a)(3)(A), the Permittee shall maintain records demonstrating that the fuel oil used by affected engines complies with the requirements in 35 IAC 214.305(a)(2) (Condition

2.3.3-2(b)), such as records from the fuel supplier indicating the sulfur content of the fuel oil.

- d. The Permittee shall keep records for the operational testing of the affected engines that address compliance with Condition 2.3.4(e), including:
 - i. The date and timing of operational testing;
 - ii. If operational testing is conducted outside of daylight hours, the reason for the timing of such testing; and
 - iii. If the duration of operational testing of an engine in a day is more than one hour, the reason why operational testing could not be completed within one hour.
- e. For the affected engines, the Permittee shall maintain the following records related to emissions:
 - i. A file containing the following information, with supporting documentation and calculations:
 - A. The maximum emission rates for NO_x + NMHC, CO, and PM from each affected engine in grams/kW-hr output.
 - B. The maximum emission rates for NO_x, CO, VOM, PM, PM₁₀/PM_{2.5}, SO₂, SAM, total HAPs and GHG (as CO₂e) from each affected engine in pounds per hour.
 - ii. Records of the actual emissions of NO_x, CO, VOM, PM, PM₁₀/PM_{2.5}, SO₂, SAM, total HAPs and GHG (as CO₂e) for each affected emergency generator engine and the affected fire pump engine (tons/month and tons/year), with supporting calculations.
- f. The Permittee shall maintain records for periods of time when conducting maintenance checks and readiness testing of each affected engine (hours/month and hours/year).

2.3.8 Reporting Requirements

- a. Pursuant to 35 IAC 214.305(a)(3)(C), the Permittee shall notify the Illinois EPA within 30 days after discovery of deviations from the requirements of 35 IAC 214.305(a)(2). At minimum, such notification must include a description of the deviations, a discussion of the possible cause of the deviations, any corrective actions taken, and any preventative measures taken.
- b. For the affected engines, the Permittee shall notify the Illinois EPA of deviations from requirements of this permit for these engines other than 35 IAC 214.305(a)(2) in accordance with Condition 3.4. For this purpose, deviations shall be reported with the periodic compliance reports for the combustion turbines required by Conditions 2.1.10(d).

SUBPART 2.4: UNIT-SPECIFIC CONDITIONS FOR NATURAL GAS PIPING/COMPONENTS

2.4.1 Description

Natural gas piping at the plant has components, including flanges and other connectors, valves and pressure relief valves, that have the potential to leak. The Metering and Pressure Regulation Stations at the plant, which meter the amount of natural gas supplied to the plant by the pipelines serving the plant and reduce the pressure of the natural gas to the level needed for the turbines, also have components. Since natural gas is primarily methane (CH₄), which is a greenhouse gas (GHG), these components would emit GHG as they leak. These GHG emissions are appropriately addressed through timely identification and repair of any leaks that occur or by use of "leakless" components. These measures would also serve to address emissions of VOM from leaks, as VOM is a minor constituent of natural gas.

For purposes of these unit-specific conditions, the "affected components" are the components in the natural gas piping and the metering and regulation stations at the plant.

2.4.2 Control Technology Determination - BACT

- a. "Leakless" valves and pumps, to the extent that "leakless" valves and pumps are available, shall be installed and operated. If "leakless" valves and pumps are not available, use of high-quality components that are designed for the specific service in which they are employed, shall be installed and operated;
- b. Use of a noninstrumental LDAR program, including the completion of auditory, visual and olfactory (AVO) inspections on a monthly basis to identify any components that are leaking;
- c. Use of an instrument-based LDAR program, including use of an Optical Gas Imaging Instrument.
- d. i. For affected components, emissions from leaks shall be controlled by meeting requirements of the NSPS for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced after September 18, 2015, 40 CFR 60 Subpart 0000a, including relevant portions of the NSPS for work practices, testing, recordkeeping and reporting. In particular, the Permittee must:
 - A. Monitor all affected components in accordance with 40 CFR 60.5397a(b) through (g), except that use of an optical gas imaging instrument shall be used as an alternative to inspecting for leaks in accordance with USEPA Method 21, unless the Permittee demonstrates to the Illinois EPA that, as applied to methane, optical gas imaging would not be equally or more effective in the identification of leaks than USEPA Method 21;
 - B. Repair all sources of fugitive emissions in accordance with 40 CFR 60.5397a(h);

- C. Keep records in accordance with 40 CFR 60.5397a(i); and
 - D. Submit reports in accordance with 40 CFR 60.5397a(j).
- ii. For purposes of monitoring of the affected components, fugitive emissions are defined as any visible emissions from an affected component observed using optical gas imaging or an instrument reading of 500 parts per million (ppm) or greater using Method 21 of 40 CFR 60 Appendix A-7.

