



State of Ohio Environmental Protection Agency

RE: DRAFT PERMIT TO INSTALL CERTIFIED MAIL
COLUMBIANA COUNTY

Street Address:

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:
Lazarus Gov. Center

Application No: 02-15426

DATE: 4/23/2002

Columbiana County Energy LLC
Mark Casper
9405 Arrowpoint Blvd
Charlotte, NC 28273

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This 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 proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of \$17600 will be due. Please do not submit any payment now.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Very truly yours,

Thomas G. Rigo
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA NEDO Eastgate Dev. & Trans. Study WV PA



STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install
Terms and Conditions

Issue Date: To be entered upon final issuance
Effective Date: To be entered upon final issuance

DRAFT PERMIT TO INSTALL 02-15426

Application Number: 02-15426
APS Premise Number: 0215000349
Permit Fee: **To be entered upon final issuance**
Name of Facility: Columbiana County Energy LLC
Person to Contact: Mark Casper
Address: 9405 Arrowpoint Blvd
Charlotte, NC 28273

Location of proposed air contaminant source(s) [emissions unit(s)]:
to be determined
Center Township, Ohio

Description of proposed emissions unit(s):
4 combustion turbines, 4 heat recovery steam generators with duct burners, 2 auxiliary boilers, 2 standby diesel generators, 1 diesel pump, 4 fuel preheaters, 4 cooling towers.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) 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 above described emissions unit(s) of environmental pollutants 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

Director

A. State and Federally Enforceable Permit To Install General Terms and Conditions**1. Monitoring and Related Recordkeeping 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:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. 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:
 - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. 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 appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.10 below if no deviations occurred during the quarter.

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- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., 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 semi-annual report, which states that no deviations occurred during that period.
- iv. 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.

2. 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 appropriate Ohio EPA District Office or local air agency 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).

3. 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.

4. 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.

5. Severability Clause

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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.

6. General Requirements

- a. The permittee must comply with all terms and conditions of this permit. 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 reissuance, or modification, or for denial of a permit renewal application.
- 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, reopened, 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, reopening 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.

7. 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 this Permit To Install.

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that 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, the State, and citizens under the Act. All other terms and conditions of this permit

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shall not be federally enforceable and shall be enforceable under State law only.

9. Compliance Requirements

- a. 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:
 - i. 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.
 - ii. 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.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. 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 appropriate Ohio EPA District Office or local air agency 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:
 - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - ii. 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.

10. Permit To Operate Application

- a. If 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 (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within thirty (30) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

12. 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.

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B. State Only Enforceable Permit To Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements Related to Monitoring and Recordkeeping 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 appropriate Ohio EPA District Office or local air agency.
- 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 appropriate Ohio EPA District Office or local air agency. 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, i.e., 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.)

3. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

4. Termination of Permit To Install

This permit to install shall terminate within eighteen months of the effective date of the permit to install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may

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be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

5. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. 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 the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install 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.

6. 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.

7. 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).

8. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the

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facility has been constructed in accordance with the Permit To Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

9. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

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, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

C. Permit To Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons Per Year</u>
NO _x	807
SO ₂	270
CO	2,763
VOC	236
PE	552
Ammonia	596
Formaldehyde	4.6
Sulfuric acid	42.8

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Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

None

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

1. The permit to install for emissions units P001, P002, P003, and P004 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions units exhaust systems, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by these emissions units using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Ammonia

TLV (ug/m³): 17,413

Maximum Hourly Emission Rate (lbs/hr): 136.0*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 29.21

MAGLC (ug/m³): 415

Pollutant: Formaldehyde

TLV (ug/m³): 272 (converted from the STEL)

Maximum Hourly Emission Rate (lbs/hr): 1.04*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.23

MAGLC (ug/m³): 6.5

Pollutant: Sulfuric acid

TLV (ug/m³): 1,000

Maximum Hourly Emission Rate (lbs/hr): 9.76*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 2.11

MAGLC (ug/m³): 23.8

*This was modeled for emissions units P001, P002, P003, and P004 combined.

Physical changes to or changes in the method of operation of these emissions units after installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

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- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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 pollutant with a listed TLV that was proposed in the application and modeled; and
 - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
2. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
B001 - Boiler No. 1, 40 MMBtu/hr natural gas fired auxiliary boiler equipped with low NOx burners and 3,000 hours of operation per rolling 12-month period.	40 CFR 60, Subpart Dc
	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-18-06(A)
	OAC rule 3745-17-10(B)(1)
	OAC rule 3745-17-07(A)(1)
	OAC rules 3745-31-10 through 3745-31-20

**Column
PTI A**

Emissions Unit ID: B001

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Applicable Emissions
Limitations/Control
Measures

The requirements of this rule also include compliance with the requirements of 40 CFR 60, Subpart Dc, OAC rule 3745-17-10(B)(1), OAC rule 3745-17-07(A)(1), and OAC rules 3745-31-10 through 20.

Nitrogen oxide (NO_x) emissions shall not exceed 0.08 pound per million Btu actual heat input, 3.20 pounds per hour and 4.80 tons per year.

Sulfur dioxide (SO₂) emissions shall not exceed 0.0065 pound per million Btu actual heat input, 0.26 pound per hour and 0.40 ton per year.

Carbon monoxide (CO) emissions shall not exceed 0.08 pound per million Btu actual heat input, 3.21 pounds per hour and 4.82 tons per year.

Volatile organic compounds (VOC) emissions shall not exceed 0.012 pound per million Btu actual heat input, 0.48 pound per hour and 0.72 ton per year.

Particulate emissions (PE) shall not exceed 0.20 pound per hour and 0.30 ton per year.

The emission limitations specified by this rule are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

PE shall not exceed 0.02 pound per million Btu actual heat input.

Visible particulate emissions from any stack shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

The emissions per rolling 12-month period shall not exceed (based on 3,000 hours):

- NO_x - 4.80 tons per year
- SO₂ - 0.40 ton per year
- CO - 4.82 tons per year
- VOC - 0.72 ton per year
- PE - 0.30 ton per year

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

- 2.a** The hourly emission limitations are based upon the emissions unit's Potential to Emit (PTE); therefore, no hourly records are required to demonstrate compliance with these limits.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit. The maximum sulfur content of the natural gas shall not exceed 2 grains per 100 scf.
2. The maximum annual hours of operation of emissions unit B001 shall not exceed 3,000 hours, based upon a rolling, 12-month summation.

To ensure enforceability during the first 12 calendar months following the startup of this emissions unit the permittee shall not exceed the monthly hours of operation restrictions specified in the following table:

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Month	Cumulative hours of Operation
1	500
1-2	1,000
1-3	1,500
1-4	2,000
1-5	2,500
1-6,...,12	3,000

After the first 12 calendar months following the startup of emissions unit B001, compliance with the annual hours of operation restriction shall be based on a rolling, 12-month summation.

III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit
2. The permittee shall monitor the sulfur content and gross calorific value of the fuel being fired at the facility. Fuel sampling and analysis shall be conducted according to the procedures and at the frequency specified by 40 CFR Part 75, Appendix D.
3. The permittee shall maintain monthly records of the following information for each emissions unit:
 - a. Hours of operation of the boiler.
 - b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the hours of operation.

