



01/26/2026

Mr. Ryan Williams
Chestnut Run Energy LLC
155 Federal St., 17th Floor
Boston, MA 02110

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL

Facility ID: 0210012080
Permit Number: P0138841
Permit Type: Initial Installation
County: Carroll

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 facility has been issued for the emissions unit(s) listed in the Auth... draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the permit. A public notice will appear in the Ohio Environmental Protection Agency (Ohio EPA) Weekly Review and Public Notices website. A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically on the Ohio EPA document search webpage: eDocument Search. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrea Moore
Permitting Section
Ohio EPA, DAPC
50 West Town Street, Suite 700
P.O. Box 1049
Columbus, Ohio 43216-1049

Ohio EPA DAPC, Northeast District Office
2110 East Aurora Rd.
Twinsburg, OH 44087

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published on the Ohio EPA Weekly Review and Public Notices website. You will be notified in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Ohio EPA DAPC, Northeast District Office at (330)963-1200.

Sincerely,

Robert Hodanbosi (signature)

Robert Hodanbosi
Chief, Division of Air Pollution Control

cc: U.S. EPA Region 5 - Via E-Mail Notification
Ohio EPA-NEDO; Pennsylvania; West Virginia

Table with 2 columns: Yes/No and various permit categories like TOXIC REVIEW, PSD, SYNTHETIC MINOR TO AVOID MAJOR NSR, etc.

PUBLIC NOTICE

The following matters are the subject of this public notice by the Ohio Environmental Protection Agency. The complete public notice, including any additional instructions for submitting comments, requesting information, a public hearing, or filing an appeal may be obtained at: [Weekly Review and Public Notices | Ohio Environmental Protection Agency](#) or Hearing Clerk, Ohio EPA, 50 W. Town St., Columbus, Ohio 43215. Ph: 614-644-3037 email: HClerk@epa.ohio.gov

Draft Air Pollution Permit-to-Install Initial Installation

Chestnut Run Energy LLC
2276 Mobile Rd
Carrollton, OH 44615

ID#: P0138841

Date of Action: 01/26/2026

Permit Desc: Initial installation PTI of a NG-fired combined cycle combustion turbine electric generating facility, nominally rated at 1,300 MW.

Carroll County

PUBLIC NOTICE

Issuance of Draft Air Pollution PSD Permit

Chestnut Run Energy LLC

Issue Date: January/23/2026

Permit Number: P0138841

Permit Type: PSD

Facility ID: 0210012080

Facility Location: 2276 Mobile Road
Carrollton, OH 44615

Permit/Facility Description: Permit-to-install (PTI) for installation of a nominal net 1,300 MW Potential combined-cycle gas turbine (CCGT) electric generating facility located in Carroll County.

The Director of the Ohio Environmental Protection Agency, 50 West Town Street, Columbus Ohio has issued a draft air pollution control Prevention of Significant Deterioration (PSD) installation permit for the listed facility. The draft permit is being issued to solicit comments from any interested party for the director to consider prior to making a final decision.

The proposed allowable emission rates of PSD pollutants from the facility in tons per rolling 12 month period are: Nitrogen Oxides (NOx) 341.67; PM less than or equal to 10 microns (PM10) and PM less than or equal to 2.5 microns (PM2.5) 202.08; Sulfur Dioxide (SO2) 65.04; Volatile Organic Compounds (VOC) 125.86; Carbon Monoxide (CO) 282.28; Sulfuric Acid (H2SO4) 46.46; Greenhouse Gas/Carbon Dioxide equivalent 5,235,432. Air dispersion modeling was performed to show allowed emission levels will not cause or contribute to an exceedance of any National Ambient Air Quality Standard (NAAQS) or the PSD Class II Significant Impact Levels. The maximum air pollutant concentrations and averaging periods that are expected from this facility are the following in micrograms per cubic meter: 7.10 nitrogen dioxide 1-hour, 0.47 nitrogen dioxide annual, 1.09 PM 2.5 24-hour, 0.10 PM2.5 annual, 0.10 PM10 24-hour, and 1.63 SO2 1-hour. Air dispersion modeling was also performed to evaluate potentially toxic compounds and passed all toxic modeling thresholds. All other pollutants were too small to model.

Written comments on the draft permit must be received by the close of the business day on February 23, 2026. Comments received after this date may not be considered a part of the official record. Written comments may be submitted to: Kevin Fortune, Ohio EPA DAPC, Northeast District Office, 2110 East Aurora Rd., Twinsburg, OH 44087, kfortune@epa.ohio.gov

Any person may request a public hearing and if the agency determines that significant public interest is shown, a public hearing may be held concerning the draft permit. The draft permit and complete instructions for requesting information or submitting comments may be obtained at: <https://epa.ohio.gov/help-center/edocument-search/edocument-search> by entering the permit number P0138841. Or by contacting: Kevin Fortune, Ohio EPA DAPC, Northeast District Office, 2110 East Aurora Rd., Twinsburg, OH 44087. Physical copies of the permit or copies of supporting records may be inspected and copied at the DO or LAA, located at the above address, telephone number 330-963-1200.

Persons interested in joining Ohio EPA's mailing list concerning this or similar actions may sign up using the following link:
https://public.govdelivery.com/accounts/OHEPA/subscriber/new?topic_id=OHEPA_281&pop=t



Permit Number: P0138841
Facility Name: Chestnut Run Energy LLC
Facility ID: 0210012080
Working Copy of a Permit in Progress

**STAFF DETERMINATION FOR THE APPLICATION TO CONSTRUCT
UNDER THE PREVENTION OF SIGNIFICANT DETERIORATION REGULATIONS
FOR CHESTNUT RUN ENERGY LLC
CARROLLTON, OHIO (CARROLL COUNTY)
PTI NUMBER P0138841**

Ohio Environmental Protection Agency
Division of Air Pollution Control
Lazarus Government Center
50 West Town Street, Suite 700
Columbus, Ohio 43216

The CAA and regulations promulgated thereunder require that major air pollution sources undergoing construction or modification comply with all applicable PSD provisions and nonattainment area NSR requirements. The federal PSD rules govern emission increases in attainment areas for major sources, which are sources with the potential to emit 250 TPY or more of any pollutant regulated under the CAA, or 100 TPY or more if the source is included in one of 28 source categories. In nonattainment areas, the definition of major source is one having at least 100 TPY potential emissions. A major modification is one resulting in a contemporaneous increase in emissions which exceeds the significance level of one or more pollutants. Any changes in actual emissions within a five-year period are considered to be contemporaneous. In addition, Ohio now has incorporated the PSD and NSR requirements by rule under OAC 3745-31.

Both PSD and nonattainment rules require that certain analyses be performed before a facility can obtain a permit authorizing construction of a new source or major modification to a major source. The principal requirements of the PSD regulations are:

- 1) **BACT review** - A detailed engineering review must be performed to ensure that BACT is being installed for the pollutants for which the new source is a major source.
- 2) **Ambient Air Quality Review** - An analysis must be completed to ensure the continued maintenance of the NAAQS and that any increases in ambient air pollutant concentrations do not exceed the incremental values set pursuant to the CAA.

For nonattainment areas, the requirements are:

- 1) **LAER** - New major sources must install controls that represent the lowest emission levels (highest control efficiency) that has been achieved in practice.
- 2) The emissions from the new major source must be offset by a reduction of existing emissions of the same pollutant by at least the same amount, and a demonstration must be made that the resulting air quality shows a net air quality benefit. This is more completely described in the Emission Offset Interpretative Ruling as found in Appendix S of 40 CFR Part 51.
- 3) The facility must certify that all major sources owned or operated in the state by the same entity are either in compliance with the existing SIP or are on an approved schedule resulting in full compliance with the SIP.



Permit Number: P0138841
Facility Name: Chestnut Run Energy LLC
Facility ID: 0210012080
Working Copy of a Permit in Progress

For rural ozone nonattainment areas, the requirements are:

- 1) LAER - New major sources must install controls that represent the lowest emissions levels (highest control efficiency) that has been achieved in practice.
- 2) The facility must certify that all major sources owned or operated in the state by the same entity are either in compliance with the existing SIP or are on an approved schedule resulting in full compliance with the SIP.

Finally, NSPS, SIP emission standards and public participation requirements must be followed in all cases.

Site/Facility Description

Chestnut Run Energy LLC has submitted a PTI application for the installation of a nominal net 1,300 MW Potential combined-cycle gas turbine (CCGT) electric generating facility located in Carroll County.

The area is designated as attainment for NSR-regulated criteria pollutants, including those triggering PSD review: CO, NO_x, SO₂, PM₁₀, PM_{2.5}, SO₂, VOC, H₂SO₄, GHG. The Title V permit program applies to this project once operating. When built and operating it will be subject to the Title V Permit Program.

This facility is similar to the Lordstown Energy (P0117655), Oregon Clean Energy Center (P0117413), South Field Energy (P0119495) and Carroll County Energy Center (P0113762), hence similar permit terms and conditions. The facility will utilize two GE Model 7HA.03 combustion turbines with NG being the primary fuel and Ultra Low Sulfur Diesel (ULSD) fuel being the secondary fuel. The design (new and clean) net plant base heat rate is 7,500 Btu/kW-hr HHV (ISO conditions without duct firing) which is an indicator of the efficiency of heat input being converted to electricity.

NSR/PSD Applicability

The emissions units will generate NSR-regulated emissions of PM₁₀/PM_{2.5}, CO, NO_x, VOC, SO₂ and CO_{2e}. A PSD analysis is required for pollutant emissions exceeding the PSD threshold levels. Nonattainment NSR is not applicable, due to the attainment status of the area. Of the pollutants emitted by the proposed source, only VOC will result in a net increase in annual emissions above PSD major source or significant emission rate levels. Table 1 below summarizes pollutant changes and emissions allowed under the draft PTI (also see the permit application). This facility is projected to be a major source for HAPs. The following chart identifies the facility's PTE:

TABLE 1
POTENTIAL TO EMIT (PTE)
CHESTNUT RUN ENERGY LLC

Pollutant	CCGT 1 (TPY)	CCGT 1 (TPY)	Ancillary Equipment (TPY)	Total Tons per rolling, 12-month period
PM ₁₀ /PM _{2.5}	100.4	100.4	1.18	202.08
SO ₂	32.4	32.4	0.21	65.04
NO _x	167.2	167.2	17.9	341.67
CO	137.9	137.9	6.51	282.28
VOC	62.5	62.5	0.93	125.86
H ₂ SO ₄	23.21	23.21	0.03	46.46
Pb	1.53E ⁻⁰³	1.53E ⁻⁰³	7.34E ⁻⁰⁵	3.14E ⁻⁰³
CO _{2e}	2,608,726	2,608,726	17,979.8	5,235,432
Maximum Individual HAP				11.3
Total HAPs	15.8	15.8	0.28	31.93

Carroll County is in attainment concerning NAAQS for all criteria pollutants.

Control Technology Review

As part of the application for any source regulated under the PSD requirements, an analysis must be conducted that demonstrates that BACT will be employed by the source. The facility is subject to PSD regulations which mandate a case-by-case BACT analysis be performed for PSD triggering pollutants. The application uses a "top down" approach to evaluate the latest demonstrated control techniques and select the appropriate controls.

BACT Evaluation Steps:

Identify all available potential control options;

Eliminate technically infeasible options;

Rank remaining technologies by control effectiveness;

Evaluate the feasible controls by performance and cost analysis; and

Select the most effective control based on energy, environmental and economic impacts (generally, the feasible technology that is also considered to be cost effective).

Summary of BACT Analysis

There are similar installations in operation and included in the RBLC. The following tables show the results of the BACT analysis, including technologies identified (see application for further details).

TABLE 2

**4,200 MMBtu/hr Heat Input Turbine at ISO conditions and 820 MMBtu/hr Heat Input Duct Burner
Combustion Turbines (P001 and P002):**

Pollutant	Emission Rate (lb/MMBtu)	Emission Rate (ppmvdc)	Emission Rate (tons per rolling, 12-month period)*	BACT/BAT
NO _x				
CTG only	0.0073	2.0	107.24	2.0 ppmvdc
CTG w/DB	0.0074	2.0		**DLN and SCR
VOC				
CTG only	0.0013	1.0	62.5	2.0 ppmvdc (w/DB)
CTG w/DB	0.0026	2.0		1.0 ppmvdc (w/out DB) Good combustion controls and oxidation catalyst
CO				
CTG only	0.0044	2.0	137.9	2.0 ppmvdc
CTG w/DB	0.0045	2.0		Good combustion controls and oxidation catalyst
PM ₁₀ /PM _{2.5}				
CTG only	0.0042	n/a	100.4	Good combustion controls and pipeline-quality NG
CTG w/DB	0.0046	n/a		
SO ₂				
CTG only	0.0015	n/a	32.4	Pipeline-quality NG
CTG w/DB	0.0015	n/a		
H ₂ SO ₄				
CTG only	0.001	n/a	23.21	Pipeline-quality NG
CTG w/DB	0.0011	n/a		
GHG (CO _{2e})	800 lb CO _{2e} /MW- hr (at full load ISO conditions w/out duct burning)	n/a	2,608,726	High efficiency combustion technology

*Per emissions unit basis

**Dry low NO_x (DLN) burners and selective catalytic reduction (SCR)

TABLE 3
152 MMBtu/hr Auxiliary Boiler (B001):

Pollutant	Emission Rate (lb/MMBtu)	Emission Rate (lb/hr and tons per rolling, 12-month period)	BACT/BAT
NO _x	0.037	5.62 and 5.62	Low NO _x burner
VOC	0.0054	0.82 and 0.82	Good combustion controls
CO	0.037	5.62 and 5.62	Good combustion controls
PM ₁₀ /PM _{2.5}	0.0075	1.13 and 1.13	Pipeline-quality NG
SO ₂	0.0014	0.21 and 0.21	Pipeline-quality NG
H ₂ SO ₄	0.00021	0.03 and 0.03	Pipeline-quality NG
GHG (CO _{2e})	17,802 TPY	17,802 TPY	Pipeline-quality NG

TABLE 4
2,000 kW (2,682 hp) Emergency Generator (P003):

Pollutant	Emission Rate (g/hp-hr)	Emission Rate (lb/MMBtu)	Emissions Rate (lb/hr and tons per rolling, 12- month period)	BACT/BAT
NO _x	4.8	n/a	28.36 and 1.42	State-of-the-art combustion design
VOC	0.32	n/a	1.89 and 0.095	State-of-the-art combustion design
CO	2.61	n/a	15.42 and 0.77	State-of-the-art combustion design
PM ₁₀ /PM _{2.5}	0.15	n/a	0.89 and 0.044	State-of-the-art combustion design
SO ₂	n/a	0.0016	0.03 and 0.002	Low sulfur fuel
H ₂ SO ₄	n/a	0.0002	0.005 and 0.00023	Low sulfur fuel
GHG (CO _{2e})	n/a	n/a	153.45 TPY	Efficient design

TABLE 5

420 hp (309 kW) Emergency Fire Pump (P004):

Pollutant	Emission Rate (g/kW-hr)	Emission Rate (lb/MMBtu)	Emissions Rate (lb/hr and tons per rolling, 12- month period)	BACT/BAT
NO _x	3.0	n/a	2.78 and 0.14	State-of-the-art combustion design
VOC	0.5	n/a	0.37 and 0.02	State-of-the-art combustion design
CO	2.61	n/a	2.42 and 0.12	State-of-the-art combustion design
PM ₁₀ /PM _{2.5}	0.2	n/a	0.14 and 0.01	State-of-the-art combustion design
SO ₂	n/a	0.0015	0.005 and 0.00024	Low sulfur fuel
H ₂ SO ₄	n/a	0.0002	0.0007 and 0.00004	Low sulfur fuel
GHG (CO _{2e})	n/a	n/a	24.03 TPY	Efficient design

Air Dispersion Modeling Review

Air dispersion modeling was conducted for CO, NO₂, PM₁₀, PM_{2.5} and SO₂ to demonstrate compliance with the NAAQS and PSD Increments. The project's air quality dispersion modeling was submitted to Ohio EPA's Central Office and was reviewed by Reyna Knight.