2.4.3 Non-Applicability Provisions

- a. This permit is issued based on the affected components at the plant not being subject to the requirements of the NSPS for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced after September 18, 2015, 40 CFR 60 Subpart OOOOa. This is because the plant is not a Crude Oil and Natural Gas Production source category, as defined in 40 CFR 60.5430a. Note, however, the plant must meet requirements of this NSPS as required by Condition 2.4.2(d) (i).
- b. This permit is issued based on affected components not being subject to the control requirement of 35 IAC 215.142 because none of these components will handle a volatile organic liquid.

2.4.4 Emission Limits

- a. Emissions of methane from the affected components shall not exceed 1.53 tons/year, as determined by use of appropriate USEPA methodology for estimating emissions from leaking components.
- b. Emissions of VOM from affected components, i.e., the total VOM emissions of affected components, shall not exceed 0.02 tons/year.

2.4.5 Recordkeeping Requirements

- a. The Permittee shall maintain a log of each instance where a high-quality component was installed rather than a leakless component, with justification for why a leakless component was not available. This documentation shall be retained until the particular component is no longer present at the source:
 - i. A description of the technical specifications for the particular component, including information for: component type; component service and operating conditions, e.g., liquid temperature and pressure; service life of component or packing; manner of valve operation, e.g., manual or automatic; and speed of valve operation.
 - ii. A list of select component manufacturers that make products that generally satisfy the technical specifications, quality standards, and safety standards established for components to be installed at the source.
 - iii. The manufacturers or vendors contacted for the availability of the leakless component and a copy of their response.

- iv. An explanation of why a leakless component was not installed if one was available.
- b. In addition to the records required by Condition 2.4.2(c) (i), the Permittee shall also maintain a log or other records for each monthly noninstrumental inspection, including:
 - i. Name of person performing the inspection;
 - ii. Equipment identification;
 - iii. Date of inspection;
 - iv. Observations made during the inspection; and
 - v. Any corrective actions taken as a result of the inspection.
- c. For affected components, the Permittee shall maintain a log or other records that identify leaking components and a compilation of leaking components by month by type of component, the nature of the leaks, and the duration of the leaks.
- d. For the affected components, the Permittee shall maintain the following records related to emissions of methane and VOM:
 - i. A file containing the number of components by type and service, and emission factors used by the Permittee to determine the emissions from leaks in different types of components, with supporting documentation and calculations. These calculations shall be updated, as appropriate, following completion of construction or upon subsequent changes to the piping systems at the plant.
 - ii. Records of the emissions of methane and VOM (tons/month and tons/year), with supporting data and calculations.

2.4.6 Reporting Requirements

- a. For the affected components, the Permittee shall notify the Illinois EPA of deviations from the requirements of this permit for these components, in accordance with Condition 3.4. For this purpose, deviations shall be reported with the periodic compliance reports for the combustion turbines required by Condition 2.1.10(d).

SUBPART 2.5: UNIT-SPECIFIC CONDITIONS FOR THE CIRCUIT BREAKERS

2.5.1 Description

The electrical switchgear at the plant includes circuit breakers (the affected units) that use gaseous sulfur hexafluoride (SF₆) as a dielectric or insulating material. Although the affected units will be pressurized without any vents directly to the atmosphere, leaks of SF₆, which is a GHG, may occur.

2.5.2 Control Technology Determination - BACT

- a. The affected units shall be low leak rate design circuit breakers, guaranteed by the manufacturer to have an SF₆ leak rate of no more than 0.5 percent on a 12-month rolling basis.
- b. Implementation of a Leak Detection and Repair (LDAR) program that includes the use of an accompanying density monitor alarm in the event that the level of material in the circuit breakers falls below recommended levels;
- c. Systematic operations tracking; and
- d. The total emissions of SF₆ from the affected units shall not exceed 12.0 pounds per year, on a 12-month rolling basis. Compliance with this limit shall be determined using the relevant procedures for quantification of GHG emissions in 40 CFR 98 Subpart DD, Electrical Transmission and Distribution Equipment Use.