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

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit deviation (excursion) reports that identify any record which shows that the sulfur content of the natural gas exceeded 2 grains per 100 scf. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month operating hours limitation and, for the first 12 calendar months of operation, all exceedances of the maximum allowable cumulative operating hours levels. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(2).
4. This emissions unit is subject to the applicable provisions of Subpart Dc of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60. The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to 40 CFR Part 60.7, 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. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
 DAPC - Permit Management Unit
 P. O. Box 163669
 Columbus, Ohio 43216-3669

and

Ohio Environmental Protection Agency
 Northeast District Office
 Division of Air Pollution Control
 2110 East Aurora Road
 Twinsburg, Ohio 44087

V. Testing Requirements

1. Emission Limitation
 0.08 lb/MMBtu, 3.20 lbs/hr, and 4.80 tpy of NO_x emissions

Applicable Compliance Method

Compliance with the 0.08 lb/MMBtu limitation shall be demonstrated using the manufacturer supplied performance data emission factor.

Compliance with the 3.20 lbs/hr limitation shall be demonstrated by multiplying the manufacturer

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supplied performance data emission factor (0.08 lb NO_x / MMBtu) by the maximum rated capacity of the emissions unit (40 MMBtu/hr).

Compliance with the 4.80 tpy limitation shall be demonstrated by multiplying the hourly NO_x emission rate (3.20 lbs/hr) by the actual hours of operation for the emissions unit and dividing by 2,000 lbs/ton, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

2. Emission Limitation
0.0065 lb/MMBtu, 0.26 lb/hr, and 0.40 tpy of SO₂ emissions

Applicable Compliance Method

Compliance with the 0.0065 lb/MMBtu limitation shall be demonstrated using the manufacturer supplied performance data emission factor.

Compliance with the 0.26 lb/hr limitation shall be demonstrated by multiplying the emission factor from the fuel supplier's specifications (0.0065 lb CO / MMBtu) by maximum rated capacity of the emissions unit (40 MMBtu/hr).

Compliance with the 0.40 tpy limitation shall be demonstrated by multiplying the hourly SO₂ emission rate (0.26 lb/hr) by the actual hours of operation for the emissions unit and dividing by 2,000 lbs/ton, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

3. Emission Limitation
0.08 lb/MMBtu, 3.21 lbs/hr, and 4.82 tpy of CO emissions

Applicable Compliance Method

Compliance with the 0.08 lb/MMBtu limitation shall be demonstrated using the manufacturer supplied performance data emission factor.

Compliance with the 3.21 lbs/hr limitation shall be demonstrated by multiplying the manufacturer supplied performance data emission factor (0.08 lb CO / MMBtu) by the maximum rated capacity of the emissions unit (40 MMBtu/hr).

Compliance with the 4.82 tpy limitation shall be demonstrated by multiplying the hourly CO emission rate (3.21 lbs/hr) by the actual hours of operation for the emissions unit and dividing by 2,000 lbs/ton, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

4. Emission Limitation

Emissions Unit ID: B001

0.012 lb/MMBtu, 0.48 lb/hr, and 0.72 tpy of VOC emissions

Applicable Compliance Method

Compliance with the 0.012 lb/MMBtu limitation shall be demonstrated using the manufacturer supplied performance data emission factor.

Compliance with the 0.48 lb/hr limitation shall be demonstrated by multiplying the manufacturer supplied performance data emission factor (0.012 lb VOC / MMBtu) by the maximum rated capacity of the emissions unit (40 MMBtu/hr).

Compliance with the 0.72 tpy limitation shall be demonstrated by multiplying the hourly VOC emission rate (0.48 lb/hr) by the actual hours of operation for the emissions unit and dividing by 2,000 lbs/ton, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

5. Emission Limitation

0.02 lb/MMBtu, 0.20 lb/hr, and 0.30 tpy of particulate emissions

Applicable Compliance Method

Compliance with the 0.02 lb/MMBtu limitation shall be demonstrated using the manufacturer supplied performance data emission factor.

Compliance with the 0.20 lb/hr limitation shall be demonstrated by multiplying the manufacturer supplied performance data emission factor (0.005 lb PE / MMBtu) by the maximum rated capacity of the emissions unit (40 MMBtu/hr).

Compliance with the 0.30 tpy limitation shall be demonstrated by multiplying the hourly particulate emission rate (0.20 lb/hr) by the actual hours of operation for the emissions unit and dividing by 2,000 lbs/ton, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

6. Emission Limitation

The emissions per rolling 12-month period shall not exceed:

NO_x - 4.80 tons per year

SO₂ - 0.40 ton per year

CO - 4.82 tons per year

VOC - 0.72 ton per year

PE - 0.30 ton per year

Applicable Compliance Method

Compliance with the rolling 12-month emission limitations shall be demonstrated by the record keeping requirement in section A.III.3 (total hours of operation) multiplied by the allowable pound per hour emission rate divided by 2,000 lbs/ton, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

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Emissions Unit ID: B001

7. Emission Limitation
20% opacity for visible particulate emissions, as a six-minute average

21

Column

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Emissions Unit ID: B001

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Applicable Compliance Method

Compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in U.S. EPA reference method 9.

VI. Miscellaneous Requirements

None

**Column
PTI A**

Emissions Unit ID: B001

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B001 - Boiler No. 1, 40 MMBtu/hr natural gas fired auxiliary boiler equipped with low NOx burners and 3,000 hours of operation per rolling 12-month period.	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

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Emissions Unit ID: B001

None

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Emissions Unit ID: B002

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
B002 - Boiler No. 2, 40 MMBtu/hr natural gas fired auxiliary boiler equipped with low NOx burners and 3,000 hours of operation per rolling 12-month period.	OAC rule 3745-31-05(A)(3)	40 CFR 60, Subpart Dc
		OAC rule 3745-18-06(A)
		OAC rule 3745-17-10(B)(1)
		OAC rule 3745-17-07(A)(1)
		OAC rules 3745-31-10 through 3745-31-20

Column**PTI A**

Emissions Unit ID: B002

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Applicable Emissions
Limitations/Control
Measures

The requirements of this rule also include compliance with the requirements of 40 CFR 60, Subpart Dc, OAC rule 3745-17-10(B)(1), OAC rule 3745-17-07(A)(1), and OAC rules 3745-31-10 through 20.

Nitrogen oxide (NO_x) emissions shall not exceed 0.08 pound per million Btu actual heat input, 3.20 pounds per hour and 4.80 tons per year.

Sulfur dioxide (SO₂) emissions shall not exceed 0.0065 pound per million Btu actual heat input, 0.26 pound per hour and 0.40 ton per year.

Carbon monoxide (CO) emissions shall not exceed 0.08 pound per million Btu actual heat input, 3.21 pounds per hour and 4.82 tons per year.

Volatile organic compounds (VOC) emissions shall not exceed 0.012 pound per million Btu actual heat input, 0.48 pound per hour and 0.72 ton per year.