Potential annual emissions in TPY for the proposed project are shown in the permit application, and are replicated here:

CO: 282.28 TPY
Pb: 0.00314 TPY
NO_x: 341.67 TPY
PM_{2.5}: 202.08 TPY
PM₁₀: 202.08 TPY
SO₂: 65.04 TPY
VOC: 125.86 TPY
H₂SO₄: 46.46 TPY
CO_{2e}: 5,235,432.27 TPY

Based on these potential emissions from the proposed facility, the project triggers Federal PSD modeling requirement for its emissions of CO, NO_x, PM_{2.5}, PM₁₀ and SO₂, as well as an accounting of secondary formation of both PM_{2.5} and O₃.



Permit Number: P0138841
Facility Name: Chestnut Run Energy LLC
Facility ID: 0210012080
Working Copy of a Permit in Progress

Modeling Information

Haley & Alrich has submitted an analysis of potential air quality and other environmental impacts on behalf of Chestnut Run Energy, LLC (CRE, Ohio EPA Facility ID 020012080) for the proposed new facility project related to the PTI application A0080149. CRE is proposing to construct and operate a 1300-MW NG-fired combined cycle electric generating facility located in Washington Township, Carroll County, Ohio that will utilize two combined cycle gas turbines, each configured in a 1x1x1 single-shaft powertrain arrangement.

Ambient Air Quality Monitoring Requirements

Significant Monitoring Concentrations (SMCs) represent a modeled impact that may compel the facility to conduct additional air quality monitoring prior to construction, if it is determined that existing monitors are not representative or have less than one year of complete data. Haley & Alrich submitted an analysis of potential air quality impacts from secondary ozone and secondary PM_{2.5} formation related to the project using the Tier 1 approach MERPs analysis for ozone and PM_{2.5}. The background ozone concentration of 65 ppb is the valid 2022-2024 design value for the Steubenville monitoring site (AQS ID 39-081-0017), located at 46.1 km southeast of the proposed CRE facility site. The results indicate that the total projected ozone impact is less than the area specific screening value of 5 ppb for secondarily formed ozone. The results indicate that the total predicted PM_{2.5} impact for both the 24-hour and annual average is less than the PSD Class II SIL.

PSD Increment and NAAQS

It is Ohio EPA practice that any new source will not consume more than one-half of the available PSD increment. Exceptions to this policy are granted on a case-by-case basis when modeled results are more than 50% but less than 83% of the increment. For the Chestnut Run Energy project the analysis showed that there will not be an exceedance of any NAAQS or PSD increment.

PSD Class I Analysis

The facility is approximately 211 km from the nearest Class I area (Otter Creek Wilderness, West Virginia). The project's Q/D is well below the Federal Land Managers (FLM) recommended screening value of 10. Therefore, no additional Class I analyses are required.

PSD Class II Analysis

Modeling was conducted to compare emissions to Ohio's Generally Acceptable Incremental Impacts (GAIIs, as max 1 -year values) and the PSD Class II Significant Impact Levels (SILs, as max 5 year average H1H values for NO₂ 1 hour and PM_{2.5} 24 hour SILs, conservatively as max H1H 5 year values for all other SILs), the emissions of CO, NOx, PM_{2.5}, PM₁₀ and SO₂ from the CRE facility resulting from the proposed project were included in the modeling, and performed using AERMOD. The modeling results showed no exceedances of the respective GAIIs or SILs. Therefore, no cumulative modeling analyses were required.

Pollutant	GAI	SIL
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(Averaging Time)	(Modeled Result) [% of GAI]	(Modeled Result) [% of SIL]
CO (1-Hour)	10000 µg/m ³ (431.05619 µg/m ³) [4.31%]	2000 µg/m ³ (438.72513 µg/m ³) [21.94%]
CO (8-Hour)	2500 µg/m ³ (172.75168 µg/m ³) [6.91%]	500 µg/m ³ (187.01659 µg/m ³) [37.40%]
NO ₂ (1-Hour)	188 µg/m ³ (8.42745 µg/m ³) [4.48%]	7.52 µg/m ³ (7.09740 µg/m ³) [94.38%]
NO ₂ (Annual)	12.5 µg/m ³ (0.50988 µg/m ³) [4.08%]	1 µg/m ³ (0.47317 µg/m ³) [47.32%]
PM _{2.5} (24-Hour)	4.5 µg/m ³ (1.06108 µg/m ³) [23.58%]	1.2 µg/m ³ (1.08941 µg/m ³) [90.78%]
PM _{2.5} (Annual)	2 µg/m ³ (0.12327 µg/m ³) [6.16%]	0.13 µg/m ³ (0.10286 µg/m ³) [79.12%]
PM ₁₀ (24-Hour)	15 µg/m ³ (1.06108 µg/m ³) [7.07%]	5 µg/m ³ (1.55264 µg/m ³) [31.05%]
PM ₁₀ (Annual)	8.5 µg/m ³ (0.12327 µg/m ³) [1.45%]	1 µg/m ³ (0.10286 µg/m ³) [10.29%]
SO ₂ (1-Hour)	196 µg/m ³ (1.63413 µg/m ³) [0.83%]	7.848 µg/m ³ (1.63413 µg/m ³) [20.82%]
SO ₂ (3-Hour)	256 µg/m ³ (1.00495 µg/m ³) [0.39%]	25 µg/m ³ (1.10926 µg/m ³) [4.44%]
SO ₂	45.5 µg/m ³	5 µg/m ³

(24-Hour)	(0.34860 µg/m ³) [0.77%]	(0.44405 µg/m ³) [8.88%]
SO ₂ (Annual)	10 µg/m ³ (0.03588 µg/m ³) [0.36%]	1 µg/m ³ (0.02780 µg/m ³) [2.78%]

Ohio Air Toxics Modeling

Modeling was completed for acetaldehyde, NH₃, ethylbenzene, formaldehyde, n-Hexane, propylene oxide, toluene, xylenes, and H₂SO₄ to demonstrate compliance with MAGLC criteria established in the evaluation method described in the Ohio EPA document entitled Option A – Review of New Sources of Air Toxic Emissions (Ohio EPA 1986).

The worst-case pollutant was H₂SO₄, with an emission rate of 5.60 lbs/hr and a MAGLC of 4.76 µg/m³. The model’s max predicted impact was 1.14 µg/m³.

Soils, Vegetation, and Visibility Analyses-Class I and Class II

Ohio EPA notes that Class I visibility criteria were established to protect the most sensitive “scenic vistas” from visible haze and color distortion. There are no Class I areas in Ohio and no nearby Class II areas expected to be impacted by the proposed project. Ohio EPA is unaware of visibility impairments caused by sources of similar size and annual emissions in the state. As such, Ohio EPA believes that the project will not cause a visibility impairment to the region.

Conclusion

Based upon the review of the PTI application and the supporting documentation provided by the applicant, the Ohio EPA staff has determined the installation will comply with all applicable State and Federal environmental regulations and that the requirements for BACT are satisfied. Therefore, the Ohio EPA staff recommends that a draft PTI be issued to Chestnut Run Energy LLC of Carroll County for the proposed project.



**Environmental
Protection
Agency**

DRAFT

Division of Air Pollution Control
Permit-to-Install
for
Chestnut Run Energy LLC

Facility ID: 0210012080
Permit Number: P0138841
Permit Type: Initial Installation
Issued: 01/26/2026
Effective: To be entered upon final issuance



**Environmental
Protection
Agency**

Division of Air Pollution Control
Permit-to-Install
for
Chestnut Run Energy LLC

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 4. EU Group - Turbines: P001 and P00261



Authorization

Facility ID: 0210012080
Facility Description: Chestnut Run Energy, LLC
Application Number(s): A0080149
Permit Number: P0138841
Permit Type: Permit-To-Install
Permit Fee: \$8,100.00 *DO NOT send payment at this time, subject to change before final issuance*
Issue Date: 01/26/2026
Effective Date: To be entered upon final issuance

This document constitutes issuance of a Permit-to-Install for the emissions unit(s) identified on the following page to:

Chestnut Run Energy LLC
2276 Mobile Rd
Carrollton, OH 44615

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northeast District Office
2110 East Aurora Rd.
Twinsburg, OH 44087
(330)963-1200

The above-named entity is hereby granted this Permit-to-Install for the air contaminant source(s) (emissions unit(s)) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and Federal laws and regulations and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

John Logue
Director

Authorization (continued)

Permit Number:P0138841

Permit Description:Initial installation PTI of a NG-fired combined cycle combustion turbine electric generating facility, nominally rated at 1,300 MW.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Emissions Unit ID: B001
Company Equipment ID: Auxiliary Boiler
Superseded Permit Number:
General Permit Category and Type: Not Applicable

Emissions Unit ID: P003
Company Equipment ID: Emergency Generator
Superseded Permit Number:
General Permit Category and Type: Not Applicable

Emissions Unit ID: P004
Company Equipment ID: Fire Pump
Superseded Permit Number:
General Permit Category and Type: Not Applicable

Group Name:Turbines

Emissions Unit ID:	P001
Company Equipment ID:	CCGT1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P002
Company Equipment ID:	CCGT2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

List of Commonly Used Abbreviations

AP-42 = U.S. EPA's Compilation of Air Pollution Emissions Factors	HVLP = high volume, low pressure	PER = Permit Evaluation Report
ASTM = American Society for Testing and Materials	LAER = lowest achievable emission rate	PM = particulate matter
BACT = Best Available Control Technology	lb(s)/hr = pound(s) per hour	PM ₁₀ = particulate matter with an aerodynamic diameter less than or equal to 10 microns
BAT = Best Available Technology	LDAR = leak detection and repair	PM _{2.5} = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns
CAA = Clean Air Act	LPG = liquefied petroleum gas/propane	ppb = parts per billion
CAM = compliance assurance monitoring	MACT = maximum achievable control technology	ppm = parts per million
CEMS = continuous emissions monitoring system	MAGLC = maximum acceptable ground level concentration	PSD = Prevention of Significant Deterioration
CFC = chlorofluorocarbon	mg/m ³ = milligrams per cubic meter	psi = pounds per square inch
CFR = Code of Federal Regulations	MM = million	psia = pounds per square inch absolute
CH ₄ = methane	MMBtu = million British Thermal Units	PTE = potential-to-emit
CI = compression ignition	MSDS = material safety data sheet	PTI = Permit-to-Install
CO = carbon monoxide	MSW = municipal solid waste	PTIO = Permit-to-Install and Operate
CO ₂ = carbon dioxide	NAAQS = National Ambient Air Quality Standard	PTO = Permit-to-Operate
COM = continuous opacity monitor	NESHAP = National Emission Standard for Hazardous Air Pollutants	PWR = process weight rate
DAPC = Division of Air Pollution Control	NG = natural gas	RACM = reasonably available control measures
DO/LAA = District Office/Local Air Agency	ng/m ³ = nanograms per cubic meter	RACT = reasonably available control technology
dscf = dry standard cubic foot	NH ₃ = ammonia	RATA = relative accuracy test audit
EAC = emissions activity category	NMHC = non-methane hydrocarbons	RTO = regenerative thermal oxidizer
eDocs = electronic documents database	NMOC = non-methane organic compound	SB265 = Senate Bill 265
ERAC = Environmental Review Appeals Commission	NO = nitrogen oxide	scfm = standard cubic feet per minute
ESP = electrostatic precipitator	NO ₂ = nitrogen dioxide	SI = spark ignition
EU = emissions unit	NO _x = nitrogen oxides	SIP = State Implementation Plan
FEPTIO = Federally Enforceable Permit-to-Install and Operate	NSPS = New Source Performance Standard	SO ₂ = sulfur dioxide
FER = Fee Emissions Report	NSR = New Source Review	SSMP = startup, shutdown, and malfunction plan
FR = Federal Register	NTV = Non-Title V	TDS = total dissolved solids
GACT = generally achievable control technology	O&M = operation and maintenance	TLV = threshold limit value
GHG = greenhouse gases	OAC = Ohio Administrative Code	TO = thermal oxidizer
gr/dscf = grains per dry standard cubic foot	OC = organic compound	TPH = ton(s) per hour
H ₂ S = hydrogen sulfide	Ohio EPA = Ohio Environmental Protection Agency	TPY = ton(s) per year
H ₂ SO ₄ = sulfuric acid	ORC = Ohio Revised Code	TSP = total suspended particulates
HAP = hazardous air pollutant	Pb = lead	VE = visible particulate emissions
HCl = hydrogen chloride	PBR = Permit-By-Rule	VMT = vehicle miles traveled
HF = hydrogen fluoride	PCB = polychlorinated biphenyl	VOC = volatile organic compound
Hg = mercury	PE = particulate emissions	WPP = work practice plan
hp = horsepower	PEMS = predictive emissions monitoring system	µg/m ³ = micrograms per cubic meter

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under state law only:
 - (1) Standard Term and Condition A.2.a), Severability Clause
 - (2) Standard Term and Condition A.3.c) through A. 3.e), General Requirements
 - (3) Standard Term and Condition A.6.c), Compliance Requirements
 - (4) Standard Term and Condition A.8., Air Pollution Nuisance
 - (5) Standard Term and Condition A.9., Reporting Requirements
 - (6) Standard Term and Condition A.10., Applicability
 - (7) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
 - (8) Standard Term and Condition A.14., Public Disclosure
 - (9) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
 - (10) Standard Term and Condition A.16., Fees
 - (11) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

- a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.
- b) All terms and conditions designated in parts B. and C. of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the state and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under state law only, only if specifically identified in this permit as such.

3. General Requirements

- a) Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification.
- b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d) This permit does not convey any property rights of any sort, or any exclusive privilege.



- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

4. Monitoring and Related Record Keeping and Reporting Requirements

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - (1) The date, place (as defined in the permit), and time of sampling or measurements.
 - (2) The date(s) analyses were performed.
 - (3) The company or entity that performed the analyses.
 - (4) The analytical techniques or methods used.
 - (5) The results of such analyses.
 - (6) The operating conditions existing at the time of sampling or measurement.
- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Northeast District Office.
 - (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Ohio EPA DAPC, Northeast District Office. The written reports shall be submitted quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.
 - (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the Ohio EPA DAPC, Northeast District Office every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semiannual report, which states that no deviations occurred during that period.
 - (4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after



reasonable inquiry, the statements and information in the report are true, accurate, and complete.

- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Ohio EPA DAPC, Northeast District Office in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

6. Compliance Requirements

- a) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the appropriate Ohio EPA District Office or contracted local air agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the electronic signature date shall constitute the date that the required application, notification or report is considered to be "submitted". Any document requiring signature may be represented by entry of the personal identification number (PIN) by responsible official as part of the electronic submission process or by the scanned attestation document signed by the Authorized Representative that is attached to the electronically submitted written report.

Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a Responsible Official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete

- b) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - (1) At reasonable times, enter upon the permittee's premises where a source is located, or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

- (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c) The permittee shall submit progress reports to the Ohio EPA DAPC, Northeast District Office concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

7. Best Available Technology

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

8. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Northeast District Office.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA DAPC, Northeast District Office. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

10. Applicability

This permit-to-install is applicable only to the emissions unit(s) identified in the permit-to-install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s) not exempt from the requirement to obtain a permit-to-install.

11. Construction of New Sources(s) and Authorization to Install

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that



the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended once by twelve months if application is made to the Director within a reasonable time before the termination date and the permittee shows good cause for any such extension.
- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update electronically will constitute notifying the Director of the permanent shutdown of the affected emissions unit(s).
- d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All records relating to any permanently shut down emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

Unless otherwise exempted, no emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31 and OAC Chapter 3745-77 if the restarted operation is subject to one or more applicable requirements.

- e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a deviation report, air fee emission report, or any other reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

12. Permit-To-Operate Application

The permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77. The permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve months after commencing operation of the emissions units covered by this permit. However, if operation of the proposed new or modified source(s) as authorized by this permit would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d) must be obtained before operating the source in a manner that would violate the existing Title V permit requirements.

13. Construction Compliance Certification

The applicant shall identify the following dates in the "Air Services" facility profile for each new emissions unit identified in this permit.

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.
- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

Effective Date: To be entered upon final issuance

15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

16. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

17. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the "Owner/Contact Change" functionality in "Air Services" once the transfer is legally completed. The change must be submitted through "Air Services" within thirty days of the ownership transfer date.

18. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

19. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.



**Environmental
Protection
Agency**

Draft Permit-to-Install
Chestnut Run Energy LLC
Permit Number: P0138841
Facility ID: 0210012080

Effective Date: To be entered upon final issuance

B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - a) None.
2. The following EU contained in this permit is subject to 40 CFR Part 60, Subparts A and Dc: B001. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the e-CFR website www.ecfr.gov or by contacting Ohio EPA NEDO.
3. The following EUs contained in this permit are subject to 40 CFR Part 60, Subparts A, KKKKa and TTTTa: P001 and P002. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the e-CFR website www.ecfr.gov or by contacting Ohio EPA NEDO.
4. The following EUs contained in this permit are subject to 40 CFR Part 60, Subparts A and IIII: P003 and P004. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the e-CFR website www.ecfr.gov or by contacting Ohio EPA NEDO.
5. The following EUs contained in this permit are subject to 40 CFR Part 63, Subparts A and ZZZZ: P003 and P004. The complete MACT requirements, including the MACT General Provisions may be accessed via the internet from the e-CFR website www.ecfr.gov or by contacting Ohio EPA NEDO.
6. Transportation Rule (TR) Trading Program Requirements
 - a) The permittee shall comply with all applicable Cross-State Air Pollution Rule (CSAPR) requirements (40 CFR Part 97, Subparts AAAAA – GGGGG) by the compliance date specified in 40 CFR 97, Subparts AAAAA – GGGGG.
 - b) The TR subject units, and the unit-specific monitoring provisions at this source, are identified in the following table. These units are subject to the requirements for the TR NO_x Annual Trading Program and TR NO_x Ozone Season Trading Program.

<u>Unit ID:</u>					
P001 and P002 - Combined cycle combustion turbine (4,200 MMBtu/hr heat input turbine at ISO conditions, NG firing with evaporative cooler on and 820 MMBtu/hr maximum heat input NG fired duct burner) with dry low NO _x combustors, selective catalytic reduction (SCR), and catalytic oxidizer.					
Parameter	CEMS requirements pursuant to 40 CFR part 75, subpart B (for SO ₂ monitoring) and 40 CFR part 75, subpart H (for NO _x monitoring)	Excepted monitoring system requirements for gas-fired units pursuant to 40 CFR part 75, appendix D	Excepted monitoring system requirements for gas-fired peaking units pursuant to 40 CFR part 75, appendix E	Low Mass Emissions excepted monitoring (LME) requirements for gas-fired units pursuant to 40 CFR 75.19	EPA-approved alternative monitoring system requirements pursuant to 40 CFR part 75, subpart E
SO ₂					
NO _x	X				
Heat input					



- c) The above description of the monitoring used by a unit does not change, create an exemption from, or otherwise affect the monitoring, recordkeeping, and reporting requirements applicable to the unit under 40 CFR 97.430 through 97.435 (TR NO_x Annual Trading Program), and 97.1030 through 97.1035 (TR NO_x Ozone Season Trading Program), as applicable]. The monitoring, recordkeeping, and reporting requirements applicable to each unit are included below in the standard conditions for the applicable TR trading programs.
- d) Owners and operators must submit to the Administrator a monitoring plan for each unit in accordance with 40 CFR 75.53, 75.62 and 75.73, as applicable. The monitoring plan for each unit is available at the EPA's website at <http://www.epa.gov/airmarkets/emissions/monitoringplans.html>.
- e) Owners and operators that want to use an alternative monitoring system must submit to the Administrator a petition requesting approval of the alternative monitoring system in accordance with 40 CFR part 75, subpart E and 40 CFR 75.66 and 97.435 (TR NO_x Annual Trading Program), and 97.1035 (TR NO_x Ozone Season Trading Program). The Administrator's response approving or disapproving any petition for an alternative monitoring system is available on the EPA's website at <http://www.epa.gov/airmarkets/emissions/petitions.html>
- f) Owners and operators that want to use an alternative to any monitoring, recordkeeping, or reporting requirement under 40 CFR 97.430 through 97.434 (TR NO_x Annual Trading Program), and 97.1030 through 97.1034 (TR NO_x Ozone Season Trading Program) must submit to the Administrator a petition requesting approval of the alternative in accordance with 40 CFR 75.66 and 97.435 (TR NO_x Annual Trading Program), and 97.1035 (TR NO_x Ozone Season Trading Program). The Administrator's response approving or disapproving any petition for an alternative to a monitoring, recordkeeping, or reporting requirement is available on EPA's website at <http://www.epa.gov/airmarkets/emissions/petitions.html>.
- g) The descriptions of monitoring applicable to the unit included above meet the requirement of 40 CFR 97.430 through 97.434 (TR NO_x Annual Trading Program), 97.1030 through 97.1034 (TR NO_x Ozone Season Trading Program), and therefore minor permit modification procedures, in accordance with 40 CFR 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B), may be used to add to or change this unit's monitoring system description.
- h) TR NO_x Annual Trading Program requirements

Designated representative requirements	97.406(a), 97.413-97.418
Emissions monitoring, reporting and recordkeeping requirements	97.406(b), 97.430-97.435
NO _x emissions requirements	97.406(c)
Title V permit revision requirements	97.406(d)
Additional recordkeeping and reporting requirements	97.406(e)
Liability	97.406(f)
Effect on other authorities	97.406(g)

- i) TR NO_x Ozone Season Trading Program requirements

Designated representative requirements	97.1006(a), 97.1013-97.1018
Emissions monitoring, reporting and recordkeeping requirements	97.1006(b), 97.1030-97.1035
NO _x emissions requirements	97.1006(c)
Title V permit revision requirements	97.1006(d)
Additional recordkeeping and reporting requirements	97.1006(e)
Liability	97.1006(f)
Effect on other authorities	97.1006(g)

7. Acid Rain Permits and Compliance – OAC chapter 3745-103

The permittee shall ensure that any affected unit complies with the requirements of OAC Chapter 3745-103, which includes submitting timely permit applications. Emissions exceeding any allowances that are lawfully held pursuant to this rule are prohibited. The requirements of this rule will be specified in the Title V permit issued to this facility.

8. All asbestos renovation and demolition activities conducted at this facility shall be performed in accordance with the applicable requirements specified in 40 CFR Part 61, Subpart M.

9. The facility is subject to the applicable requirements specified in OAC Chapter 3745-25. In accordance with Ohio EPA Engineering Guide #64, the emission control action programs, as specified in OAC rule 3745-25-03, shall be developed, and submitted within 60 days after receiving notification from Ohio EPA.

10. PSD REQUIREMENTS

The source described in this PTI is subject to the applicable provisions of the PSD regulations as promulgated by the U.S. EPA 40 CFR 52.21. The authority to apply and enforce the PSD regulations has been delegated to Ohio EPA. The terms and conditions of this permit and the requirements of the PSD regulations are also enforceable by the U.S. EPA.

In accordance with 40 CFR 124.15, 124.19 and 124.20, the following shall apply: (1) the effective date of this permit shall be 30 days after the service of notice to any public commenters of the final decision to issue, modify, or revoke and re-issue the permit, unless the service of notice is by mail, in which case the effective date of the permit shall be 33 days after the service of notice; and (2) if an appeal is made to the Environmental Appeals Board of the U.S. EPA, the effective date of the permit is suspended until such time as the appeal is resolved or denied.

Appeals will be addressed to:
United States Environmental
401 M Street, SW (MC-113do)
Washington, DC 20460



**Environmental
Protection
Agency**

Draft Permit-to-Install
Chestnut Run Energy LLC
Permit Number: P0138841
Facility ID: 0210012080

Effective Date: To be entered upon final issuance

C. Emissions Unit Terms and Conditions

1. B001, Auxiliary Boiler

Operations, Property and/or Equipment Description:

152 MMBtu/hr NG fired boiler with dry low NOx burners

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)(a)(ii)	The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM _{2.5} , PM ₁₀ , NO _x , CO, SO ₂ , or VOC emissions from this air contaminant source since the calculated annual emission rate is less than 10 TPY, taking into account the federally enforceable rule limits under OAC rules 3745-31-10 through 20.
b.	OAC rules 3745-31-10 through 20 (PSD of Air Quality)	<p>CO emissions shall not exceed 0.037 lb/MMBtu, 5.62 lbs/hr and 5.62 tons per rolling, 12-month period.</p> <p>NO_x emissions shall not exceed 0.037 lb/MMBtu, 5.62 lb/hr and 5.62 tons per rolling, 12-month period.</p> <p>PM₁₀ and PM_{2.5} emissions shall not exceed 0.0075 lb/MMBtu, 1.13 lb/hr and 1.13 ton per rolling, 12-month period.</p> <p>VOC emissions shall not exceed 0.0054 lb/MMBtu, 0.82 lb/hr and 0.82 ton per rolling, 12-month period.</p> <p>SO₂ emissions shall not exceed 0.0014 lb/MMBtu, 0.21 lb/hr and 0.21 ton per rolling, 12-month period.</p> <p>H₂SO₄ emissions shall not exceed 2.1 E-04 lb/MMBtu, 0.03 lb/hr and 0.03 ton per rolling, 12-month period.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		CO ₂ equivalent (CO ₂ e) emissions shall not exceed 17,802.4 tons per rolling, 12-month period. Visible PEs from the stack serving this EU shall not exceed 10% opacity as a 6-minute average. See b)(2)a.
c.	OAC rule 3745-31-05(F)	See b)(2)b.
d.	OAC rule 3745-17-07(A)	See b)(2)e.
e.	OAC rule 3745-17-10(B)(1)	See b)(2)e.
f.	OAC rule 3745-18-06(A)	Exempt. See c)(1)
g.	OAC rule 3745-110-03(K)(16)	See b)(2)c.
h.	40 CFR Part 60, Subpart A (40 CFR 60.1 - 40 CFR 60.19)	See b)(2)d.
i.	40 CFR Part 60, Subpart Dc (40 CFR 60.40c - 40 CFR 60.48c)	See b)(2)e. through b)(2)g.
j.	40 CFR Part 63, Subpart JJJJJJ	See b)(2)h.
k.	40 CFR Part 63, Subpart A (40 CFR 63.1 - 40 CFR 63.16)	See b)(2)h.

(2) Additional Terms and Conditions

- a. The lb/MMBtu and lb/hr emission limitations are based on the EU's PTE. Therefore, no monitoring, recordkeeping and reporting requirements are necessary to ensure ongoing compliance with these emission limitations.
- b. The maximum annual operating hours for this EU shall not exceed 2,000 hours per rolling, 12-month period.
- c. The permittee is exempt from the requirements of OAC rule 3745-110-03(A) through (G) since this permit restricts NO_x emissions from this EU to less than 25 TPY.
- d. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to EUs affected by 40 CFR Part 60.
- e. The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rules 3745-31-10 through 20.



- f. This rule does not establish emission limitations for NG-fired boilers but does require record keeping of gas usage.
 - g. This EU is subject to the applicable provisions of Subpart Dc of the NSPS as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60. The application and enforcement of these standards are delegated to Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.
 - h. This EU is exempt from the requirements of 40 CFR Part 63, Subpart JJJJJJ and the area source MACT requirements due to combusting only NG.
- c) **Operational Restrictions**
- (1) The permittee shall burn only NG in this EU.
 - (2) The sulfur content of NG burned in this EU shall not exceed 0.5 grain per 100 scf.
- d) **Monitoring and/or Recordkeeping Requirements**
- (1) For each day during which the permittee burns a fuel other than NG, the permittee shall maintain a record of the type and quantity of fuel burned in this EU.
 - (2) The permittee shall maintain monthly records of the following information:
 - a. the operating hours for each month;
 - b. the type of fuel combusted during operation; and
 - c. the rolling, 12-month summation of the monthly operating time, in hours (including each fuel that was combusted).
 - (3) See 40 CFR Part 60, Subpart Dc (40 CFR 60.40c - 48c).
- e) **Reporting Requirements**
- (1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than NG was burned in this EU. Each report shall be submitted within 30 days after the deviation occurs.
 - (2) Pursuant to 40 CFR Part 60.7 and 60.48c(a), the permittee is hereby advised of the requirement to report the following at the appropriate times:
 - a. construction date (no later than 30 days after such date);
 - b. actual start-up date (within 15 days after such date); and
 - c. the design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

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(3) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

- a. all exceedances of the rolling, 12-month limitation on the hours of operation for this EU.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard terms and conditions of this permit.

(4) See 40 CFR Part 60, Subpart Dc (40 CFR 60.40c-48c).

(5) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

CO emissions shall not exceed 0.037 lb/MMBtu of actual heat input, 5.62 lbs/hr and 5.62 tons per rolling, 12-month period.

Applicable Compliance Method:

The lb/MMBtu emission limitations are based on BACT/LAER Precedents for Auxiliary Boilers provided in the permit application. The hourly emission limitation was developed by multiplying the maximum heat input (152 MMBtu/hr) by the CO emission factor (0.037 lb/MMBtu) to determine the hourly emissions.

The annual emission limitation was developed based on the maximum hourly emissions for NG (5.62 lbs/hr) and then calculated in annual pounds using maximum total annual operating hours (2,000) and dividing the sum of the pounds by 2,000 lbs/ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the short-term limitation is shown.