2.5.3 Operating Requirements

- a. The Permittee shall promptly respond to any alarm from the leak detection system on an affected unit required by Condition 2.5.5(a), expeditiously investigating the cause for the alarm and implementing any appropriate corrective action based on the investigation to either reduce loss of SF₆ from the unit (e.g., repairing a leak or making changes to operating practices for the unit) or repairs to the leak detection system.

2.5.4 Instrumentation and Monitoring Requirements

- a. The Permittee shall install, operate, and maintain a leak detection system on each affected unit, which system shall indicate the level of SF₆ or dielectric material in the unit (e.g., pressure of the material in the unit) and provide an alarm in the event that the level of material in the affected unit falls below the set point or level recommended by the manufacturer of the unit.
- b. The Permittee shall keep the following records for each of these leak detection systems:
 - i. The data measured by the system recorded on at least a quarterly basis.
 - ii. Information for each alarm from the system, including date, time and action taken to resolve the alarm.

- iii. Operational records and maintenance and repair records for the system.
- iv. The operating and maintenance procedure(s) for the system recommended by the manufacturer.

2.5.5 Recordkeeping Requirements

- a. The Permittee shall keep a file or other records containing the following information for the affected units:
 - i. A listing of the units, with the manufacturer and model number of each unit and its SF₆ content when fully charged.
 - ii. A copy of the manufacturer's guarantee for the design leak rate of SF₆ from each unit, percent loss on an annual basis.
 - iii. The recommended operating and maintenance procedure(s) for each unit as related to the use of SF₆ recommended by the manufacturer of the unit.
- b.
 - i. The Permittee shall maintain records for the addition of SF₆ to each affected unit following initially being filled or charged with SF₆, with date, the amount of SF₆ added (in hundredths of pounds), and explanation for loss, if known, and any other corrective actions taken.
 - ii. The Permittee shall maintain the following records for the overall addition of SF₆ to the affected units, in hundredths of pounds, based on inventory data for SF₆:
 - A. The amount of SF₆ used in initially charging the units (pounds).
 - B. The subsequent addition of SF₆ to the units following initial charging of the units (pounds/month).
- c.
 - i. The Permittee shall maintain records of the annual leak rate from each affected unit, calculated as the total amount of SF₆ added to the unit in a calendar year, as recorded pursuant to Condition 2.5.6(b)(i), and the amount of SF₆ in the unit when fully charged, as recorded pursuant to Condition 2.5.6(a)(i).
 - ii. The Permittee shall maintain records for the total emissions of SF₆ from the affected units (pounds/month and pounds/year), as determined from the records required by Condition 2.5.6(b)(ii)(B), with supporting calculations.

2.5.6 Reporting Requirements

- a. For the affected units, the Permittee shall notify the Illinois EPA of deviations from the requirements of this permit for affected units, in accordance with Condition 3.4. For this purpose, deviations shall be reported with the periodic compliance reports for the combustion turbines required by Condition 2.1.10(d).

SUBPART 2.6: UNIT-SPECIFIC CONDITIONS FOR ROADWAYS

2.6.1 Description

Roadways at the plant (the affected roadways) would be sources of fugitive particulate matter due to vehicle traffic. Roadways that serve trucks delivering bulk materials needed for the operation of the plant (e.g., water for the combustion turbines, reagent for the SCR systems for the turbines, or chemicals for water treatment) would be paved to reduce the generation of emissions. In addition, appropriate mitigative measures would be used, as needed, including a formal dust control program.

2.6.2 Control Technology Determination - BACT

- a. The opacity of fugitive particulate matter emissions from affected roadways shall not exceed 10 percent. For this purpose, opacity shall be determined in accordance with 35 IAC 212.109.
- b. All affected roadways that are subject to regular travel shall be paved.
- c. The Permittee shall implement mitigative measures by means of a fugitive dust control program, as needed to comply with the limits in Conditions 2.6.2(a), 2.6.3 and 2.6.4. The fugitive dust control program shall address mitigative measures for control of fugitive dust on affected roadways, including but not limited to, vacuum sweeping, broom sweeping, water or surface spray, and prompt cleanup of spillage onto roadways.