Particulate emissions (PE) shall not exceed 0.20 pound per hour and 0.30 ton per year.

The emission limitations specified by this rule are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

PE shall not exceed 0.02 pound per million Btu actual heat input.

Visible particulate emissions from any stack shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

The emissions per rolling 12-month period shall not exceed (based on 3,000 hours):

NO_x - 4.80 tons per year
 SO₂ - 0.40 ton per year
 CO - 4.82 tons per year
 VOC - 0.72 ton per year
 PE - 0.30 ton per year

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

- 2.a** The hourly emission limitations are based upon the emissions unit's Potential to Emit (PTE); therefore, no hourly records are required to demonstrate compliance with these limits.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit. The maximum sulfur content of the natural gas shall not exceed 2 grains per 100 scf.
2. The maximum annual hours of operation of emissions unit B001 shall not exceed 3,000 hours, based upon a rolling, 12-month summation.

To ensure enforceability during the first 12 calendar months following the startup of this emissions unit the permittee shall not exceed the monthly hours of operation restrictions specified in the following table:

Column

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Emissions Unit ID: B002

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Month	Cumulative hours of Operation
1	500
1-2	1,000
1-3	1,500
1-4	2,000
1-5	2,500
1-6,...,12	3,000

After the first 12 calendar months following the startup of emissions unit B001, compliance with the annual hours of operation restriction shall be based on a rolling, 12-month summation.

III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit
2. The permittee shall monitor the sulfur content and gross calorific value of the fuel being fired at the facility. Fuel sampling and analysis shall be conducted according to the procedures and at the frequency specified by 40 CFR Part 75, Appendix D.
3. The permittee shall maintain monthly records of the following information for each emissions unit:
 - a. Hours of operation of the boiler.
 - b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the hours of operation.

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

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit deviation (excursion) reports that identify any record which shows that the sulfur content of the natural gas exceeded 2 grains per 100 scf. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).

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3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month operating hours limitation and, for the first 12 calendar months of operation, all exceedances of the maximum allowable cumulative operating hours levels. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(2).
4. This emissions unit is subject to the applicable provisions of Subpart Dc of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60. The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to 40 CFR Part 60.7, 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. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
 DAPC - Permit Management Unit
 P. O. Box 163669
 Columbus, Ohio 43216-3669

and

Ohio Environmental Protection Agency
 Northeast District Office
 Division of Air Pollution Control
 2110 East Aurora Road
 Twinsburg, Ohio 44087

V. Testing Requirements

1. Emission Limitation
 0.08 lb/MMBtu, 3.20 lbs/hr, and 4.80 tpy of NO_x emissions

Applicable Compliance Method

Compliance with the 0.08 lb/MMBtu limitation shall be demonstrated using the manufacturer supplied performance data emission factor.

Compliance with the 3.20 lbs/hr limitation shall be demonstrated by multiplying the manufacturer

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supplied performance data emission factor (0.08 lb NO_x / MMBtu) by the maximum rated capacity of the emissions unit (40 MMBtu/hr).

Compliance with the 4.80 tpy limitation shall be demonstrated by multiplying the hourly NO_x emission rate (3.20 lbs/hr) by the actual hours of operation for the emissions unit and dividing by 2,000 lbs/ton, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

2. Emission Limitation
0.0065 lb/MMBtu, 0.26 lb/hr, and 0.40 tpy of SO₂ emissions

Applicable Compliance Method

Compliance with the 0.0065 lb/MMBtu limitation shall be demonstrated using the manufacturer supplied performance data emission factor.

Compliance with the 0.26 lb/hr limitation shall be demonstrated by multiplying the emission factor from the fuel supplier's specifications (0.0065 lb/MMBtu) by maximum rated capacity of the emissions unit (40 MMBtu/hr).

Compliance with the 0.40 tpy limitation shall be demonstrated by multiplying the hourly SO₂ emission rate (0.26 lb/hr) by the actual hours of operation for the emissions unit and dividing by 2,000 lbs/ton, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

3. Emission Limitation
0.08 lb/MMBtu, 3.21 lbs/hr, and 4.82 tpy of CO emissions

Applicable Compliance Method

Compliance with the 0.08 lb/MMBtu limitation shall be demonstrated using the manufacturer supplied performance data emission factor.

Compliance with the 3.21 lbs/hr limitation shall be demonstrated by multiplying the manufacturer supplied performance data emission factor (0.08 lb CO / MMBtu) by the maximum rated capacity of the emissions unit (40 MMBtu/hr).

Compliance with the 4.82 tpy limitation shall be demonstrated by multiplying the hourly CO emission rate (3.21 lbs/hr) by the actual hours of operation for the emissions unit and dividing by 2,000 lbs/ton, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

4. Emission Limitation

Emissions Unit ID: B002

0.012 lb/MMBtu, 0.48 lb/hr, and 0.72 tpy of VOC emissions

Applicable Compliance Method

Compliance with the 0.012 lb/MMBtu limitation shall be demonstrated using the manufacturer supplied performance data emission factor.

Compliance with the 0.48 lb/hr limitation shall be demonstrated by multiplying the manufacturer supplied performance data emission factor (0.012 lb VOC / MMBtu) by the maximum rated capacity of the emissions unit (40 MMBtu/hr).

Compliance with the 0.72 tpy limitation shall be demonstrated by multiplying the hourly VOC emission rate (0.48 lb/hr) by the actual hours of operation for the emissions unit and dividing by 2,000 lbs/ton, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

5. Emission Limitation

0.02 lb/MMBtu, 0.20 lb/hr, and 0.30 tpy of particulate emissions

Applicable Compliance Method

Compliance with the 0.02 lb/MMBtu limitation shall be demonstrated using the manufacturer supplied performance data emission factor.

Compliance with the 0.20 lb/hr limitation shall be demonstrated by multiplying the manufacturer supplied performance data emission factor (0.005 lb PE / MMBtu) by the maximum rated capacity of the emissions unit (40 MMBtu/hr).

Compliance with the 0.30 tpy limitation shall be demonstrated by multiplying the hourly particulate emission rate (0.20 lb/hr) by the actual hours of operation for the emissions unit and dividing by 2,000 lbs/ton, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

6. Emission Limitation

The emissions per rolling 12-month period shall not exceed:

NO_x - 4.80 tons per year

SO₂ - 0.40 ton per year

CO - 4.82 tons per year

VOC - 0.72 ton per year

PE - 0.30 ton per year

Applicable Compliance Method

Compliance with the rolling 12-month emission limitations shall be demonstrated by the record keeping requirement in section A.III.3 (total hours of operation) multiplied by the allowable pound per hour emission rate divided by 2,000 lbs/ton, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

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Emissions Unit ID: B002

7. Emission Limitation
20% opacity for visible particulate emissions, as a six-minute average

Column

PTI A

Emissions Unit ID: B002

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Applicable Compliance Method

Compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in U.S. EPA reference method 9.