Compliance with the short-term emission limitations shall be demonstrated based upon the emission test required in f)(2).

b. Emission Limitation:

NO_x emissions shall not exceed 0.037 lb/MMBtu, 5.62 lb/hr and 5.62 tons per rolling, 12-month period.

Applicable Compliance Method:

The lb/MMBtu emission limitations are based on BACT/LAER Precedents for Auxiliary Boilers provided in the permit application. The hourly emission limitation was developed by multiplying the maximum heat input (152 MMBtu/hr) by the NO_x emission factor (0.037 lb/MMBtu) to determine the hourly emissions.



The annual emission limitation was developed based on the maximum hourly emissions from NG (5.62 lbs/hr) and then calculated in annual pounds using maximum total annual operating hours (2,000) and dividing the sum of the pounds by 2,000 lbs/ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation is shown.

Compliance with the short-term emission limitations shall be demonstrated based upon the emission test required in f)(2).

c. Emission Limitation:

PM₁₀ and PM_{2.5} emissions shall not exceed 0.0075 lb/MMBtu, 1.13 lb/hr and 1.13 ton per rolling, 12-month period.

Applicable Compliance Method:

The lb/MMBtu emission limitations are based on BACT/LAER Precedents for Auxiliary Boilers provided in the permit application. The hourly emission limitation was developed by multiplying the maximum heat input (152 MMBtu/hr) by the PM₁₀/PM_{2.5} emission factor (0.0075 lb/MMBtu) to determine the hourly emissions.

The annual emission limitation was developed based on the maximum hourly emissions for NG (1.13 lb/hr) and then calculated in annual pounds using maximum total annual operating hours (2,000) and dividing the sum of the pounds by 2,000 lbs/ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation is shown.

Compliance with the short-term emission limitations shall be demonstrated based upon the emission test required in f)(2).

d. Emission Limitation:

VOC emissions shall not exceed 0.0054 lb/MMBtu, 0.82 lb/hr and 0.82 ton per rolling, 12-month period.

Applicable Compliance Method:

The lb/MMBtu emission limitations are based on BACT/LAER Precedents for Auxiliary Boilers provided in the permit application. The hourly emission limitation was developed by multiplying the maximum heat input (152 MMBtu/hr) by the VOC emission factor (0.0054 lb/MMBtu) to determine the hourly emissions.

The annual emission limitation was developed by multiplying the hourly emission limitation (0.82 lb/hr) by the maximum annual operating hours (2,000 hrs/yr) and dividing by 2,000 lbs/ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the annual operating hours limitation is shown.

Compliance with the short-term emission limitations shall be demonstrated based upon the emission test required in f)(2).

e. Emission Limitation:



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SO₂ emissions shall not exceed 0.0014 lb/MMBtu, 0.21 lb/hr and 0.21 ton per rolling, 12-month period.

Applicable Compliance Method:

The lb/MMBtu emission limitations are based on BACT/LAER Precedents for Auxiliary Boilers provided in the permit application. The hourly emission limitation was developed by multiplying the maximum heat input (152 MMBtu/hr) by SO₂ emission factor (0.0014 lb/MMBtu) to determine the hourly emissions.

The annual emission limitation was developed based on the maximum hourly emissions from NG (0.21 lb/hr) and then calculated in annual pounds using maximum total annual operating hours (2,000) and dividing the sum of the pounds by 2,000 lbs/ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation is shown.

If required, the permittee shall demonstrate compliance with the lb/MMBtu and hourly emission limitation using Methods 1 through 4 and 6C of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

f. Emission Limitation:

H₂SO₄ emissions shall not exceed 2.1 E-04 lb/MMBtu, 0.033 lb/hr and 0.033 ton per rolling, 12-month period.

Applicable Compliance Method:

The lb/MMBtu emission limitations are based on BACT/LAER Precedents for Auxiliary Boilers provided in the permit application. The hourly emission limitation was developed by multiplying the maximum heat input (152 MMBtu/hr) by the H₂SO₄ emission factor (2.1E-04 lb/MMBtu) to determine the hourly emissions.

The annual emission limitation was developed by multiplying the hourly emission limitation (0.033 lb/hr) by the maximum annual operating hours (2,000 hrs/yr) and dividing by 2,000 lbs/ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the annual operating hours limitation is shown.

If required, the permittee shall demonstrate compliance with the lb/MMBtu and lb/hr emissions limitations using Methods 1 through 4 and 8 of 40 CFR Part 60, Appendix A.

g. Emission Limitation:

CO₂ equivalent (CO₂e) emissions shall not exceed 17,784 lbs/hr and 17,784 tons per rolling, 12-month period.

Applicable Compliance Method:



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The annual emission limitation was established to reflect the PTE for this EU by calculating the sum of the calculated emissions based on the maximum total annual operating hours (2,000). The NG emissions are the product of the maximum NG firing rate (152 MMBtu/hr) multiplied by the AP-42 emission factors for CO₂, N₂O, and CH₄ from Table 1.4-2 dated 7/98 (120,000 lb/mmscf, 0.64 lb/mmscf, and 2.3 lb/mmscf, respectively), multiplied by the global warming potentials for CO₂, N₂O, and CH₄ (1, 298, and 25, respectively from Table A-1 to Subpart A of 40 CFR Part 98). Divide by the average heating value used for AP- 42 emission factors in Table 1.-42 dated 7/98 (1,020 Btu/scf), multiply by the annual hours and divide by 2,000 lbs/ton.

$$(152 \text{ MMBtu/hr}) \times \text{GWP} \times (\text{mmscf}/1020 \text{ MMBtu}) \times (2000 \text{ hr/yr}) \times (\text{ton}/2000 \text{ lbs}) =$$

$$\text{GWP} = (120,000 \text{ lb/hr/mmscf})(1) + (0.64 \text{ lb/hr/mmscf})(298) + (2.3 \text{ lb/hr/mmscf})(25)$$

If required, the permittee shall conduct emissions testing using Methods 1, 2, 3A, and 4 of 40 CFR Part 60, Appendix A to determine the lbs/scf CO₂ emission rate.

Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.



h. Emission Limitation:

Visible PEs from the stack serving this EU shall not exceed 10% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance with the stack visible PE limitation shall be demonstrated through VE observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

- (2) The permittee shall conduct, or have conducted, emission testing for this EU in accordance with the following requirements:
- a. The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the EU will be operated, but not later than 180 days after initial startup of the EU.
 - b. The emission testing shall be conducted to demonstrate compliance with the following emission limitations:
 - i. CO emissions in lb/hr and lb/MMBtu;
 - ii. NO_x emissions in lb/hr and lb/MMBtu;
 - iii. VOC emissions in lb/hr and lb/MMBtu;
 - iv. PM₁₀/PM_{2.5} emissions in lb/hr and lb/MMBtu;
 - v. SO₂ emissions in lb/hr and lb/MMBtu;
 - vi. H₂SO₄ emissions in lb/hr and lb/MMBtu; and
 - vii. for CO₂e emissions in lb/hr.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):
 - for CO, Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A;
 - for NO_x, Methods 1 through 4 and 7E of 40 CFR Part 60, Appendix A;
 - for VOC, Methods 1 through 4 and 18, 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A. Use of Method 18, 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents;
 - for SO₂, 40 CFR 60.4415;
 - for H₂SO₄, Methods 1 through 4 and 8 of 40 CFR Part 60, Appendix A;
 - for CO₂, Methods 1, 2, 3A, and 4 of 40 CFR Part 60, Appendix A, mass balance calculations using ASTM D1945-03 (Standard Test Method for Analysis of NG by Gas Chromatography) and/or ASTM D1826-94 (Standard Test Method for Calorific Value of Gases in NG Range by Continuous Recording Calorimeter); and

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for PM₁₀/PM_{2.5}, Methods 201 or 201A and 202 of 40 CFR Part 51, Appendix M.

Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

- d. The test(s) shall be conducted under those representative conditions that challenge, to the fullest extent possible, a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by Ohio EPA NEDO. Although this generally consists of operating the EU at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA NEDO. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the EU operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in Ohio EPA NEDO's refusal to accept the results of the emission test(s).
- f. Personnel from Ohio EPA NEDO shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the EU and the testing procedures provide a valid characterization of the emissions from the EU and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to Ohio EPA NEDO within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from Ohio EPA NEDO.

g) **Miscellaneous Requirements**

- (1) None.

2. P003, Emergency Generator

Operations, Property and/or Equipment Description:

2,682-hp emergency diesel generator

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)(a)(ii)	The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM _{2.5} , PM ₁₀ , NO _x , CO, SO ₂ , or VOC emissions from this air contaminant source since the calculated annual emission rate is less than 10 TPY, taking into account the federally enforceable rule limits under OAC rules 3745-31-10 through 20.
b.	OAC rules 3745-31-10 through 20 (PSD of Air Quality)	CO emissions shall not exceed 2.61 g/kW-hr, 15.42 lbs/hr, and 0.77 tons per rolling, 12-month period. NO _x emissions shall not exceed 4.8 g/kW-hr, 28.36 lbs/hr, and 1.42 tons per rolling, 12-month period. PM ₁₀ and PM _{2.5} shall not exceed 0.15 g/kW-hr, 0.89 lb/hr, and 0.044 ton per rolling, 12-month period. VOC emissions shall not exceed 0.32 g/kW-hr, 1.89 lbs/hr and 0.095 ton per rolling, 12-month period. SO ₂ emissions shall not exceed 0.03 lb/hr and 0.002 ton per rolling, 12-month period. H ₂ SO ₄ mist emissions shall not exceed 1.72E-06 lbs/HP-hr, 5.0E-03 lb/hr and 2.3E-04 ton per rolling, 12-month period.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		CO ₂ equivalent (CO ₂ e) emissions shall not exceed 153.45 tons per rolling, 12-month period. See b)(2)a.
c.	OAC rule 3745-31-05(F)	See b)(2)b.
d.	OAC rule 3745-17-07(A)	Visible PE from the stack serving this EU shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
e.	OAC rule 3745-17-11(B)(5)(a)	See b)(2)c.
f.	OAC rule 3745-18-06(G)	Less stringent than 40 CFR Part 60, Subpart IIII.
g.	OAC rule 3745-110-03(K)(16) and (K)(19)	Exemptions. See b)(2)d.
h.	40 CFR Part 60, Subpart A (40 CFR 60.1 - 60.19)	Table 8 to Subpart IIII of 40 CFR Part 60 - Applicability of General Provisions to Subpart IIII shows which parts of the General Provisions in 40 CFR 60.1 - 60.19 apply.
i.	40 CFR Part 60, Subpart IIII (40 CFR 60.4200 - 60.4219) [In accordance with 40 CFR 60.4200(a)(2), this EU is a CI emergency stationary internal combustion engine (CI ICE) for which construction commenced after July 11, 2005 subject to the emissions limitation/control measures specified in this section.]	Non-methane hydrocarbon (NMHC) + NO _x emissions shall not exceed 6.4 g/kW-hr. CO emissions shall not exceed 3.5 g/kW- hr. PM emissions shall not exceed 0.20 g/kW-hr. Exhaust opacity shall not exceed: 20 percent during acceleration mode; 15 percent during lugging mode; and 50 percent during the peaks in either the acceleration or lugging modes. See b)(2)e. [60.4205(b) and 60.4207(b)]
j.	40 CFR Part 63, Subpart ZZZZ (40 CFR 63.6580 - 63.6675) [In accordance with 40 CFR 63.6590(c)(1), this EU is a new stationary internal combustion engine (RICE) located at an area source of HAP emissions subject to the emissions limitation/control	See b)(2)f. [63.6580, 63.6585 and 63.6590(c)(1)]



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	measures specified in this section.]	
k.	40 CFR Part 63, Subpart A (40 CFR 63.1 – 40 CFR 63.16)	Table 8 to Subpart ZZZZ of 40 CFR Part 63 - Applicability of General Provisions to Subpart ZZZZ shows which parts of the General Provisions in 40 CFR 63.1 - 63.16 apply.

(2) Additional Terms and Conditions

- a. All PE are assumed to be less than 2.5 microns in diameter. The PM₁₀/PM_{2.5} emission limitations include both filterable and condensable PE.
- b. The maximum annual operating hours for this EU shall not exceed 100 hours, based upon a rolling, 12-month summation of the operating hours.
- c. The emission limitation required by this applicable rule is less stringent than the emission limitation established by OAC rules 3745-31-10 through 20.
- d. The requirements of this rule do not apply, since:
 - i. NO_x emissions are restricted to less than 25 TPY; and
 - ii. the EU is subject to a BACT limitation for NO_x.
- e. The permittee shall only combust ULSD fuel in this EU meeting the following standards:
 - i. 15 ppm maximum sulfur content; and
 - ii. a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.



- f. The permittee shall comply with the applicable restrictions required under 40 CFR Part 60, Subpart IIII, including the following sections:

60.4218	General Provisions
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c) Operational Restrictions

- (1) The permittee shall comply with the applicable restrictions required under 40 CFR Part 60, Subpart IIII, including the following sections:

60.4206	Duration of Standards
60.4207(b)	Fuel Requirements

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the following information:
- a. the operating hours for each month; and
 - b. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the operating hours.

Also, during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative operating hours for each calendar month.

- (2) For each shipment of ULSD fuel received for burning in this EU, the permittee shall maintain records of the oil supplier's (or permittee's) analyses for sulfur content in ppm (40 CFR 80.510). The permittee shall perform or require the supplier to perform the analyses for sulfur content in accordance with 40 CFR 80.585.
- (3) The permittee shall also maintain documentation of supplier verification that the ULSD fuel as purchased has a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.
- (4) The permittee shall comply with the applicable restrictions required under 40 CFR Part 60, Subpart IIII, including the following sections:

60.4209	Monitoring
60.4214	Notification, recordkeeping, reporting

e) Reporting Requirements



- (1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. each shipment of ULSD fuel received for burning in this EU that did not comply with the standards specified in b)(2)e; and
 - b. all exceedances of the rolling, 12-month limitation on the hours of operation for this EU.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard terms and conditions of this permit.

- (2) The permittee shall comply with the applicable restrictions required under 40 CFR Part 60, Subpart IIII, including the following sections:

60.4214	Notification, recordkeeping, reporting
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- (3) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

CO emissions shall not exceed 2.61 g/kW-hr, 15.42 lbs/hr, and 0.77 tons per rolling, 12-month period.

Applicable Compliance Method:

The g/kW-hr limitation is based on the Tier 2 emission standards under 40 CFR 89.112(a), Subpart B, Table 1. The hourly emission limitation was developed by multiplying the maximum operating load (2,000 kW) by the CO emission factor supplied by the manufacturer (3.5 g/kW-hr) and dividing by (454 g/lb) to determine the hourly emissions.

If required, the permittee shall demonstrate compliance with the g/kW-hr limitation and hourly emission limitation using Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was developed by multiplying the hourly emission limitation (15.42 lbs/hr) by the maximum annual operating hours (100 hrs/yr) and dividing by 2,000 lbs/ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation and operating hours restriction is shown.

b. Emission Limitation:



NO_x emissions shall not exceed 5.61 g/kW-hr, 28.36 lbs/hr, and 1.42 tons per rolling, 12-month period.