2.6.3 Applicable State Emission Standards

- a. For the affected roadways, the Permittee shall comply with 35 IAC 212.301 and 212.314, which provide that emissions of fugitive particulate matter shall not be visible from any process, including material handling and storage activities, 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.

2.6.4 Emission Limits

- a. Emissions of PM, PM₁₀, and PM_{2.5} from the affected roadways shall not exceed 0.43, 0.09, and 0.04 tons/year, respectively. Compliance with these limits shall be determined from the amount and nature of vehicle traffic on roadways and appropriate emission factors published by USEPA.

2.6.5-1 Opacity Observations

- a. The Permittee shall conduct observations for the opacity of fugitive emissions from the affected roadways as follows. These observations shall be conducted when trucks transporting bulk materials are travelling on the various roadways.
 - i. "Performance observations" shall be conducted not later than 45 days after the performance testing for the combustion turbines required by Condition 2.1.7-1(b). For these

observations, the Permittee shall submit test plans, test notifications and test reports, as specified by Condition 3.1.

- ii. Unless otherwise provided by the CAAPP permit for the plant, "compliance observations" shall be conducted for affected roadways at least every 30 months to verify opacity levels.
- iii. Upon written request by the Illinois EPA, the Permittee shall conduct opacity observations, as specified in the request. Unless another date is agreed to by the Illinois EPA, these observations shall be completed within 30 days or the date that bulk materials are next scheduled to be handled on the specified roadway(s), whichever date is later.

- b. The Permittee shall keep records for these opacity observations.

2.6.5-2 Inspection Requirements

- a. The Permittee shall inspect the main roadways at the complex, including the haul roads, on at least an annual basis to confirm compliance with Condition 2.6.2(b). The Permittee shall keep records for these inspections, which shall include the date of the inspection, the name of the individual(s) who conducted the inspection, and a description of the condition of the paving on various segment of each main roadway, including any repairs to the paving that are recommended.

2.6.6 Recordkeeping Requirements

- a. The Permittee shall keep a file that contains:
 - i. The operating factors used to determine the amount of vehicle traffic associated with the affected roadways or the particulate emissions from the affected roadways, with supporting documentation.
 - ii. The maximum PM, PM₁₀ and PM_{2.5} emissions of the affected roadways, in tons per year, considering the maximum amounts of vehicle traffic needed for the operation of the plant, with supporting calculations and documentation, and confirmation that the control measures used by the Permittee for roadways, if any, are sufficient to ensure compliance with the emission limits in Condition 2.6.4.
- b. If a fugitive dust control program is required pursuant to Condition 2.6.2(c), the Permittee shall maintain the following:
 - i. A written description of the program, including the roadways addressed by the program, and if implementation of the program only occurs during certain circumstances (e.g., season or weather conditions), a description of those circumstances.
 - ii. Records for each treatment of roadway(s), including the identity of the roadway(s), the date and time, and the

identification of the treatment equipment used, and any deficiencies in the condition of such equipment.

- c. The Permittee shall maintain records for the PM, PM₁₀, and PM_{2.5} emissions of the affected roadways, based on data for shipments of bulk materials for the plant and appropriate USEPA emission estimation methodology and emission factors (tons/month and tons/year), with supporting calculations.

2.6.7 Reporting Requirements

- a. For the affected roadways, the Permittee shall notify the Illinois EPA of deviations from the requirements of this permit for these units, in accordance with Condition 3.4. For this purpose, deviations shall be reported with the periodic compliance reports for the combustion turbines required by Conditions 2.1.10(d).