VI. Miscellaneous Requirements

None

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PTI A

Emissions Unit ID: B002

Issued: To be entered upon final issuance**B. State Only Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B002 - Boiler No. 2, 40 MMBtu/hr natural gas fired auxiliary boiler equipped with low NOx burners and 3,000 hours of operation per rolling 12-month period.	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

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Emissions Unit ID: B002

None

Column

PTI A

Emissions Unit ID: P001

Issued: To be entered upon final issuance**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P001 - 305 MW combined cycle natural gas combustion turbine (GE PG7241FA or equivalent) with duct burners using selective catalytic reduction (SCR) and dry low NOx burners for NOx control and good combustion practices for CO control.	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-31-05(A)(3)

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	<u>Applicable Emissions Limitations/Control Measures</u>	
		not exceed 2.44 pounds per hour.
		See section A.II. 1.
OAC rule 3745-17-07(A)(1)	The requirements of this rule also include compliance with the requirements of 40 CFR 60 Subpart GG, and OAC rules 3745-31-10 through 20.	Start-up and shut-down emissions shall not exceed the following (see section A.II.2.):
OAC rule 3745-17-11(B)(4)	Visible particulate emissions from any stack shall not exceed 10% opacity, as a six-minute average.	NO _x - 54.6 tons per year CO - 316 tons per year VOC - 21.3 tons per year
OAC rule 3745-18-06(F)		
40 CFR 60, Subpart Da	Emissions limits with duct burners firing:	Total emissions (per unit), including duct burners, start-ups, and shut-downs, shall not exceed the following:
40 CFR 60, Subpart GG	Nitrogen oxide (NO _x) emissions shall not exceed 3.5 ppmvd at 15% oxygen and 33.0 pounds per hour.	NO _x - 199.2 tons per year SO ₂ - 67.1 tons per year CO - 688.3 tons per year VOC - 58.6 tons per year
OAC rules 3745-31-10 through 3745-31-20	Sulfur dioxide (SO ₂) emissions shall not exceed 15.3 pounds per hour.	PE - 122.7 tons per year NH ₃ - 149.0 tons per year Formaldehyde - 1.14 tons per year
	Carbon monoxide (CO) emissions shall not exceed 15.7 ppmvd at 15% oxygen and 85.0 pounds per hour.	H ₂ SO ₄ - 10.7 tons per year
40 CFR 75		See section A.I.2.a.
OAC rule 3745-103	Volatile organic compounds (VOC) emissions shall not exceed 8.5 pounds per hour.	See section A.I.2.a. See section A.I.2.a.
	Particulate emissions (PE) shall not exceed 28.0 pounds per hour.	See section A.I.2.a.
	Ammonia (NH ₃) emissions shall not exceed 34.0 pounds per hour.	See section A.I.2.b.
	Formaldehyde emissions shall not exceed 0.26 pound per hour.	NO _x - 199.2 tons per year SO ₂ - 67.1 tons per year CO - 688.3 tons per year VOC - 58.6 tons per year PE - 122.7 tons per year
	Sulfuric acid (H ₂ SO ₄) emissions shall	H ₂ SO ₄ - 10.7 tons per year

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See section A.I.2.e.

See section A.I.2.c.

See section A.I.2.c.

2. Additional Terms and Conditions

2.a The emissions limit based on this applicable rule is equivalent to or less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3).

2.b The emissions limits based on this applicable rule are equivalent to or less stringent than the limits established pursuant to OAC rule 3745-31-05(A)(3). Except as provided for in the terms and conditions in this permit, the permittee is not exempt from meeting any additional requirements of 40 CFR 60, Subpart GG.

2.c If the permittee is subject to the requirements of 40 CFR 75 concerning acid rain, the permittee shall ensure that any effected 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.

2.d The emissions of Hazardous Air Pollutants (HAPs), as defined in Section 112(b) of the Clean Air Act, from emissions units P001, P002, P003, and P004 combined, shall not exceed 10.0 tons per year for an individual HAP* and 25 tons per year for any combination of HAPs*, per rolling 12 month period.

*Using AP-42 emission factors, the potential to emit for all HAPs for emissions units P001, P002, P003, and P004 combined is approximately 40.9 tons per year, with approximately 28.3 tons per year being one individual HAP (formaldehyde). But, since the permittee has elected to use more restrictive "CARB" emission factors, the potential to emit for all HAPs combined is less than 25 tons and less than 10.0 tons for any single HAP, no monitoring, record keeping, or reporting requirements are necessary to meet these limits. However, testing will be required to demonstrate compliance as described in Part V of the Testing Requirements.

2.e Per the requirements of OAC rule 3745-31-10 through 20, the permittee is required to perform a Best Available Control Technology (BACT) review for NO_x, SO₂, CO, VOC, PE, and H₂SO₄. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-05(A)(3) above. The following determinations have been made for each pollutant:

NO _x -	Use of selective catalytic reduction (SCR) and dry low NO _x (DLN) burners with a controlled rate of 3.5 ppmvd at 15% oxygen.
SO ₂ -	Burning natural gas in an efficient combustion turbine.
CO-	Use of good combustion practices with a rate of 15.7 ppmvd at 15% oxygen with duct burners ON. The effectiveness of this rate shall be verified through stack testing.
VOC-	Use of efficient combustion technology in the operation of the turbine.
PE-	Burning natural gas in an efficient combustion turbine. For this permit, it is assumed that all PE are PM ₁₀ .
H ₂ SO ₄ -	Burning natural gas in an efficient combustion turbine.

- 2.f** The hourly emission limitations outlined are based upon the emissions unit's potential to emit (PTE); therefore, no hourly records are required to demonstrate compliance with these limits.

II. Operational Restrictions

- The permittee shall burn only natural gas in this emissions unit. The maximum sulfur content of the natural gas shall not exceed 2 grains per 100 scf.
- Start-up and shut-down shall be defined as when the unit is running at less than 70% of electric load, but under no circumstances shall start-ups exceed 4.6 hours in duration and shut-downs shall not exceed 2 hours in duration. Start-up and shut-downs shall be limited to 400 cycles (one start-up and one shut-down) per year. Each start-up and shut-down shall be limited to the following:

<u>Pollutant</u>	<u>Pounds per start-up</u>	<u>Pounds per shut-down</u>	<u>Total pounds per one cycle</u>	<u>TPY for 400 cycles</u>
NO _x	234	39	273	54.6
CO	1,292	288	1,580	316
VOC	93.2	13.2	106.4	21.3

III. Monitoring and/or Recordkeeping Requirements

- The permittee shall maintain monthly records of the following information for this emissions unit:
 - number of start-ups;
 - duration of each start-up;
 - number of shut-downs;
 - duration of each shut-down;
 - the start-up and shut-down emissions for NO_x, CO, and VOC, in tons per month; and
 - the annual, year to date, emissions of NO_x, CO, and VOC, in tons per year.