Applicable Compliance Method:

The g/kW-hr limitation is based on the combined NO_x + NMHC emission limitation specified by the Tier 2 standard in 40 CFR 89.112(a) Table 1 (6.4 g/kW-hr) multiplied by the Tier 1 emission limitation for NO_x in Table 1 (9.2 g/kW-hr) divided by the sum of the Tier 1 emission limitations for NO_x and HC in Table 1 (9.2 g/kW-hr + 1.3 g/kW-hr). The hourly emission limitation was developed by multiplying the maximum operating load (2,000 kW mechanical) by the NO_x g/kW-hr emission limitation (5.61 g/kW-hr) divided by (454 g/lb) to determine the hourly emissions.

If required, the permittee shall demonstrate compliance with the g/kW-hr limitation and hourly emission limitation using Methods 1 through 4 and 7E of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was developed by multiplying the hourly emission limitation (28.36 lbs/hr) by the maximum annual operating hours (100 hrs/yr) and dividing by 2,000 lbs/ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation and operating hours restriction is shown.

c. Emission Limitation:

PM₁₀/PM_{2.5} emissions shall not exceed 0.20 g/kW-hr, 0.89 lb/hr, and 0.044 ton per rolling, 12-month period.

Applicable Compliance Method:

The g/kW-hr limitation is based on manufacturer's emissions data. The hourly emission limitation was developed by multiplying the maximum operating load (2,000 kW mechanical) by the PM₁₀/PM_{2.5} emission factor supplied by the manufacturer (0.20 g/kW-hr) divided by (454 g/lb) to determine the hourly emissions.

If required, the permittee shall demonstrate compliance with the g/kW-hr limitation and hourly emission limitation using Methods 201 or 201A and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was developed by multiplying the hourly emission limitation (0.89 lb/hr) by the maximum annual operating hours (100 hrs/yr) and dividing by 2,000 lbs/ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation and operating hours restriction is shown.

d. Emission Limitation:

SO₂ emissions shall not exceed 0.03 lb/hr and 0.002 ton per rolling, 12-month period.

Applicable Compliance Method:

Effective Date: To be entered upon final issuance

The hourly emission limitation is based on dividing the AP-42 emission factor for SO₂ from AP-42 Table 3.4-1 dated 10/96 when burning diesel fuel with a maximum sulfur content of 15 ppmw (0.0015 lb/MMBtu) multiplied by the maximum power rating (14.7 MMBtu/hr).

If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 through 4 and 6C of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was developed by multiplying the hourly emission limitation (0.03 lb/hr) by the maximum annual operating hours (100 hrs/yr) and dividing by 2,000 lbs/ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation and operating hours restriction is shown.

e. Emission Limitation:

VOC emissions shall not exceed 0.32 g/kW-hr, 1.89 lbs/hr and 0.095 ton per rolling, 12-month period.

Applicable Compliance Method:

The g/kW-hr limitation is based on the combined NO_x + NMHC emission limitation specified by the Tier 2 standard in 40 CFR 89.112(a) Table 1 (6.4 g/kW-hr) multiplied by the Tier 1 emission limitation for NMHC in Table 1 (1.3 g/kW-hr) divided by the sum of the Tier 1 emission limitations for NO_x and HC in Table 1 (9.2 g/kW-hr + 1.3 g/kW-hr). The hourly emission limitation was developed by multiplying the maximum operating load (2,000 kW mechanical) by the VOC emission factor supplied by the manufacturer (0.32 g/kW-hr) divided by (454 g/lb) to determine the hourly emissions.

If required, the permittee shall demonstrate compliance with the g/kW-hr limitation and hourly emission limitation using Methods 1 through 4 and 18, 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A. Use of Method 18, 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was developed by multiplying the hourly emission limitation (1.89 lbs/hr) by the maximum annual operating hours (100 hrs/yr) and dividing by 2,000 lbs/ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation and operating hours restriction is shown.

f. Emission Limitation:

H₂SO₄ mist emissions shall not exceed 1.72E-06 lbs/HP-hr, 5.0E-03 lb/hr and 2.3E-04 ton per rolling, 12-month period.

Applicable Compliance Method:

The lb/hr emissions limitation (5.0E-03 lb/hr) was obtained from the manufacturer of the EU. The lb/hr emission factor was converted to g/kW-hr by multiplying by 454 grams per pound and dividing by the maximum operating load (2,000 kW mechanical) = 1.72E-06 lbs/HP-hr.

If required, the permittee shall demonstrate compliance with the g/kW-hr and lb/hr emission limitation using Methods 1 through 4 and 8 of 40 CFR Part 60,



Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was developed by multiplying the hourly allowable H₂SO₄ emission limitation (5.0E-03 lb/hr) by the maximum annual hours of operation (100 hours), and then dividing by 2,000 lbs/ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation and operating hours restriction is shown.

g. Emission Limitation:

CO₂e emissions shall not exceed 153.45 tons per rolling, 12-month period.

Applicable Compliance Method:

This emissions limitation was established to reflect the PTE for this EU by calculating the sum of the maximum capacity (2,682 hp) by the emission factors for CO₂, N₂O, and CH₄, multiplied by the global warming potentials (GWP) for CO₂, N₂O, and CH₄ (1, 298, and 25, respectively from Table A-1 to Subpart A of 40 CFR 98). Multiply the sum by the maximum annual hours of operation (100 hrs/yr) and divide by 2,000 lbs/ton. The CO₂ emission factor was obtained from AP-42 Table 3.4-1 dated 10/96 (1.16 lb/hp-hr). The N₂O emission factor was obtained from 40 Table C-2 to Subpart C of 40 CFR 98 (0.6 g/MMBtu). The CH₄ emission factor was obtained from AP-42 Table 3.4-1 dated 10/96 (7.05E-04 lb TOC/hp-hr x 0.09 lb CH₄/lb TOC = 6.34E-05 lb CH₄/hp-hr).

$$2,682 \text{ hp} \times \text{GWP} \times 100 \text{ hr/yr} \times \text{ton}/2000 \text{ lbs} = 153.45 \text{ TPY where}$$

$$\text{GWP} = (1.16 \text{ lb/hp-hr})(1) + (0.6 \text{ g/MMBtu})(7000 \text{ Btu/hp-hr})(\text{MMBtu}/1\text{E}6 \text{ Btu})(\text{lb}/454 \text{ g})(298) + (6.34\text{E}-05 \text{ lb/hp-hr})(25)$$

Since the CO₂e emissions are estimated to consist of more than 99% CO₂, compliance with this emission limitation will be assumed provided that the lb/hp-hr CO₂ emission rate does not exceed 1.16 lb/hp-hr. If required, the permittee shall conduct emissions testing using Methods 1, 2, 3A and 4 of 40 CFR Part 60, Appendix A to determine the lb/hp-hr CO₂ emission rate. Alternative U.S. EPA- approved test methods may be used with prior approval from Ohio EPA.

h. Emission Limitation:

The permittee shall only combust ULSD fuel in this EU meeting the following standard: 15 ppm maximum sulfur content.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(2).

i. Emission Limitation:

The permittee shall only combust ULSD fuel in this EU meeting the following standard: a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(2) and d)(3).

j. Emission Limitation:

Visible PE from the stack serving this EU shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance based upon an emission test performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

k. Emission Limitation:

NMHC + NO_x emissions shall not exceed 6.4 g/kW-hr.
CO emissions shall not exceed 3.5 g/kW-hr.
PM emissions shall not exceed 0.20 g/kW-hr.

Exhaust opacity shall not exceed:

20 percent during acceleration mode;
15 percent during lugging mode; and
50 percent during the peaks in either the acceleration or lugging modes

Applicable Compliance Method:

According to 40 CFR 60.4211(c), the permittee shall demonstrate compliance with these emission limitations by purchasing an engine certified to the emission standards in 40 CFR 60.4205(b) for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in 40 CFR 60.4211(g). The permittee shall maintain documentation of certification to the emission standards in 40 CFR 60.4205.

- g) **Miscellaneous Requirements**
(1) None.

3. P004, Fire Pump

Operations, Property and/or Equipment Description:

420-hp emergency fire pump engine

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)(a)(ii)	The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM _{2.5} , PM ₁₀ , NO _x , CO, SO ₂ , or VOC emissions from this air contaminant source since the calculated annual emission rate is less than 10 TPY, taking into account the federally enforceable rule limits under OAC rules 3745-31-10 through 20.
b.	OAC rules 3745-31-10 through 20 (PSD of Air Quality)	<p>CO emissions shall not exceed 2.61 g/kW-hr, 2.42 lbs/hr, and 0.12 ton per rolling, 12- month period.</p> <p>NO_x emissions shall not exceed 3.0 g/kW-hr, 2.78 lbs/hr, and 0.14 ton per rolling, 12- month period.</p> <p>PM₁₀ and PM_{2.5} shall not exceed 0.20 g/kW-hr, 0.14 lb/hr, and 0.01 ton per rolling, 12- month period.</p> <p>VOC emissions shall not exceed 0.5 g/kW-hr, 0.37 lb/hr, and 0.02 ton per rolling, 12- month period.</p> <p>SO₂ emissions shall not exceed 0.005 lb/hr and 2.4E-04 ton per rolling, 12- month period.</p> <p>H₂SO₄ mist emissions shall not exceed 2.0E-04 lb/MMBtu, 7.0E-04 lb/hr and 4.0E-05 ton per rolling, 12- month period.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		CO ₂ equivalent (CO ₂ e) emissions shall not exceed 24.03 tons per rolling, 12-month period. See b)(2)a.
c.	OAC rule 3745-31-05(F)	See b)(2)b.
d.	OAC rule 3745-17-07(A)	Visible PE from the stack serving this EU shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
e.	OAC rule 3745-17-11(B)(5)(a)	See b)(2)c.
f.	OAC rule 3745-110-03(K)(16) and (K)(19)	Exemption. See b)(2)d.
g.	40 CFR Part 60, Subpart A (40 CFR 60.1 - 60.19)	Table 8 to Subpart IIII of 40 CFR Part 60 – Applicability of General Provisions to Subpart IIII shows which parts of the General Provisions in 40 CFR 60.1 - 60.19 apply.
h.	40 CFR Part 60, Subpart IIII (40 CFR 60.4200 – 60.4219) [In accordance with 40 CFR 60.4200(a)(2), this EU is a compression ignition stationary internal combustion fire pump engine for which construction commenced after July 11, 2005 subject to the emissions limitation/control measures specified in this section.]	Non-methane hydrocarbon (NMHC) + NO _x emissions shall not exceed 4.0 g/kW-hr. CO emissions shall not exceed 3.5 g/kW-hr. PM emissions shall not exceed 0.20 g/kW-hr. See b)(2)e. [60.4205(c) and 60.4207(b)]
i.	40 CFR Part 63, Subpart ZZZZ (40 CFR 63.6580 - 63.6675) [In accordance with 40 CFR 63.6590(c)(1), this EU is a new stationary reciprocating internal combustion engine (RICE) located at an area source of HAP emissions subject to the emissions limitation/control measures specified in this section.]	See b)(2)f. [63.6580, 63.6585 and 63.6590(c)(1),
j.	40 CFR Part 63, Subpart A (40 CFR 63.1 - 63.16)	Table 8 to Subpart ZZZZ of 40 CFR Part 63 – Applicability of General Provisions to Subpart ZZZZ shows which parts of the General Provisions in 40 CFR 63.1 - 63.16 apply.

(2) Additional Terms and Conditions

- a. All PE are assumed to be less than 2.5 microns in diameter. The PM₁₀/PM_{2.5} emission limitations include both filterable and condensable PE.
- b. The maximum annual operating hours for this EU shall not exceed 100 hours, based upon a rolling, 12-month summation of the operating hours.
- c. The emission limitation required by this applicable rule is less stringent than the emission limitation established by OAC rules 3745-31-10 through 20.
- d. The requirements of this rule do not apply since:
 - i. NO_x emissions are restricted to less than 25 TPY; and
 - ii. the EU is subject to a BACT limitation for NO_x.
- e. The permittee shall only combust ULSD fuel in this EU meeting the following standards:
 - i. 15 ppm maximum sulfur content; and
 - ii. a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.
- f. The permittee shall comply with the applicable restrictions required under 40 CFR Part 60, Subpart IIII, including the following sections:

60.4218	General Provisions
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c) Operational Restrictions

- (1) The permittee shall comply with the applicable restrictions required under 40 CFR Part 60, Subpart IIII, including the following sections:

60.4206	Duration of Standards
60.4207(b)	Fuel Requirements

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the following information:
- a. the operating hours for each month; and
 - b. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the operating hours. Also, during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative operating hours for each calendar month.
- (2) For each shipment of ULSD fuel received for burning in this EU, the permittee shall maintain records of the oil supplier's (or permittee's) analyses for sulfur content in ppm (40 CFR 80.510). The permittee shall perform or require the supplier to perform the analyses for sulfur content in accordance with 40 CFR 80.585.
- (3) The permittee shall also maintain documentation of supplier verification that the ULSD fuel as purchased has a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.
- (4) The permittee shall comply with the applicable restrictions required under 40 CFR Part 60, Subpart IIII, including the following sections:

60.4209	Monitoring
60.4214	Notification, recordkeeping, reporting

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
- a. each shipment of ULSD fuel received for burning in this EU that did not comply with the standards specified in b)(2)e; and
 - b. all exceedances of the rolling, 12-month limitation on the hours of operation for this EU.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard terms and conditions of this permit.



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- (2) The permittee shall comply with the applicable restrictions required under 40 CFR Part 60, Subpart IIII, including the following sections:

60.4214	Notification, recordkeeping, reporting
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- (3) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

CO emissions shall not exceed 2.61 g/kW-hr, 2.42 lbs/hr, and 0.12 ton per rolling, 12-month period.

Applicable Compliance Method:

The g/kW-hr limitation is based on the standard specified in Table 4 to 40 CFR Part 60, Subpart IIII. The hourly emission limitation was developed by multiplying the maximum operating load (309 kW mechanical) by the g/kW-hr CO emission limitation (2.61 g/kW-hr), and then dividing by (454 g/lb) to determine the hourly emissions.

If required, the permittee shall demonstrate compliance with the g/kW-hr limitation and hourly emission limitation using Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was developed by multiplying the hourly emission limitation (2.42 lbs/hr) by the maximum annual operating hours (100 hrs/yr) and dividing by 2,000 lbs/ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation and operating hours restriction is shown.

- b. Emission Limitation:

NO_x emissions shall not exceed 3.0 g/kW-hr, 2.78 lbs/hr, and 0.14 ton per rolling, 12-month period.

Applicable Compliance Method:

The g/kW-hr limitation is based on the combined NO_x + NMHC emission limitation specified by the Table 4 to 40 CFR Part 60, Subpart IIII (4.0 g/kW-hr) multiplied by the Tier 1 emission limitation for NO_x in Table 1 to 40 CFR 89.112(a) (9.2 g/kW-hr) divided by the sum of the Tier 1 emission limitations for NO_x and HC in Table 1 to 40 CFR 89.112(a) (9.2 g/kW-hr + 1.3 g/kW-hr). The hourly emission limitation was developed by multiplying the maximum operating load (309 kW mechanical) by the g/kW-hr NO_x emission limitation (3.0 g/kW-hr), and then dividing by (454 g/lb) to determine the hourly emissions.