PART 3: GENERAL PERMIT CONDITIONS

3.1: General Requirements for Emission Testing

- a. i. At least 60 days prior to the actual date of initial emission testing required by this permit, a written test plan shall be submitted to the Illinois EPA for review. This plan shall describe the specific procedures for testing and shall include at a minimum:
 - A. The person(s) who will be performing sampling and analysis and their experience with similar tests.
 - B. The specific conditions, e.g., operating rate and control device operating conditions, under which testing shall be performed including a discussion of why these conditions will be representative and the means by which the operating parameters will be determined.
 - C. The specific determinations of emissions that are intended to be made, including sampling and monitoring locations.
 - D. The test method(s) that will be used, with the specific analysis method if the method can be used with different analysis methods.
- ii. As provided by 35 IAC 283.220(d), the Permittee need not submit a test plan for subsequent emissions testing that will be conducted in accordance with the procedures used for previous tests accepted by the Illinois EPA or the previous test plan submitted to and approved by the Illinois EPA, provided that the Permittee's notification for testing, as required below, contains the information specified by 35 IAC 283.220(d)(1)(A), (B) and (C).
- b. i. The Permittee shall notify the Illinois EPA prior to performing emissions testing required by this permit to enable the Illinois EPA to observe the tests. Notification for the expected date of testing shall be submitted a minimum of 30 days prior to the expected date and identify the testing that will be performed. 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 testing. Notwithstanding 40 CFR 60.8(d), the Illinois EPA may at its discretion accept notifications with shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe testing.
- ii. This notification shall also identify the parties that will be performing testing and the set or sets of operating conditions under which testing will be performed.
- c. Three copies of the Final Reports for emission tests shall be forwarded to the Illinois EPA within 30 days after the test results are compiled and finalized but not later than 90 days

after the date of testing. At a minimum, the Final Report for testing shall contain the following. 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.

- i. A tabular summary of results which includes:
 - A. Process rates (e.g., feedstock usage rate or firing rate).
 - B. Measured emission rates for different pollutants tested.
 - C. Emission factor, calculated using the average test results in the terms of the applicable limits, for example, in terms of lb/mmBtu.
 - D. Compliance demonstrated - Yes/No.
- ii. Description of test method(s) and procedures, including a description of sampling points, sampling train, analysis equipment, and test schedule.
- iii. Detailed description of test conditions, including:
 - A. Pertinent process information (e.g., usage of fuel and the heat and sulfur content of the fuel that is representative of the fuel burned during the period of testing).
 - B. Control equipment information (i.e., monitored data and other relevant operating parameters during testing).
- iv. Data and calculations, including copies of all raw data sheets and records of laboratory analysis, sample calculations, and data on equipment calibration.

3.2: 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 practice.
- 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.

3.3: General Requirements for Recordkeeping for Deviations

- a. Except as specified in a particular provision of this permit or in a subsequent CAAPP Permit for the plant, records for deviations from applicable requirements shall include at least the following information: the date, time and estimated duration of the deviation; a description of the deviation; the manner in which the deviation was identified, if not readily apparent; the probable cause for deviation, if known, including a description of any equipment malfunction or breakdown associated with the deviation; 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.

3.4: General Requirements for Reporting of Deviations

- a. The Permittee shall include the following information in records and reports for deviations:
 - i. Identity of the deviation, with date, time, duration and description.
 - ii. Describe the effect of the deviation on compliance, with an estimate of the excess emissions that accompanied the deviation, if any.
 - iii. Describe the probable cause of the deviation and any corrective actions or preventive measures taken.
- b.
 - i. Unless otherwise specified in a particular condition of this permit, if deviation(s) from requirements of this permit occurs during a reporting period, a compliance report shall be submitted no later than 45 days after the end of the reporting period.
 - ii. If there are no deviations during a reporting period, the Permittee shall still submit a compliance report, which report shall state that no deviations occurred during the reporting period.
- c. Upon issuance of a Clean Air Act Permit Program (CAAPP) permit for the plant, the provisions of the CAAPP permit with respect to reporting of deviations will supersede the requirements of this permit.

ATTACHMENTS

ATTACHMENT 1: SUMMARY OF THE PERMITTED EMISSIONS OF THE PLANT (TONS/YEAR)

Pollutant	Combustion Turbines	Auxiliary Boiler	Engines	Circuit Breakers	Components	Roadways	Storage Tanks	Total
NOx	264.12	0.43	9.38	-	-	-	-	273.9
CO	319.97	1.60	5.88	-	-	-	-	327.5
PM	100.62	0.08	0.33	-	-	0.43	-	101.5
PM ₁₀ /PM _{2.5}	130.72	0.32	0.54	-	-	0.09/0.04	-	131.7/131.6
VOM	62.76	0.06	1.03	-	0.02	-	0.01	63.9
SO ₂	47.30	0.06	0.03	-	-	-	-	47.4
Sulfuric Acid Mist	17.20	0.01	0.03	-	-	-	-	17.2
GHG, as CO ₂ e	3,580,575	5,059	1,108	137	39	-	-	3,586,918

a.