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2. The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the natural gas usage rate for each month, in standard cubic feet;
 - b. the hours of operation;
 - c. the monthly emission rate for NO_x, SO₂, CO, VOC, PE, and H₂SO₄, in tons; and
 - d. the annual rolling 12-month, to date emissions of NO_x, SO₂, CO, VOC, PE, and H₂SO₄, in tons.
3. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
4. The permittee shall operate and maintain equipment to continuously monitor* and record NO_x and CO from this emissions unit in the units established in this permit. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR 60.13 or as approved by the Ohio EPA, Central Office.

The permittee shall maintain records of all data obtained by the continuous NO_x and CO monitoring systems including, but not limited to, parts per million NO_x or CO on an instantaneous (one-minute) basis, emissions of NO_x and CO in the units established in this permit (with a three hour rolling averaging period), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

*The installation and operation of systems to continuously monitor and record emissions of NO_x shall be performed in lieu of monitoring the nitrogen content of the natural gas being fired in the turbine, as required by 40 CFR 60.334(b).

5. The permittee shall operate and maintain equipment to continuously monitor and record the O₂ from this emissions unit in percent O₂. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR 60.13 or as approved by the Ohio EPA, Central Office. The permittee may install a CO₂ monitor in lieu of an O₂ monitor with prior approval from the Ohio EPA, Central Office.

The permittee shall maintain records of all data obtained by the continuous O₂ monitoring system including, but not limited to percent O₂ on an instantaneous (one-minute) basis, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.
6. The information management system for this emissions unit shall be capable of monitoring and recording the fuel flow (million cubic feet), hours of operation with duct burner firing, and hours of operation without duct burner firing.
7. The permittee shall operate and maintain equipment to continuously monitor and record fuel flow

to this emissions unit.

8. The permittee shall maintain documentation on the sulfur contents and heating values of the fuels received. ASTM D 2880-71 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81 shall be used for the sulfur content of gaseous fuels. The permittee shall determine the heat value of the fuels using ASTM method D240. The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Ohio EPA. The newest or most recent revisions to the applicable test method shall be used for these analyses.

Alternative, equivalent methods and frequencies of sampling schedules may be used if they comply with the requirements specified in 40 CFR 60.13, and upon written approval by the Ohio EPA.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit deviation (excursion) reports that identify any record which shows that the sulfur content of the natural gas exceeded 2 grains per 100 scf. These reports are due by the date described in Part I - General Terms and Conditions of this permit.
3. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northeast District Office documenting the date, commencement and completion time, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of NO_x or CO values in excess of the limits specified in the terms and conditions of this permit.

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northeast District Office documenting any continuous NO_x or CO monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement

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Emissions Unit ID: P001

to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

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Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031, the permittee shall submit a summary of the excess emission report pursuant to 40 CFR Part 60.7. The summary shall be submitted to the Ohio EPA, Northeast District Office within 30 days following the end of each calendar quarter in a manner prescribed by the Director.

4. In lieu of the excess emissions reports required under 40 CFR Part 60.334, the permittee shall submit excess and emissions reports for this emissions unit in accordance with this permit.
5. Unless otherwise specified, the above reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(1).
6. Pursuant to 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northeast District Office documenting all instances of continuous O₂ monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included in the quarterly report. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.
7. The permittee shall submit deviation (excursion) reports that identify each time when this emissions unit was not in compliance with the start-up/shut-down restrictions specified under section II. above. These reports are due by the date described in Part I - General Terms and Conditions of this permit.
8. This emissions unit is subject to the applicable provisions of Subpart Da and GG of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60. The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to 40 CFR Part 60.7, 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. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

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Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P. O. Box 163669
Columbus, Ohio 43216-3669

and

Ohio Environmental Protection Agency
Northeast District Office
Division of Air Pollution Control
2110 East Aurora Road
Twinsburg, Ohio 44087

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit 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 emissions unit will be operated, but not later than 180 days after initial start-up of such emissions unit.
 - b. The emission testing* shall be conducted to demonstrate compliance with the NO_x and CO outlet concentrations and the mass emissions limitations for NO_x, CO, and formaldehyde. Testing shall be conducted while the emissions unit is operating at or near its maximum capacity with duct burners firing, unless otherwise specified or approved by Ohio EPA.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable emissions limitations:

NO _x	Method 20 of 40 CFR Part 60, Appendix A
PM	Method 5 of 40 CFR Part 60, Appendix A
Formaldehyde	SW-846 Method 0011
VOC(as carbon)	Method 25 of 40 CFR Part 60, Appendix A
SO ₂	Method 6 of 40 CFR Part 60, Appendix A
CO	Method 10 of 40 CFR Part 60, Appendix A
Ammonia	CTM-027

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northeast District Office.

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- d. The stack on this emissions unit shall be constructed such that the height and port locations meet the minimum requirements necessary to perform Methods 1-4 of 40 CFR Part 60, Appendix A.
 - e. The testing shall be performed at peak load (as defined by 40 CFR Part 60, Subpart GG), unless otherwise specified or approved by the Ohio EPA, Northeast District Office.
 - f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA, Northeast District Office's refusal to accept the results of the emission tests.
 - g. Personnel from the Ohio EPA, Northeast District Office shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
 - h. A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Northeast District Office within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Northeast District Office.

*In lieu of the test methods and procedures required under 40 CFR Part 60.335, the permittee shall follow the testing requirements in accordance with this permit.
2. Within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial start-up of such emissions unit, the permittee shall conduct certification tests of the continuous NO_x and CO monitoring systems pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6*. Personnel from the Ohio EPA, Northeast District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, copies of all the test results shall be submitted within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA, Northeast District Office and the Ohio EPA, Central Office. Certification of the continuous NO_x and CO monitoring systems shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6*.

*The permittee may use 40 CFR Part 60, Appendix B, Performance Specification 2 and

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Performance Specification 4 in conjunction with a fuel flow monitor as described in 40 CFR Part 75 to meet these requirements if approved by the Ohio EPA, Central Office.

3. Within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit, the permittee shall conduct certification tests of the continuous O₂ monitoring systems pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 3. Personnel from the Ohio EPA, Northeast District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA, Northeast District Office and the Ohio EPA, Central Office. Certification of the continuous O₂ monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 3.
4. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:

- a. Emission Limitation

NO_x emissions shall not exceed:

3.5 ppmvd at 15% oxygen with duct burner firing

33.0 pounds per hour with duct burner firing

199.2 tons per year, which includes 54.6 tons for start-up and shut-down emissions

Applicable Compliance Method

Compliance with the allowable outlet concentration and the pound per hour emission limitations shall be demonstrated by the performance testing as described in condition A.V.1. and CEM requirements as described in conditions A.III.4 & 5 and A.V.2 & 3. Compliance with the annual emission limitation shall be determined by the record keeping required in condition A.III, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

- b. Emission Limitation

SO₂ emissions shall not exceed:

15.3 pounds per hour with duct burner firing

67.1 tons per year

Applicable Compliance Method

Compliance with the allowable pound per hour emission limitation shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual

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emission limitations shall be determined by the record keeping required in condition A.III, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

c. Emission Limitation

CO emissions shall not exceed:

15.7 ppmvd at 15% oxygen with duct burner firing

85.0 pounds per hour with duct burner firing

688.3 tons per year, which includes 316 tons for start-up and shut-down emissions