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If required, the permittee shall demonstrate compliance with the g/kW-hr limitation and hourly emission limitation using Methods 1 through 4 and 7E of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was developed by multiplying the hourly emission limitation (2.78 lbs/hr) by the maximum annual operating hours (100 hrs/yr) and dividing by 2,000 lbs/ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation and operating hours restriction is shown.

c. Emission Limitation:

PM₁₀/PM_{2.5} emissions shall not exceed 0.20 g/kW-hr, 0.14 lb/hr, and 0.01 ton per rolling, 12-month period.

Applicable Compliance Method:

The g/kW-hr limitation is based on manufacturer's emissions data. The hourly emission limitation was developed by multiplying the maximum operating load (309 kW mechanical) by the PM₁₀/PM_{2.5} emission factor supplied by the manufacturer (0.20 g/kW-hr), and then dividing by (454 g/lb) to determine the hourly emissions.

If required, the permittee shall demonstrate compliance with the g/kW-hr limitation and hourly emission limitation using Methods 201 or 201A and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was developed by multiplying the hourly emission limitation (0.14 lb/hr) by the maximum annual operating hours (100 hrs/yr) and dividing by 2,000 lbs/ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation is shown.

d. Emission Limitation:

SO₂ emissions shall not exceed 0.005 lb/hr and 2.4E-04 ton per rolling, 12-month period.

Applicable Compliance Method:

The hourly emission limitation is based on multiplying the AP-42 emission factor for SO₂ from AP-42 Table 3.4-1 dated 10/96 when burning diesel fuel with a maximum sulfur content of 15 ppmw (0.0015 lb/MMBtu) by the maximum heat input capacity of 1.81 MMBtu/hr.

If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 through 4 and 6C of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was developed by multiplying the hourly emission limitation (0.005 lb/hr) by the maximum annual operating hours (100 hrs/yr) and dividing by 2,000 lbs/ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation is shown.

e. Emission Limitation:



VOC emissions shall not exceed 0.5 g/kW-hr, 0.37 lb/hr, and 0.02 ton per rolling, 12-month period.

Applicable Compliance Method:

The g/kW-hr limitation is based on the combined NO_x + NMHC emission limitation specified by the Table 4 to 40 CFR Part 60, Subpart IIII (4.0 g/kW-hr) multiplied by the Tier 1 emission limitation for NMHC in Table 1 to 40 CFR 89.112(a) (1.3 g/kW-hr) divided by the sum of the Tier 1 emission limitations for NO_x and HC in Table 1 to 40 CFR 89.112(a) (9.2 g/kW-hr + 1.3 g/kW-hr). The hourly emission limitation was developed by multiplying the maximum operating load (309 kW mechanical) by the g/kW-hr VOC emission limitation (0.5 g/kW-hr) divided by (454 g/lb) to determine the hourly emissions.

If required, the permittee shall demonstrate compliance with the g/kW-hr limitation and hourly emission limitation using Methods 1 through 4 and 18, 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A. Use of Method 18, 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was developed by multiplying the hourly emission limitation (0.37 lb/hr) by the maximum annual operating hours (100 hrs/yr) and dividing by 2,000 lbs/ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation is shown.

f. Emission Limitation:

H₂SO₄ mist emissions shall not exceed 2.0E-04 lb/MMBtu, 7.0E-04 lb/hr and 4.0E-05 ton per rolling, 12-month period.

Applicable Compliance Method:

The lb/MMBtu emission limitation is based on 10% conversion by weight lb/MMBtu converted to lb/HP-hr assuming ~7000 Btu/HP-hr

The lb/hr emission limitation was developed by multiplying the lb/MMBtu allowable H₂SO₄ emission limitation (2.0E-04 lb/MMBtu) by the maximum operating load (420 HP) and then multiplying by 1.76E-06 lbs/HP-hr to determine the hourly emissions (7.0E-04 lb/hr).

If required, the permittee shall demonstrate compliance with the g/kW-hr and lb/hr emission limitation using Methods 1 through 4 and 8 of 40 CFR Part 60 Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The TPY emission limitation was developed by multiplying the hourly allowable H₂SO₄ emission limitation (7.0E-04 lb/hr) by the maximum annual hours of operation (100 hours), and then dividing by 2,000 lbs/ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation and operating hours restriction is shown.

g. Emission Limitation:

CO₂e emissions shall not exceed 24.03 tons per rolling, 12-month period.

Applicable Compliance Method:



This emission limitation was established to reflect the PTE for this EU by calculating the sum of the maximum capacity (420 hp) by the emission factors for CO₂, N₂O, and CH₄, multiplied by the global warming potentials (GWP) for CO₂, N₂O, and CH₄ (1, 298, and 25, respectively from Table A-1 to Subpart of 40 CFR 98). Multiply the sum by the maximum annual hours of operation (100 hrs/yr) and divide by 2,000 lbs/ton. The CO₂ emission factor was obtained from AP-42 Table 3.3-1 dated 10/96 (1.15 lb/hp-hr). The N₂O emission factor was obtained from Table C-2 to Subpart C of 40 CFR 98 (0.6 g/MMBtu). The CH₄ emission factor was obtained from AP-42 Table 3.3-1 dated 10/96 (2.47E-03 lb TOC/hp-hr (0.09 lb CH₄/lb TOC)= 2.223E-04 lb CH₄/hp-hr, this table did not include an estimate of how much methane comprises the TOC emission factor, so the value of 9% from AP-42 Table 3.4-1 dated 10/96 was used).

420 hp x GWP x 100 hr/yr x ton/2000 lbs = 24.03 TPY where

$$GWP = (1.15 \text{ lb/hp-hr})(1) + (0.6 \text{ g/MMBtu})(7000 \text{ Btu/hp-hr})(\text{MMBtu}/1\text{E}6 \text{ Btu})(\text{lb}/454 \text{ g})(298) + (2.223\text{E-}04 \text{ lb/hp-hr})(25)$$

Since the CO₂e emissions are estimated to consist of more than 99% CO₂, compliance with this emission limitation will be assumed provided that the lb/hp-hr CO₂ emission rate does not exceed 1.15 lb/hp-hr. If required, the permittee shall conduct emissions testing using Methods 1, 2, 3A and 4 of 40 CFR Part 60, Appendix A to determine the lb/hp-hr CO₂ emission rate. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

h. Emission Limitation:

The permittee shall only combust ULSD fuel in this EU meeting the following standard: 15 ppm maximum sulfur content.

Applicable Compliance Method

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(2).

i. Emission Limitation:

The permittee shall only combust ULSD fuel in this EU meeting the following standard: a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(2) and d)(3).

j. Emission Limitation:

Visible PE from the stack serving this EU shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance based upon an emission test performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

k. Emission Limitation:

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NMHC + NO_x emissions shall not exceed 4.0 g/kW-hr (3.0 g/hp-hr).

CO emissions shall not exceed 3.5 g/kW-hr (2.6 g/hp-hr).

PM emissions shall not exceed 0.20 g/kW-hr (0.15 g/hp-hr).

Applicable Compliance Method:

According to 40 CFR 60.4211(c), the permittee shall demonstrate compliance with these emission limitations by purchasing an engine certified to the emission standards in 40 CFR 60.4205(c) for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in 40 CFR 60.4211(g).

g) Miscellaneous Requirements

(1) None.

4. EU Group - Turbines: P001 and P002

EU ID Operations, Property and/or Equipment Description

P001 Combined cycle combustion turbine (4,200 MMBtu/hr heat input turbine at ISO conditions, NG firing with evaporative cooler and 820 MMBtu/hr maximum heat input NG-fired duct burner) with dry low NOx combustors, selective catalytic reduction (SCR), and catalytic oxidizer.

P002 Combined cycle combustion turbine (4,200 MMBtu/hr heat input turbine at ISO conditions, NG firing with evaporative cooler and 820 MMBtu/hr maximum heat input NG-fired duct burner) with dry low NOx combustors, selective catalytic reduction (SCR), and catalytic oxidizer.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) d)(12) through d)(15) and e)(8).

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) and ORC 3704.03(T)	See b)(2)a. and b)(2)b.
b.	OAC rules 3745-31-10 through 20 (PSD of Air Quality)	Visible PE from the stack serving this EU shall not exceed 10% opacity as a 6-minute average. The design (new and clean) net plant base load heat rate shall not exceed 7,500 Btu/kW-hr HHV (at ISO conditions without duct firing). See b)(2)c. through b)(2)h. and b)(2)p. through b)(2)s.
c.	OAC rule 3745-17-07(A)	See b)(2)i.
d.	OAC rule 3745-17-11(B)(4)	See b)(2)i.
e.	OAC rule 3745-18-06(A)	See b)(2)i.
f.	OAC rule 3745-110-03(K)(18)	Exemption from NO _x RACT requirements



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
g.	OAC rule 3745-114-01	See d)(12) through d)(15) and e)(8).
h.	40 CFR Part 60, Subpart KKKKa (40 CFR 60.4300a – 60.4420a) [In accordance with 40 CFR 60.4305a(a), this EU is a stationary combustion turbine that commenced construction, modification, or reconstruction after December 13, 2024 with a heat input at peak load greater than 10 MMBtu/hr with a heat recovery steam generator/duct burners subject to the emissions limitations/control measures specified in this section.]	See b)(2)i. and b)(2)l.
i.	40 CFR Part 60, Subpart TTTTa (40 CFR 60.5508a – 60.5580a)	CO ₂ emissions shall not exceed 360 kg to 560 kg per megawatt-hour (MWh) of gross energy output (800 to 1,250 lb CO ₂ /MWh) per 12-month rolling period or CO ₂ emissions shall not exceed 370 kg to 570 kg per MWh of net energy output (820 to 1,280 lb CO ₂ /MWh) per 12-month rolling period. See b)(2)k., b)(2)m., d(17) and e)(4).
j.	40 CFR Part 60, Subpart A (40 CFR 60.1 – 60.19)	Table 3 to Subpart TTTTa of 40 CFR Part 60 – Applicability of General Provisions to Subpart TTTTa shows which parts of the General Provisions in 40 CFR 60.1 - 60.19 apply. See b)(2)j. and b)(2)k.
k.	40 CFR Part 63, Subpart YYYY (40 CFR 63.6080 – 63.6175)	See b)(2)n.
l.	40 CFR Part 63, Subparts JJJJJ and UUUUU	See b)(2)o.

(2) Additional Terms and Conditions

- a. All requirements specified in this Section of the permit for EU Group P001 and P002 apply to each combined cycle combustion turbine (P001 and P002) unless a combined requirement is otherwise specified.



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- b. Compliance with the requirements of this rule for CO, SO₂, NO_x, PM₁₀, PM_{2.5} and VOC includes compliance with the requirements of OAC rules 3745-31-10 through 20.
- c. The emissions from this EU shall utilize dry low NO_x combustors, selective catalytic reduction (SCR) and catalytic oxidation.
- d. The PM₁₀/PM_{2.5} emission limitations include both filterable and condensable PE.
- e. The sulfur content of NG burned in this EU shall not exceed 0.5 grain per 100 standard cubic feet.
- f. The permittee shall comply with the following emissions limitations per turbine:

Allowable Emissions				
Pollutant	Operating Mode^a	Emission Rate^{b,e}	Emission rate, lb/hr^b	Emission rate, tons per rolling, 12-month period^f
CO	CT with DB	2.0 ^c	23.20	-
	CT only	2.0 ^c	19.20	-
	All operating modes, including startup and shutdown periods	-	-	137.9
NO _x	CT with DB	2.0 ^c	38.10	-
	CT only	2.0 ^c	31.50	-
	All operating modes, including startup and shutdown periods			167.2
SO ₂	CT with DB	1.5E-03 ^d	7.70	-
	CT only	1.5E-03 ^d	6.40	
	All operating modes, including startup and shutdown periods			32.4
PM ₁₀ /PM _{2.5}	CT with DB	4.6E-03 ^d	24.20	-
	CT only	4.2E-03 ^d	14.60	
	All operating modes, including startup and shutdown periods			100.4
VOC	CT with DB	2.0 ^c	13.30	-



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	CT only	1.0 ^c	5.50	-
	All operating modes, including startup and shutdown periods	-	-	62.5
H ₂ SO ₄	CT with DB	1.1E-03 ^d	5.60	-
	CT only	1.0E-03 ^d	4.30	-
	All operating modes, including startup and shutdown periods	-	-	23.21
CO ₂ ^e	All operating modes, including startup and shutdown periods	-	-	2,608,726
<p>a. CT - combustion turbine; DB - duct burner b. Limitation does not apply during periods of startup and shutdown. c. ppm by volume dry (ppmvd) at 15% oxygen. d. Pounds per million Btu of heat input. e. Emissions limitations are based on an hourly average. f. Potential annual emissions from the proposed facility were estimated using the following worst-case assumptions:</p> <ul style="list-style-type: none"> • Full-load operation of the combustion turbine generators (CTGs) for 8,760 hours per year (at 59°F ambient temperature). • Duct burning for 8,760 hours per year during steady-state operation of each CTG; and <p>g. Incorporation of startup/shutdown events, based on a representative scenario that reflects maximum emissions.</p>				

- g. To ensure enforceability of the rolling, 12-month emissions limitations during the first 12 calendar months of operation following the initial emissions compliance testing and CEMS certification, the permittee shall not exceed the emission levels specified in the following table (per turbine):

Month(s)	Maximum Allowable Cumulative Emissions (Tons)					
	CO	NO _x	PM ₁₀ /PM _{2.5}	VOC	SO ₂	H ₂ SO ₄
1	23.0	27.9	16.7	10.4	5.4	3.9
1-2	46.0	55.8	33.4	20.8	10.8	7.8
1-3	69.0	83.7	50.1	31.2	16.2	11.7
1-4	92.0	111.6	66.8	41.6	21.6	15.6
1-5	115.0	139.5	83.5	52.0	27.0	19.5

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1-6	137.9	167.2	100.4	62.5	32.4	23.2
1-7	137.9	167.2	100.4	62.5	32.4	23.2
1-8	137.9	167.2	100.4	62.5	32.4	23.2
1-9	137.9	167.2	100.4	62.5	32.4	23.2
1-10	137.9	167.2	100.4	62.5	32.4	23.2
1-11	137.9	167.2	100.4	62.5	32.4	23.2
1-12	137.9	167.2	100.4	62.5	32.4	23.2

After the first 12 calendar months of operation following the initial emissions compliance testing and CEMS certification, compliance with the annual emissions limitations shall be based upon a rolling, 12-month summation of the monthly emissions.