ATTACHMENT 2: SUMMARY OF THE PERMITTED HAP EMISSIONS OF THE PLANT (TONS/YEAR)^{a,b}

Pollutant ^c	Combustion Turbines	Auxiliary Boiler	Engines	Total
Total HAPs	18.40	0.08	0.03	18.51
Any Individual HAP	8.60 ^c	0.08 ^d	<0.01 ^d	---
Formaldehyde	8.60 ^c	<0.01 ^d	<0.01 ^d	8.60

Table Notes:

- This summary addresses operation of the plant after initial shakedown of the plant, as defined in Condition 1.12, is complete.
- The HAP emissions from units at the plant that are not listed in this summary, including the roadways, circuit breakers, and natural gas piping components, are negligible (i.e., no more than 0.001 tons/year). In particular, the circuit breakers are not listed because SF₆ is not a HAP. Similarly, natural gas piping and associated components are not listed because methane is not a HAP. The organic liquid storage tanks are also not addressed as they will store ultra-low-sulfur diesel fuel or lubricating oil.
- For the combustion turbines, separate limits are set for individual HAPs, i.e., formaldehyde.
- For the auxiliary boiler and the engines, separate limits for individual HAPs are not set given the small magnitude of the total HAPs from these units. These values represent the potential emissions for individual HAPs from these units.

ATTACHMENT 3: 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.
- 6
- a. 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.



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

2520 WEST ILES AVENUE, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397

JB PRITZKER, GOVERNOR

JAMES JENNINGS, ACTING DIRECTOR

217/785-1705

ACID RAIN PROGRAM PHASE II PERMIT

Lincoln Land Energy Center, LLC
Attn: James Palumbo
4410 Dusty Meadow Lane
Sugar Land, Texas 77479

ORIS No.: [To be assigned by ORIS]
IEPA I.D. No.: 167085ABB
Source/Unit: Lincoln Land Energy Center/Generating Units 1 and 2
Date Received: April 6, 2018
Date Issued: July 29, 2022
Effective Date: July 29, 2022
Expiration Date: July 29, 2027

STATEMENT OF BASIS:

In accordance with Section 39.5(17)(b) of the Illinois Environmental Protection Act and Titles IV and V of the Clean Air Act, the Illinois Environmental Protection Agency is issuing this Acid Rain Program permit to Lincoln Land Energy Center.

SULFUR DIOXIDE (SO₂) ALLOCATIONS AND NITROGEN OXIDE (NO_x) REQUIREMENTS FOR EACH AFFECTED UNIT:

Combined Cycle Generating Units CT-1 and CT-2	SO ₂ Allowances	These units are not entitled to an allocation of SO ₂ allowances pursuant to 40 CFR Part 73
	NO _x Limitation	These units are not subject to a NO _x emissions limitation pursuant to 40 CFR Part 76

PERMIT APPLICATION: The permit application, which includes SO₂ allowance requirements and other standard requirements, is attached and incorporated as part of this permit. The owners and operators of this source must comply with the standard requirements and special provisions set forth in the application.

COMMENTS, NOTES AND JUSTIFICATIONS: This permit contains provisions related to SO₂ emissions and requires the owners and operators to hold SO₂ allowances to account for SO₂ emissions from the affected units. An allowance is a limited authorization to emit up to one ton of SO₂ during or after a specified calendar year. The affected units are new units and there is no allowance allocation for new units by USEPA. Although these units are not eligible for an allowance allocation by USEPA, the owners or operators through their designated representative must obtain SO₂ allowances to cover emissions in accordance with the SO₂ allowance system requirements of 40 CFR Part 73. The transfer of allowances to and from a unit account does not necessitate a revision to the unit SO₂ allocations denoted in this permit (See 40 CFR 72.84). This permit contains provisions related to NO_x emissions and requires the owners and operators to monitor NO_x emissions from affected units in accordance with applicable provisions of 40 CFR Part 75. These units

2125 S. First Street, Champaign, IL 61820 (217) 278-5800
115 S. LaSalle Street, Suite 2203, Chicago, IL 60603
1101 Eastport Plaza Dr., Suite 100, Collinsville, IL 62234 (618) 346-5120
9511 Harrison Street, Des Plaines, IL 60016 (847) 294-4000

595 S. State Street, Elgin, IL 60123 (847) 608-3131
2309 W. Main Street, Suite 116, Marion, IL 62959 (618) 993-7200
412 SW Washington Street, Suite D, Peoria, IL 61602 (309) 671-3022
4302 N. Main Street, Rockford, IL 61103 (815) 987-7760

are not subject to a NOx emission limitation because USEPA has not adopted such limitations for combustion turbine generating units.