Applicable Compliance Method

Compliance with the allowable outlet concentration and the pound per hour emission limitations shall be demonstrated by the performance testing as described in condition A.V.1. and CEM requirements as described in conditions A.III.4 & 5 and A.V.2 & 3. Compliance with the annual emission limitation shall be determined by the record keeping required in condition A.III, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

d. Emission Limitation

VOC emissions shall not exceed:

8.5 pounds per hour with duct burner firing

58.6 tons per year, which includes 21.3 tons for start-up and shut-down emissions

Applicable Compliance Method

Compliance with the allowable pound per hour emission limitation shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by the record keeping required in condition A.III, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

e. Emission Limitation

Particulate emissions shall not exceed:

28.0 pounds per hour with duct burner firing

122.7 tons per year

Applicable Compliance Method

Compliance with the allowable pound per hour emission limitation shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by the record keeping required in condition A.III, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

f. Emission Limitation

NH₃ emissions shall not exceed:

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34.0 pounds per hour with duct burner firing

149.0 tons per year

Applicable Compliance Method

Compliance with the allowable pound per hour emission limitation shall be demonstrated by the performance testing as described in condition A.V.1. As long as the pound per hour emissions limitation is met, the annual emissions limitation is also assumed to be met because the annual emissions limitation is based upon the potential to emit of the emissions unit.

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- g. Emission Limitation
Formaldehyde emissions shall not exceed:
0.26 pounds per hour with duct burner firing
1.14 tons per year

Applicable Compliance Method

Compliance with the allowable pound per hour emission limitation shall be demonstrated by the performance testing as described in condition A.V.1. As long as the pound per hour emissions limitation is met, the annual emissions limitation is also assumed to be met because the annual emissions limitation is based upon the potential to emit of the emissions unit.

- h. Emission Limitation
H₂SO₄ emissions shall not exceed:
2.44 pounds per hour with duct burner firing
10.7 tons per year

Applicable Compliance Method

Compliance with the allowable pound per hour emission limitation shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by the record keeping required in condition A.III, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

- i. Emission Limitation
10% opacity for visible particulate emissions, as a six-minute average

Applicable Compliance Method

Compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in U.S. EPA reference method 9.

VI. Miscellaneous Requirements

1. In accordance with good engineering practices, the SCR and Dry Low NO_x burner unit associated with this emissions unit shall be installed, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The permittee shall maintain on site, a copy of the operation & maintenance manual, as provided by the manufacturer.
2. Prior to the installation of the continuous NO_x and CO monitoring systems, the permittee shall

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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 6 (or as described in condition A.V.1.) for approval by the Ohio EPA, Central Office.

Prior to the installation of the continuous O₂ 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 3 for approval by the Ohio EPA, Central Office.

3. No later than 90 days prior to the certification testing of the CEM systems, the permittee shall submit a written quality assurance/quality control plan for the continuous NO_x, CO, and O₂ monitoring systems designed to ensure continuous valid and representative readings of NO_x, CO, and O₂ emissions in the units established in this permit. The plan shall follow the requirements of 40 CFR Part 60, Appendix F or as approved by the Ohio EPA, Central office. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x, CO, and O₂ monitoring systems must be kept on site and available for inspection during regular office hours.
4. This emissions unit, as described in this Permit to Install (PTI), is subject to the applicable provisions of the NSPS, as promulgated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR Part 60. The requirements of 40 CFR Part 60 are delegated to the Ohio EPA and are federally enforceable.

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P001 - 305 MW combined cycle natural gas combustion turbine (GE PG7241FA or equivalent) with duct burners using selective catalytic reduction (SCR) and dry low NOx burners for NOx control and good combustion practices for CO control.	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

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None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P002 - 305 MW combined cycle natural gas combustion turbine (GE PG7241FA or equivalent) with duct burners using selective catalytic reduction (SCR) and dry low NOx burners for NOx control and good combustion practices for CO control.	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-31-05(A)(3)

OAC rule 3745-31-05(A)(3)	Applicable Emissions Limitations/Control Measures	Start-up and shut-down emissions shall not exceed the following (see section A.II.2.):
OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of 40 CFR 60 Subpart GG, and OAC rules 3745-31-10 through 20.	NO _x - 54.6 tons per year CO - 316 tons per year VOC - 21.3 tons per year
OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed 10% opacity, as a six-minute average.	Total emissions (per unit), including duct burners, start-ups, and shut-downs, shall not exceed the following:
OAC rule 3745-17-11(B)(4)	Emissions limits with duct burners firing:	NO _x - 199.2 tons per year SO ₂ - 67.1 tons per year CO - 688.3 tons per year
OAC rule 3745-18-06(F)	Nitrogen oxide (NO _x) emissions shall not exceed 3.5 ppmvd at 15% oxygen and 33.0 pounds per hour.	VOC - 58.6 tons per year PE - 122.7 tons per year NH ₃ - 149.0 tons per year
OAC rules 3745-31-10 through 3745-31-20	Sulfur dioxide (SO ₂) emissions shall not exceed 15.3 pounds per hour.	Formaldehyde - 1.14 tons per year H ₂ SO ₄ - 10.7 tons per year
40 CFR 60, Subpart Da	Carbon monoxide (CO) emissions shall not exceed 15.7 ppmvd at 15% oxygen and 85.0 pounds per hour.	See section A.I.2.a.
40 CFR 60, Subpart GG	Volatile organic compounds (VOC) emissions shall not exceed 8.5 pounds per hour.	See section A.I.2.a.
OAC rules 3745-31-10 through 3745-31-20	Particulate emissions (PE) shall not exceed 28.0 pounds per hour.	See section A.I.2.a.
40 CFR 75	Ammonia (NH ₃) emissions shall not exceed 34.0 pounds per hour.	See section A.I.2.a.
OAC rule 3745-103	Formaldehyde emissions shall not exceed 0.26 pound per hour.	See section A.I.2.b.
	Sulfuric acid (H ₂ SO ₄) emissions shall not exceed 2.44 pounds per hour.	NO _x - 199.2 tons per year SO ₂ - 67.1 tons per year CO - 688.3 tons per year VOC - 58.6 tons per year PE - 122.7 tons per year H ₂ SO ₄ - 10.7 tons per year
	See section A.II. 1.	See section A.I.2.e.
		See section A.I.2.c.
		See section A.I.2.c.

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

- 2.a** The emissions limit based on this applicable rule is equivalent to or less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3).
- 2.b** The emissions limits based on this applicable rule are equivalent to or less stringent than the limits established pursuant to OAC rule 3745-31-05(A)(3). Except as provided for in the terms and conditions in this permit, the permittee is not exempt from meeting any additional requirements of 40 CFR 60, Subpart GG.
- 2.c** If the permittee is subject to the requirements of 40 CFR 75 concerning acid rain, the permittee shall ensure that any effected 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.
- 2.d** The emissions of Hazardous Air Pollutants (HAPs), as defined in Section 112(b) of the Clean Air Act, from emissions units P001, P002, P003, and P004 combined, shall not exceed 10.0 tons per year for an individual HAP* and 25 tons per year for any combination of HAPs*, per rolling 12 month period.