- h. The permittee shall comply with the following requirements during periods of startup and shutdown:

Emission Limitations during Startup and Shutdown Events			
Pollutant	Cold Startup (lbs/event)	Other than Cold Startup (lbs/event)	Shutdown (lbs/event)
NO _x	450	260	30
CO	350	247	225
VOC	27	16	50
PM ₁₀ /PM _{2.5}	32	27	5

Represents worst-case hourly emissions as normal startup and shutdown with steady-state emissions balancing out each other.
 "Cold Startup" is defined as a startup for which the initial SCR inlet temperature is 350 degrees Fahrenheit or less.
 "Startup" is defined as beginning with combustion turbine fuel flow ignition (a.k.a. Flame On) until the combustion turbine achieves ten consecutive CEM data points in compliance with the ppmvd emission limitations for CO and NO_x. Time while in compliance (i.e., the ten consecutive CEM data points) does not add to the event duration.
 "Shutdown" is defined as the process of taking the turbine off-line, including protective shutdowns, beginning with the first CEM data point that deviates from either the CO or NO_x ppmvd emission limit when load is dropping in conjunction with the process of ceasing operation of the unit, and ending with "flame out" or when no flame is detected in the combustion turbine.

- i. The emission limitations required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rules 3745-31-10 through 20.



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- j. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to EUs affected by 40 CFR Part 60.
- k. This EU is subject to the applicable provisions of Subparts KKKKa and TTTTa of the NSPS as promulgated by the U.S. EPA, 40 CFR Part 60. The application and enforcement of these standards are delegated to Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.
- l. The permittee shall comply with the applicable restrictions required under 40 CFR Part 60, Subpart KKKKa, including the following sections:

60.4333a	General Compliance Requirements
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- m. The permittee shall comply with the applicable restrictions required under 40 CFR Part 60, Subpart TTTTa, including the following sections:

60.5525a	General Compliance Requirements
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- n. This EU is not subject to the requirements of 40 CFR Part 63, Subpart Yyyy, since it is not located at a major source of HAP emissions.
- o. This EU is exempt from the requirements of these rules due to combusting only NG.
- p. Each continuous NO_x monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 2. At least 45 days before commencing certification testing of the continuous NO_x monitoring system(s), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of NO_x emissions from the continuous monitor(s), in units of the applicable standard(s). Except as allowed below, the plan shall follow the requirements of 40 CFR Part 60, Appendix F and 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct relative accuracy test audits for the continuous NO_x monitoring system in accordance with the frequencies required pursuant to 40 CFR Part 60 and 40 CFR Part 75; or may follow relative accuracy test audit frequency requirements for monitoring systems subject to 40 CFR 75, Appendix B, in lieu of frequencies required in 40 CFR Part 60. In either case, results shall be recorded and reported in units of the applicable standard(s) in accordance with 40 CFR Part 60.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits pursuant to 40 CFR Part 60, and linearity checks pursuant to 40 CFR Part 75; however, linearity checks completed pursuant to 40 CFR Part 75, Appendix B, may be substituted for the quarterly cylinder gas or relative accuracy audits required per 40 CFR Part 60.

- q. Each continuous CO monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 4 or 4a. At least 45 days before commencing certification testing of the continuous CO monitoring system(s), the permittee shall develop and maintain a written quality assurance/quality control



plan designed to ensure continuous valid and representative readings of CO emissions from the continuous monitor(s), in units of the applicable standard(s). The fuel flow monitors/meters shall be maintained as required in Part 75, Appendix D. Except as allowed below, the plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct relative accuracy test audits for the continuous CO monitoring system in accordance with the frequencies required for monitoring systems subject to 40 CFR 60, or may follow relative accuracy test audit frequency requirements for monitoring systems subject to 40 CFR 75, Appendix B. In either case, results shall be recorded and reported in units of the applicable standard(s) in accordance with 40 CFR Part 60.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; however, the quarterly cylinder gas audit and relative accuracy audit frequency requirements may be adjusted to coincide with linearity checks completed for continuous emissions monitoring systems subject to 40 CFR Part 75, Appendix B requirements.

- r. The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.
- s. The design (new and clean) net plant base heat rate shall not exceed 7,500 Btu/kW-hr HHV (ISO conditions without duct firing).

c) **Operational Restrictions**

- (1) The permittee shall only burn pipeline quality NG as fuel in this EU.
- (2) The number of cold start-up events (see b)(2)h. above), conducted without employment of the 152 MMBtu/hr auxiliary boiler (B001), shall not exceed fifteen (15) such events per rolling, 12-month period per turbine.

d) **Monitoring and/or Recordkeeping Requirements**

- (1) For each day during which the permittee burns a fuel other than NG, the permittee shall maintain a record of the type and quantity of fuel burned in this EU.
- (2) The permittee shall maintain monthly records of the following information:
 - a. the operating hours for each month;
 - b. the type of fuel combusted during operation; and
 - c. the rolling, 12-month summation of the monthly operating time, in hours (including each fuel that was combusted).
- (3) For purposes of demonstrating compliance with the NG sulfur concentration restriction of 0.5 grain/100 scf, the permittee shall sample and analyze the NG burned in this EU monthly to determine the sulfur content using the appropriate ASTM or Gas Processors Association



standards. Fuel supplier data may be used to comply with this requirement, provided that it is demonstrated to be representative of the fuel received for burning at this EU.

- (4) The permittee may elect not to monitor the total sulfur content of the fuel combusted in the turbine as specified in 40 CFR 60.4360, if the fuel is demonstrated not to exceed potential sulfur emissions of 1.4E-03 lb SO₂/MMBtu. The permittee shall use one of the following sources of information to make the required demonstration:
- the fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content for NG is 0.5 grain of sulfur or less per 100 standard cubic feet, has potential sulfur emissions of less than less than 1.4E-03 lb SO₂/MMBtu heat input;
 - representative fuel sampling data which show that the sulfur content of the fuel does not exceed 1.4E-03 lb SO₂/MMBtu heat input. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of Appendix D to Part 75 of this chapter is required; or
 - one of the custom sulfur monitoring schedules outlined in 40 CFR 60.4370(c) may be used to comply with the 1.4E-03 lb SO₂/MMBtu standard.
- (5) The permittee shall maintain monthly records of the following information:
- the CO, NO_x, PM₁₀/PM_{2.5}, SO₂, VOC and H₂SO₄ emission rate for each month of operations; and
 - beginning after the first 12 calendar months of operation following the initial emissions compliance testing and CEMS certification, the rolling, 12-month summation of the CO, NO_x, PM₁₀/PM_{2.5}, SO₂, VOC and H₂SO₄ emissions.

Also, during the first 12 calendar months of operation following the initial emissions compliance testing and CEMS certification, the permittee shall record the cumulative CO, NO_x, PM₁₀/PM_{2.5}, SO₂, VOC and H₂SO₄ emissions for each calendar month.

- (6) The permittee shall maintain monthly records of the following information for this EU for purposes of calculating rolling, 12-month emissions:
- date, time, and duration of each startup and shutdown period;
 - the hours of operation of the combustion turbine;
 - the hours of operation of the duct burner;
 - the total duration of all startup periods in hours per rolling, 12-month period;
 - the total duration of all shutdown periods in hours per rolling, 12-month period;
 - the total duration of steady-state operation without duct burner firing in hours per rolling, 12-month period;
 - the total duration of steady-state operation with duct burner firing in hours per rolling, 12-month period; and



- h. the total number of cold startup events (see b)(2)h. above), conducted without employment of the 152 MMBtu/hr auxiliary boiler (B001), per rolling, 12-month period.
- (7) Prior to the installation of the continuous NO_x monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 2. Ohio EPA, CO shall approve the proposed sampling site and certify that the continuous NO_x monitoring system meets the requirements of Performance Specifications 2; and the U.S. EPA shall certify that the continuous NO_x monitoring system meets the requirements under 40 CFR Part 75, which may be approved through the recommendation for certification by Ohio EPA to U.S. EPA. Once received, the letter(s)/document(s) of certification under Part 60 and certification or recommendation for certification under Part 75 shall be maintain on-site and made available to the Director (Ohio EPA NEDO) upon request.
- (8) The permittee shall install, operate, and maintain equipment to continuously monitor and record NO_x emissions from this EU in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60 and 40 CFR Part 75.

The permittee shall maintain records of all data obtained by the continuous NO_x monitoring system including, but not limited to:

- a. emissions of NO_x in ppm for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. emissions of NO_x in pounds per hour and in units of the applicable standard(s) in the appropriate averaging period;
- c. results of quarterly cylinder gas audits or linearity checks;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
- f. hours of operation of the EU, continuous NO_x monitoring system, and control equipment;
- g. the date, time, and hours of operation of the EU without the control equipment and/or the continuous NO_x monitoring system;
- h. malfunction of the control equipment and/or the continuous NO_x monitoring system; and
- i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

All valid data points generated and recorded by the CEM and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.



- (9) Prior to the installation of the continuous CO monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 4 or 4a (as appropriate). Ohio EPA, CO shall approve the proposed sampling site and certify that the continuous CO monitoring system meets the requirements of Performance Specifications 4 or 4a. Once received, the letter(s)/document(s) of certification shall be maintained on-site and shall be made available to the Director (Ohio EPA NEDO upon request).
- (10) The permittee shall operate and maintain equipment to continuously monitor and record CO emissions from this EU in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to:

- a. emissions of CO in ppm for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. emissions of CO in pounds per hour and in units of the applicable standard(s) in the appropriate averaging period;
- c. results of quarterly cylinder gas audits;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
- f. hours of operation of the EU, continuous CO monitoring system, and control equipment;
- g. the date, time, and hours of operation of the EU without the control equipment and/or the continuous CO monitoring system;
- h. the date, time, and hours of operation of the EU during any malfunction of the control equipment and/or the continuous CO monitoring system; and
- i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

All valid data points generated and recorded by the CEM and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

- (11) The permittee shall calculate and record the monthly CO₂ emissions from P001 and P002 using data from the continuous fuel flow monitor using the procedures set forth in 40 CFR Part 75, Appendix G. From this data, the permittee shall calculate the CO₂ emissions from P001 and P002 per rolling, 12-month period.
- (12) The PTI application for these EUs, P001 and P002, was evaluated based on the actual materials and the design parameters of the EU's exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to these EUs



for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one TPY using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the MAGLC, calculated as described in Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the EU, (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. Threshold Limit Value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
 - ii. Short Term Exposure Limit (STEL) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the EUs, i.e., "X = 24" hours per day and "Y = 7" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the MAGLC:

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the "worst case" toxic contaminant(s):

Toxic Contaminant: H₂SO₄

TLV (mg/m³): 0.2 mg/m³

Hourly Emission Rate for Maximum Hourly Impact (lbs/hr): 5.60

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m³): 1.14

MAGLC (µg/m³): 4.76

The permittee has demonstrated that emissions of H₂SO₄, from EUs P001 and P002, is calculated to be less than eighty percent of the MAGLC; any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).



- (13) Prior to making any physical changes to or changes in the method of operation of the EUs, that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower TLV than the lowest TLV previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
 - c. physical changes to the EUs or its/their exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI prior to the change. The Director may consider any significant departure from the operations of the EU, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

- (14) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
 - b. the MAGLC for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the EU(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
 - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the EUs or the materials applied.



- (15) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
- (16) See 40 CFR Part 60, Subpart KKKKa (40 CFR 60.4335a – 60.4374a).
- (17) The permittee shall comply with the applicable restrictions required under 40 CFR Part 60, Subpart TTTTa, including the following sections:

60.5535a	Monitor and Collect Data to Demonstrate Compliance
60.5540a	Demonstrate Compliance with CO ₂ Emissions and Determine Excess Emissions
60.5550a	Notification Requirements
60.5560a and 60.5565a	Record Keeping Requirements

e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than NG was burned in this EU. Each report shall be submitted within 30 days after the deviation occurs.
- (2) Pursuant to 40 CFR Part 60.7 and 60.48c(a), the permittee is hereby advised of the requirement to report the following at the appropriate times:
 - a. construction date (no later than 30 days after such date);
 - b. actual startup date (within 15 days after such date); and
 - c. the design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.
- (3) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. any monthly record showing an exceedance of the allowable sulfur content of NG, 0.5 grain per 100 standard cubicfeet; and
 - b. any monthly record showing an exceedance of the fifteen (15) cold start-up events (see c)(2) above), conducted without employment of the 152 MMBtu/hr auxiliary boiler (B001), per rolling, 12-month period per turbine.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard terms and conditions of this permit.

- (4) The permittee shall comply with the applicable restrictions required under 40 CFR Part 60, Subpart TTTTa, including the following sections:

60.5555a	Required Reports
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- (5) The permittee shall comply with the following quarterly reporting requirements for the EU and its continuous NO_x monitoring system:
- a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to Ohio EPA NEDO, documenting all instances of NO_x emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, 40 CFR Parts 75 and 76, OAC Chapters 3745-14 and 3745-23, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).
 - b. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall include the following:
 - i. the facility name and address;
 - ii. the manufacturer and model number of the continuous NO_x and other associated monitors;
 - iii. a description of any change in the equipment that comprises the CEMS, including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;
 - iv. the EER*, i.e., a summary of any exceedances during the calendar quarter, as specified above;
 - v. the total NO_x emissions for the calendar quarter (tons);
 - vi. the total operating time (hours) of the EU;
 - vii. the total operating time of the continuous NO_x monitoring system while the EU was in operation;
 - viii. results and date of quarterly cylinder gas audits or linearity checks;
 - ix. unless previously submitted, results and date of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));
 - x. unless previously submitted, the results of any relative accuracy test audit showing the continuous NO_x monitor out-of-control and the compliant results following any corrective actions;
 - xi. the date, time, and duration of any/each malfunction** of the continuous NO_x monitoring system, EU, and/or control equipment;



- xii. the date, time, and duration of any downtime** of the continuous NO_x monitoring system and/or control equipment while the EU was in operation; and
- xiii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (xii).

Each report shall address the operations conducted and data obtained during the previous calendar quarter. Data substitution procedures from 40 CFR 75 are not to be used for showing compliance with the short term OAC 3745-31-05(A)(3) rule-based or NSPS-based limitation(s) in this permit.

* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

** each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

- (6) The permittee shall comply with the following quarterly reporting requirements for the EU and its continuous CO monitoring system:
 - a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to Ohio EPA NEDO, documenting all instances of CO emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 3745-21, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).
 - b. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall include the following:
 - i. the facility name and address;
 - ii. the manufacturer and model number of the continuous CO and other associated monitors;
 - iii. a description of any change in the equipment that comprises the CEM system, including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;
 - iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;
 - v. the total CO emissions for the calendar quarter (tons);
 - vi. the total operating time (hours) of the EU;



- vii. the total operating time of the continuous CO monitoring system while the EU was in operation;
- viii. results and dates of quarterly cylinder gas audits;
- ix. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));
- x. unless previously submitted, the results of any relative accuracy test audit showing the continuous CO monitor out-of-control and the compliant results following any corrective actions;
- xi. the date, time, and duration of any/each malfunction** of the continuous CO monitoring system, EU, and/or control equipment;
- xii. the date, time, and duration of any downtime** of the continuous CO monitoring system and/or control equipment while the EU was in operation; and
- xiii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (xii).

Each report shall address the operations conducted and data obtained during the previous calendar quarter. Data substitution procedures from 40 CFR 75 are not to be used for showing compliance with the short term OAC 3745-31-05(A)(3) rule-based or NSPS-based limitation(s) in this permit.

* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

** each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

- (7) The permittee shall collect, record and maintain measurements, data, records and reports required per 40 CFR Part 75; and shall submit certification, recertification, notifications, applications, monitoring plans, petitions for alternative monitoring systems, electronic quarterly reports and any other pertinent record and/or report to the Administrator (U.S. EPA), as required by this Part.
- (8) The permittee shall submit annual reports that include any changes to any parameter or value used in the dispersion model used to demonstrate compliance with the "Toxic Air Contaminate Statute", ORC 3704.03(F), through the predicted 1-hour maximum concentration. The report should include:
 - a. the original model input;
 - b. the updated model input;
 - c. the reason for the change(s) to the input parameter(s);
 - d. a summary of the results of the updated modeling, including the input changes; and



- e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, EUs, or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

- (9) See 40 CFR Part 60, Subpart KKKKa (40 CFR 60.4375a – 60.4395a).

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

Visible PE from the stack serving this EU shall not exceed 10% opacity as a 6-minute average.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance based upon an emission test performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

- b. Emission Limitation:

CO emissions from this EU shall not exceed 2.0 ppmvd at 15% oxygen as an hourly average and 19.20 lbs/hr when the duct burner is not in operation; and 2.0 ppmvd at 15% oxygen as an hourly average and 23.20 lbs/hr when the duct burner is in operation.

Applicable Compliance Method:

These emission limitations are based on manufacturer's data. Ongoing compliance with the CO emission limitations shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

The permittee shall demonstrate compliance using Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA. See f)(2).

- c. Emission Limitation:

CO emissions from this EU shall not exceed 247 lbs/event during startup (other than a cold startup), 350 lbs/event during a cold start, and 225 lbs/event during shutdown.

Applicable Compliance Method:

These emission limitations are based on manufacturer's data. Ongoing compliance with the CO emission limitations shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit and through



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demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

The permittee shall demonstrate compliance using Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA. See f)(2).

d. Emission Limitation:

CO emissions from this EU shall not exceed 137.9 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be based upon record keeping as specified in d)(5) and shall be demonstrated through the use of CEMs as specified in d)(10).

The monthly CO emissions shall be added to the total CO emissions from the previous eleven months to determine the rolling, 12-month summation of CO emissions.

e. Emission Limitation:

NO_x emissions from this EU shall not exceed 2.0 ppmvd at 15% oxygen as an hourly average and 31.50 lbs/hr when the duct burner is not in operation; and 2.0 ppmvd at 15% oxygen as an hourly average and 38.10 lbs/hr when the duct burner is in operation.

Applicable Compliance Method:

These emission limitations are based on manufacturer's data. Ongoing compliance with the NO_x emission limitations shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

The permittee shall demonstrate compliance using Methods 1 through 4 and 7E of 40 CFR Part 60, Appendix A, and the procedures specified in 40 CFR 60.4400. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA. See f)(2).

f. Emission Limitation:

NO_x emissions from this EU shall not exceed 260 lbs/event during startup (other than a cold startup), 450 lbs/event during a cold start, and 30 lbs/event during shutdown.

Applicable Compliance Method:

These emissions limitations are based on manufacturer's data. Ongoing compliance with the NO_x emission limitations shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

The permittee shall demonstrate compliance using Methods 1 through 4 and 7E of 40 CFR Part 60, Appendix A, and the procedures specified in 40 CFR 60.4400. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA. See f)(2).

g. Emission Limitation:



NO_x emissions from this EU shall not exceed 167.2 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be based upon record keeping as specified in d)(5) and shall be demonstrated through the use of CEMs as specified in d)(8).

The monthly NO_x emissions shall be added to the total NO_x emissions from the previous eleven months to determine the rolling, 12-month summation of NO_x emissions.

h. Emission Limitation:

VOC emissions from this EU shall not exceed 1.0 ppmvd at 15% oxygen as an hourly average and 5.50 lbs/hr when the duct burner is not in operation; and 2.0 ppmvd at 15% oxygen as an hourly average and 13.30 lbs/hr when the duct burner is in operation.

Applicable Compliance Method:

These emission limitations are based on manufacturer's data. The permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 18, 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A. Use of Method 18, 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA. See f)(2).

i. Emission Limitation:

VOC emissions from this EU shall not exceed 16.0 lbs/event during startup (other than a cold startup), 27 lbs/event during a cold start, and 50.0 lbs/event during shutdown.

Applicable Compliance Method:

These emission limitations are based on manufacturer's data. The permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 18, 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A. Use of Method 18, 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

j. Emission Limitation:

VOC emissions from this EU shall not exceed 62.5 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be based upon record keeping as specified in d)(5) and shall be demonstrated through a summation of the VOC emissions from the burning of NG as follows:

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- i. The VOC emissions for each EU shall be determined by multiplying the operating hours while duct firing for the month, by the average emission rate (lbs VOC/hour) derived from the emission tests conducted in accordance with Section f)(2), and dividing by 2,000 lbs/ton.
 - ii. The VOC emissions for each EU shall be determined by multiplying the operating hours while not duct firing for the month, by the average emission rate (lbs VOC/hour) derived from the emission tests conducted in accordance with Section f)(2), and dividing by 2,000 lbs/ton.
 - iii. The monthly VOC emissions shall be added to the total VOC emissions from the previous 11 months to determine the rolling, 12-month summation of VOC emissions, using the operating hour data from d)(6) and the average emission rates derived from the emission tests conducted in accordance with f)(2).
- k. Emission Limitation:
- SO₂ emissions from this EU shall not exceed 1.5E-03 lb/MMBtu and 6.40 lbs/hr when the duct burner is not in operation; and 1.5E-03 lb/MMBtu and 7.70 lbs/hr when the duct burner is in operation.
- Applicable Compliance Method:
- Compliance with this emissions limitation shall be determined by the following calculation based on the records required by (d)(4). Multiply the actual monthly sulfur content of NG (in grain S/100 scf) by the molecular weight of SO₂ (64.07 lb SO₂/lb-mole), divide by the molecular weight of sulfur (32.06 lb S/lb-mole), divide by (7,000 grains/lb), the measured gross calorific value (HHV) (Btu/scf) determined in accordance with 40 CFR 75, Appendix D, and multiply by (10⁶ Btu/MMBtu).
- Compliance with the lb/hr emission limitation shall be based upon multiplying 1.4E-03 lb/MMBtu by the maximum heat input capacity (with and without the use of the duct burner) of this EU.
- l. Emission Limitation:
- SO₂ emissions from this EU shall not exceed 32.4 tons per rolling, 12- month period.
- Applicable Compliance Method:
- Compliance shall be based upon record keeping as specified in d)(5) and shall be demonstrated through a summation of the SO₂ emissions as follows:
- i. The monthly SO₂ emissions for each EU shall be determined by multiplying 1.5E-03 lb SO₂/MMBtu by the actual heat input for these EUs (MMBtu/month) and then dividing by 2,000 lbs/ton.
 - ii. The monthly SO₂ emissions shall be added to the total SO₂ emissions from the previous eleven months to determine the rolling, 12-month summation of SO₂ emissions, using 1.5E-03 lb SO₂/MMBtu.
- m. Emission Limitation:
- PM₁₀ and PM_{2.5} emissions from this EU shall not exceed 4.2E-03 lb/MMBtu as an hourly average and 14.60 lbs/hr when the duct burner is not in operation; and 4.6E-

03 lb/MMBtu as an hourly average and 24.20 lbs/hr when the duct burner is in operation.

Applicable Compliance Method:

These emission limitations are based on manufacturer's data. The permittee shall demonstrate compliance with these emission limitations using Methods 201A and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA. See f)(2).

n. Emission Limitation:

PM₁₀ and PM_{2.5} emissions from this EU shall not exceed 100.4 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be based upon record keeping as specified in d)(5) and shall be demonstrated through a summation of the PM₁₀ and PM_{2.5} emissions as follows:

- i. The PM₁₀ and PM_{2.5} emissions for each EU shall be determined by multiplying the total fuel use (MMBtu) for the month, by the average emission rate (lbs PM₁₀ and PM_{2.5}/MMBtu) derived from the emission tests conducted in accordance with f)(2), and dividing by 2,000 lbs/ton.
- ii. The monthly PM₁₀ and PM_{2.5} emissions shall be added to the total PM₁₀ and PM_{2.5} emissions from the previous 11 months to determine the rolling, 12-month summation of PM₁₀ and PM_{2.5} emissions, using the total fuel use (MMBtu) data from the Part 75 certified fuel flow meters and the average emission rates derived from the emission tests conducted in accordance with f)(2).

o. Emission Limitation:

H₂SO₄ emissions from this EU shall not exceed 1.0E-03 lb/MMBtu as an hourly average and 4.30 lbs/hr when the duct burner is not in operation; and 1.1E-03 lb/MMBtu as an hourly average and 5.60 lbs/hr when the duct burner is in operation.

Applicable Compliance Method:

These emission limitations are based on manufacturer's data. The permittee shall demonstrate compliance using Methods 1 through 4 and 8 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA. See f)(2).

p. Emission Limitation:

H₂SO₄ emissions from this EU shall not exceed 23.21 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be based upon record keeping as specified in d)(5) and shall be determined through a summation of the H₂SO₄ emissions as follows:

- i. The H₂SO₄ emissions for each EU shall be determined by multiplying the fuel use in MMBtu by the average emission rate (lbs H₂SO₄/MMBtu) derived from



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the emission tests conducted in accordance with f)(2) and dividing by 2,000 lbs/ton.

- ii. The monthly H₂SO₄ emissions shall be added to the total H₂SO₄ emissions from the previous 11 months to determine the rolling, 12-month summation of H₂SO₄ emissions, using the fuel use data from the Part 75 certified fuel flow meters and the average emission rates derived from the emission tests conducted in accordance with f)(2).

q. Emission Limitation:

CO_{2e} emissions shall not exceed 2,608,726 tons per rolling, 12-month period during all operating modes, including startup and shutdown periods.

Applicable Compliance Method:

The annual emission limitation is based on the sum of the following manufacturer's data GE Case #12 and #13 (595,000 lbs/hr CO₂, 11.34 lbs/hr CH₄, and 1.13 lbs/hr N₂O) multiplied by the associated global warming potential for each pollutant (CO₂=1, CH₄=25, N₂O=298 from Table A-1 of 40 CFR 98), multiplied by the maximum annual hours of operation (8,760 hrs/yr) and divided by (2,000 lbs/ton).

$$\left(618,000 \frac{\text{lbs}}{\text{hr}} \times 1 + 11.34 \frac{\text{lbs}}{\text{hr}} \times 25 + 1.13 \frac{\text{lbs}}{\text{hr}} \times 298 \right) \times 8,760 \frac{\text{hrs}}{\text{yr}} \div 2,000 \frac{\text{tons}}{\text{lb}} = 2,608,726 \text{ tons}$$

Since the CO_{2e} emissions are estimated to consist of more than 99% CO₂, compliance with this emission limitation will be assumed provided that the rolling, 12-month CO₂ emissions as calculated in section d) above do not exceed 2,608,726 tons per rolling, 12-month period.

r. Emission Limitation:

CO₂ emissions shall not exceed 360 kg to 560 kg per megawatt-hour (MWh) of gross energy output (800 to 1,250 lb CO₂/MWh) per 12-month rolling period or

CO₂ emissions shall not exceed 370 kg to 570 kg per MWh of net energy output (820 to 1,280 lb CO₂/MWh) per 12-month rolling period.

Applicable Compliance Method:

Compliance with the above emissions limitations shall be determined in accordance with the following:

60.5540a	Demonstrating Compliance with the CO ₂ Emissions Standard
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- (2) The permittee shall conduct, or have conducted, emission testing for this EU in accordance with the following requirements:

- a. The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the EU will be operated, but not later than 180 days after initial startup of the EU.



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- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for CO, NO_x, SO₂, PM₁₀, PM_{2.5}, VOC and H₂SO₄, in the appropriate averaging period(s).
- The emission testing shall include startup and shutdown for CO, NO_x, and VOC emissions.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):
- for CO, Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A;
- for NO_x, Methods 1 through 4 and 7E of 40 CFR Part 60, Appendix A, and the procedures specified in 40 CFR 60.4400;
- for PM₁₀ and PM_{2.5}, Methods 201A and 202 of 40 CFR Part 51, Appendix M; for SO₂, 40 CFR 60.4415;
- for VOC, Methods 1 through 4 and 18, 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A. Use of Method 18, 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents;
- for H₂SO₄, Methods 1 through 4 and 8 of 40 CFR Part 60, Appendix A; and
- for CO₂, Methods 1, 2, 3A, and 4 of 40 CFR Part 60, Appendix A, mass balance calculations using ASTM D1945-03 (Standard Test Method for Analysis of NG by Gas Chromatography) and/or ASTM D1826-94 (Standard Test Method for Calorific Value of Gases in NG Range by Continuous Recording Calorimeter).
- Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.
- d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by Ohio EPA NEDO. Although this generally consists of operating the EU at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA NEDO. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the EU operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in Ohio EPA NEDO's refusal to accept the results of the emission test(s).
- f. Personnel from Ohio EPA NEDO shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the EU and the testing procedures provide a valid characterization of the emissions from the EU and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to Ohio EPA NEDO

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within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from Ohio EPA NEDO.

- (3) Within 60 days of achieving the maximum production rate at which the EU(s) will be operated, but not later than 180 days after initial startup, the permittee shall conduct certification tests of the continuous NO_x emission monitoring system, in units of the applicable standard(s), to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specification 2 relative accuracy requirements; ORC section 3704.03(I); and 40 CFR Part 75.

The permittee shall certify that the fuel flow monitor/meter meets 40 CFR Part 75 certification requirements prior to the performance specification test and shall demonstrate how the lb/hr emissions of NO_x will be calculated stoichiometrically from the fuel flow rate.

Personnel from Ohio EPA CO and Ohio EPA NEDO shall be notified 45 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to Ohio EPA NEDO and one copy to Ohio EPA CO, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification, or recommendation for certification by Ohio EPA to U.S. EPA, of the continuous NO_x monitoring system shall be granted upon determination by Ohio EPA, CO that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specification 2 relative accuracy requirements; ORC section 3704.03(I); and 40 CFR Part 75.

Ongoing compliance with the NO_x emissions limitations contained in this permit, 40 CFR Parts 60 and 75, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60 and 40 CFR Part 75.

- (4) Within 60 days of achieving the maximum production rate at which the EU(s) will be operated, but not later than 180 days after initial startup, the permittee shall conduct certification tests of the continuous CO monitoring system in units of the applicable standard(s), to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specification 4 or 4a (as appropriate) relative accuracy requirements; and ORC section 3704.03(I).

The permittee shall certify that the fuel flow monitor/meter is calibrated prior to the performance specification test and shall demonstrate how the lb/hr emissions of CO will be calculated stoichiometrically from the fuel flow rate.

Personnel from Ohio EPA CO and Ohio EPA NEDO shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to OHIO EPA, one copy to Ohio EPA NEDO and one copy to Ohio EPA CO, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification of the continuous CO monitoring system shall be granted upon determination by Ohio EPA CO that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specification 4 or 4a (as appropriate) relative accuracy requirements; and ORC section 3704.03(I).



- a. Ongoing compliance with the CO emission limitations contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

- g) Miscellaneous Requirements
 - (1) None.