This Acid Rain Program permit does not authorize the construction and operation of the affected units as such matters are addressed by Titles I and V, respectively, of the Clean Air Act. This permit also does not affect the source's responsibility to meet all other applicable local, state and federal requirements, including state and federal requirements under the Clean Air Interstate Rule and 35 IAC Part 225, Subparts C, D, and E.

If you have any questions regarding this permit, please contact Bob Smet or Jason Schnepf at 217/785-1705.

William D. Marr

William D. Marr
Manager, Permits Section
Bureau of Air

WDM:RPS:tan

cc: USEPA Region V



STEP 3

Permit Requirements

Read the standard requirements.

- (1) The designated representative of each affected source and each affected unit at the source shall:
 - (i) Submit a complete Acid Rain permit application (including a compliance plan) under 40 CFR part 72 in accordance with the deadlines specified in 40 CFR 72.30; and
 - (ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain permit application and issue or deny an Acid Rain permit;
- (2) The owners and operators of each affected source and each affected unit at the source shall:
 - (i) Operate the unit in compliance with a complete Acid Rain permit application or a superseding Acid Rain permit issued by the permitting authority; and
 - (ii) Have an Acid Rain Permit.

Monitoring Requirements

- (1) The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75.
- (2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the source or unit, as appropriate, with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
- (3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

Sulfur Dioxide Requirements

- (1) The owners and operators of each source and each affected unit at the source shall:
 - (i) Hold allowances, as of the allowance transfer deadline, in the source's compliance account (after deductions under 40 CFR 73.34(c)), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the affected units at the source; and
 - (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
- (2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.
- (3) An affected unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
 - (i) Starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2); or
 - (ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3).
- (4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
- (5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
- (6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
- (7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements

The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

STEP 3, Cont'd.

Excess Emissions Requirements

- (1) The designated representative of an affected source that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.
- (2) The owners and operators of an affected source that has excess emissions in any calendar year shall:
 - (i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
 - (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

Recordkeeping and Reporting Requirements

- (1) Unless otherwise provided, the owners and operators of the source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:
 - (i) The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
 - (ii) All emissions monitoring information, in accordance with 40 CFR part 75, provided that to the extent that 40 CFR part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply.
 - (iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,
 - (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.
- (2) The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

Liability

- (1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
- (2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
- (3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
- (4) Each affected source and each affected unit shall meet the requirements of the Acid Rain Program.
- (5) Any provision of the Acid Rain Program that applies to an affected source (including a provision applicable to the designated representative of an affected source) shall also apply to the owners and operators of such source and of the affected units at the source.
- (6) Any provision of the Acid Rain Program that applies to an affected unit (including a provision applicable to the designated representative of an affected unit) shall also apply to the owners and operators of such unit.
- (7) Each violation of a provision of 40 CFR parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Lincoln Land Energy Center

Acid Rain - Page 4

Facility (Source) Name (from STEP 1)

STEP 3, Cont'd.

Effect on Other Authorities

No provision of the Acid Rain Program, an Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 shall be construed as:

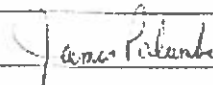
- (1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;
- (2) Limiting the number of allowances a source can hold; provided, that the number of allowances held by the source shall not affect the source's obligation to comply with any other provisions of the Act;
- (3) Requiring a change of any kind in any State law regulating electric utility rates and charges affecting any State law regulating such State regulation, or limiting such State regulation, including any prudency review requirements under such State law;
- (4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or
- (5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

STEP 4

Certification

Read the certification statement, sign, and date.

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine and imprisonment.

Name	Jim Palumbo	
Signature		Date 05/21/2019



STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
BUREAU OF AIR
P. O. BOX 19276
SPRINGFIELD, ILLINOIS 62794-9276

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

July 1, 1985

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 Agency and a supplemental written permit issued.
4. The Permittee shall allow any duly authorized agent of the Agency 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 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 emission 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 the 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 Agency (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.
- 6.
 - a. Unless a joint construction/operation permit has been issued, a permit for operation shall be obtained from the Agency 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 Agency 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 statements 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.