*Using AP-42 emission factors, the potential to emit for all HAPs for emissions units P001, P002, P003, and P004 combined is approximately 40.9 tons per year, with approximately 28.3 tons per year being one individual HAP (formaldehyde). But, since the permittee has elected to use more restrictive "CARB" emission factors, the potential to emit for all HAPs combined is less than 25 tons and less than 10.0 tons for any single HAP, no monitoring, record keeping, or reporting requirements are necessary to meet these limits. However, testing will be required to demonstrate compliance as described in Part V of the Testing Requirements.

- 2.e** Per the requirements of OAC rule 3745-31-10 through 20, the permittee is required to perform a Best Available Control Technology (BACT) review for NO_x, SO₂, CO, VOC, PE, and H₂SO₄. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-05(A)(3) above. The following determinations have been made for each pollutant:

NO _x -	Use of selective catalytic reduction (SCR) and dry low NO _x (DLN) burners with a controlled rate of 3.5 ppmvd at 15% oxygen.
SO ₂ -	Burning natural gas in an efficient combustion turbine.
CO-	Use of good combustion practices with a rate of 15.7 ppmvd at 15% oxygen with duct burners ON. The effectiveness of this rate shall be verified through stack testing.

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VOC-	Use of efficient combustion technology in the operation of the turbine.
PE-	Burning natural gas in an efficient combustion turbine. For this permit, it is assumed that all PE are PM ₁₀ .
H ₂ SO ₄ -	Burning natural gas in an efficient combustion turbine.

- 2.f** The hourly emission limitations outlined are based upon the emissions unit's potential to emit (PTE); therefore, no hourly records are required to demonstrate compliance with these limits.

II. Operational Restrictions

- The permittee shall burn only natural gas in this emissions unit. The maximum sulfur content of the natural gas shall not exceed 2 grains per 100 scf.
- Start-up and shut-down shall be defined as when the unit is running at less than 70% of electric load, but under no circumstances shall start-ups exceed 4.6 hours in duration and shut-downs shall not exceed 2 hours in duration. Start-up and shut-downs shall be limited to 400 cycles (one start-up and one shut-down) per year. Each start-up and shut-down shall be limited to the following:

<u>Pollutant</u>	<u>Pounds per start-up</u>	<u>Pounds per shut-down</u>	<u>Total pounds per one cycle</u>	<u>TPY for 400 cycles</u>
NO _x	234	39	273	54.6
CO	1,292	288	1,580	316
VOC	93.2	13.2	106.4	21.3

III. Monitoring and/or Recordkeeping Requirements

- The permittee shall maintain monthly records of the following information for this emissions unit:
 - number of start-ups;
 - duration of each start-up;
 - number of shut-downs;
 - duration of each shut-down;
 - the start-up and shut-down emissions for NO_x, CO, and VOC, in tons per month; and
 - the annual, year to date, emissions of NO_x, CO, and VOC, in tons per year.
- The permittee shall maintain monthly records of the following information for this emissions unit:
 - the natural gas usage rate for each month, in standard cubic feet;
 - the hours of operation;
 - the monthly emission rate for NO_x, SO₂, CO, VOC, PE, and H₂SO₄, in tons; and
 - the annual rolling 12-month, to date emissions of NO_x, SO₂, CO, VOC, PE, and H₂SO₄, in tons.

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3. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
4. The permittee shall operate and maintain equipment to continuously monitor* and record NO_x and CO from this emissions unit in the units established in this permit. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR 60.13 or as approved by the Ohio EPA, Central Office.

The permittee shall maintain records of all data obtained by the continuous NO_x and CO monitoring systems including, but not limited to, parts per million NO_x or CO on an instantaneous (one-minute) basis, emissions of NO_x and CO in the units established in this permit (with a three hour rolling averaging period), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

*The installation and operation of systems to continuously monitor and record emissions of NO_x shall be performed in lieu of monitoring the nitrogen content of the natural gas being fired in the turbine, as required by 40 CFR 60.334(b).

5. The permittee shall operate and maintain equipment to continuously monitor and record the O₂ from this emissions unit in percent O₂. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR 60.13 or as approved by the Ohio EPA, Central Office. The permittee may install a CO₂ monitor in lieu of an O₂ monitor with prior approval from the Ohio EPA, Central Office.

The permittee shall maintain records of all data obtained by the continuous O₂ monitoring system including, but not limited to percent O₂ on an instantaneous (one-minute) basis, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

6. The information management system for this emissions unit shall be capable of monitoring and recording the fuel flow (million cubic feet), hours of operation with duct burner firing, and hours of operation without duct burner firing.
7. The permittee shall operate and maintain equipment to continuously monitor and record fuel flow to this emissions unit.
8. The permittee shall maintain documentation on the sulfur contents and heating values of the fuels received. ASTM D 2880-71 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81 shall be used for the sulfur content of gaseous fuels. The permittee shall determine the heat value of the fuels using ASTM method D240. The applicable ranges of some ASTM methods mentioned above are not adequate to

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measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Ohio EPA. The newest or most recent revisions to the applicable test method shall be used for these analyses.

Alternative, equivalent methods and frequencies of sampling schedules may be used if they comply with the requirements specified in 40 CFR 60.13, and upon written approval by the Ohio EPA.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit deviation (excursion) reports that identify any record which shows that the sulfur content of the natural gas exceeded 2 grains per 100 scf. These reports are due by the date described in Part I - General Terms and Conditions of this permit.
3. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northeast District Office documenting the date, commencement and completion time, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of NO_x or CO values in excess of the limits specified in the terms and conditions of this permit.

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northeast District Office documenting any continuous NO_x or CO monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

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Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031, the permittee shall submit a summary of the excess emission report pursuant to 40 CFR Part 60.7. The summary shall be submitted to the Ohio EPA, Northeast District Office within 30 days following the end of each calendar quarter in a manner prescribed by the Director.

4. In lieu of the excess emissions reports required under 40 CFR Part 60.334, the permittee shall submit excess and emissions reports for this emissions unit in accordance with this permit.
5. Unless otherwise specified, the above reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(1).
6. Pursuant to 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northeast District Office documenting all instances of continuous O₂ monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included in the quarterly report. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.
7. The permittee shall submit deviation (excursion) reports that identify each time when this emissions unit was not in compliance with the start-up/shut-down restrictions specified under section II. above. These reports are due by the date described in Part I - General Terms and Conditions of this permit.
8. This emissions unit is subject to the applicable provisions of Subpart Da and GG of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60. The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to 40 CFR Part 60.7, 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. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

**Column
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Emissions Unit ID: P002

Issued: To be entered upon final issuance

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P. O. Box 163669
Columbus, Ohio 43216-3669

and

Ohio Environmental Protection Agency
Northeast District Office
Division of Air Pollution Control
2110 East Aurora Road
Twinsburg, Ohio 44087

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit 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 emissions unit will be operated, but not later than 180 days after initial start-up of such emissions unit.
 - b. The emission testing* shall be conducted to demonstrate compliance with the NO_x and CO outlet concentrations and the mass emissions limitations for NO_x, CO, and formaldehyde. Testing shall be conducted while the emissions unit is operating at or near its maximum capacity with duct burners firing, unless otherwise specified or approved by Ohio EPA.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable emissions limitations:

NO _x	Method 20 of 40 CFR Part 60, Appendix A
PM	Method 5 of 40 CFR Part 60, Appendix A
Formaldehyde	SW-846 Method 0011
VOC(as carbon)	Method 25 of 40 CFR Part 60, Appendix A
SO ₂	Method 6 of 40 CFR Part 60, Appendix A
CO	Method 10 of 40 CFR Part 60, Appendix A
Ammonia	CTM-027

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northeast District Office.

Emissions Unit ID: P002

- d. The stack on this emissions unit shall be constructed such that the height and port locations meet the minimum requirements necessary to perform Methods 1-4 of 40 CFR Part 60, Appendix A.
 - e. The testing shall be performed at peak load (as defined by 40 CFR Part 60, Subpart GG), unless otherwise specified or approved by the Ohio EPA, Northeast District Office.
 - f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA, Northeast District Office's refusal to accept the results of the emission tests.
 - g. Personnel from the Ohio EPA, Northeast District Office shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
 - h. A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Northeast District Office within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Northeast District Office.

*In lieu of the test methods and procedures required under 40 CFR Part 60.335, the permittee shall follow the testing requirements in accordance with this permit.
2. Within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial start-up of such emissions unit, the permittee shall conduct certification tests of the continuous NO_x and CO monitoring systems pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6*. Personnel from the Ohio EPA, Northeast District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, copies of all the test results shall be submitted within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA, Northeast District Office and the Ohio EPA, Central Office. Certification of the continuous NO_x and CO monitoring systems shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6*.

*The permittee may use 40 CFR Part 60, Appendix B, Performance Specification 2 and

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Performance Specification 4 in conjunction with a fuel flow monitor as described in 40 CFR Part 75 to meet these requirements if approved by the Ohio EPA, Central Office.

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3. Within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit, the permittee shall conduct certification tests of the continuous O₂ monitoring systems pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 3. Personnel from the Ohio EPA, Northeast District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA, Northeast District Office and the Ohio EPA, Central Office. Certification of the continuous O₂ monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 3.

4. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:
 - a. Emission Limitation
NO_x emissions shall not exceed:
3.5 ppmvd at 15% oxygen with duct burner firing
33.0 pounds per hour with duct burner firing
199.2 tons per year, which includes 54.6 tons for start-up and shut-down emissions

Applicable Compliance Method
Compliance with the allowable outlet concentration and the pound per hour emission limitations shall be demonstrated by the performance testing as described in condition A.V.1. and CEM requirements as described in conditions A.III.4 & 5 and A.V.2 & 3. Compliance with the annual emission limitation shall be determined by the record keeping required in condition A.III, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

 - b. Emission Limitation
SO₂ emissions shall not exceed:
15.3 pounds per hour with duct burner firing
67.1 tons per year

Applicable Compliance Method
Compliance with the allowable pound per hour emission limitation shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by the record keeping required in condition A.III, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

c. Emission Limitation

CO emissions shall not exceed:

15.7 ppmvd at 15% oxygen with duct burner firing

85.0 pounds per hour with duct burner firing

688.3 tons per year, which includes 316 tons for start-up and shut-down emissions

Applicable Compliance Method

Compliance with the allowable outlet concentration and the pound per hour emission limitations shall be demonstrated by the performance testing as described in condition A.V.1. and CEM requirements as described in conditions A.III.4 & 5 and A.V.2 & 3. Compliance with the annual emission limitation shall be determined by the record keeping required in condition A.III, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

d. Emission Limitation

VOC emissions shall not exceed:

8.5 pounds per hour with duct burner firing

58.6 tons per year, which includes 21.3 tons for start-up and shut-down emissions

Applicable Compliance Method

Compliance with the allowable pound per hour emission limitation shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by the record keeping required in condition A.III, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

e. Emission Limitation

Particulate emissions shall not exceed:

28.0 pounds per hour with duct burner firing

122.7 tons per year

Applicable Compliance Method

Compliance with the allowable pound per hour emission limitation shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by the record keeping required in condition A.III, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

f. Emission Limitation

NH₃ emissions shall not exceed:

34.0 pounds per hour with duct burner firing

149.0 tons per year

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Compliance with the allowable pound per hour emission limitation shall be demonstrated by the performance testing as described in condition A.V.1. As long as the pound per hour emissions limitation is met, the annual emissions limitation is also assumed to be met because the annual emissions limitation is based upon the potential to emit of the emissions unit.

g. Emission Limitation

Formaldehyde emissions shall not exceed:
0.26 pounds per hour with duct burner firing
1.14 tons per year

Applicable Compliance Method

Compliance with the allowable pound per hour emission limitation shall be demonstrated by the performance testing as described in condition A.V.1. As long as the pound per hour emissions limitation is met, the annual emissions limitation is also assumed to be met because the annual emissions limitation is based upon the potential to emit of the emissions unit.

h. Emission Limitation

H₂SO₄ emissions shall not exceed:
2.44 pounds per hour with duct burner firing
10.7 tons per year

Applicable Compliance Method

Compliance with the allowable pound per hour emission limitation shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by the record keeping required in condition A.III, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

i. Emission Limitation

10% opacity for visible particulate emissions, as a six-minute average

Applicable Compliance Method

Compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in U.S. EPA reference method 9.

VI. Miscellaneous Requirements

Issued

Emissions Unit ID: P002

1. In accordance with good engineering practices, the SCR and Dry Low NO_x burner unit associated with this emissions unit shall be installed, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The permittee shall maintain on site, a copy of the operation & maintenance manual, as provided by the manufacturer.
2. Prior to the installation of the continuous NO_x and CO monitoring systems, 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 6 (or as described in condition A.V.1.) for approval by the Ohio EPA, Central Office.

Prior to the installation of the continuous O₂ 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 3 for approval by the Ohio EPA, Central Office.

3. No later than 90 days prior to the certification testing of the CEM systems, the permittee shall submit a written quality assurance/quality control plan for the continuous NO_x, CO, and O₂ monitoring systems designed to ensure continuous valid and representative readings of NO_x, CO, and O₂ emissions in the units established in this permit. The plan shall follow the requirements of 40 CFR Part 60, Appendix F or as approved by the Ohio EPA, Central office. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x, CO, and O₂ monitoring systems must be kept on site and available for inspection during regular office hours.
4. This emissions unit, as described in this Permit to Install (PTI), is subject to the applicable provisions of the NSPS, as promulgated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR Part 60. The requirements of 40 CFR Part 60 are delegated to the Ohio EPA and are federally enforceable.

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Emissions Unit ID: P002

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P002 - 305 MW combined cycle natural gas combustion turbine (GE PG7241FA or equivalent) with duct burners using selective catalytic reduction (SCR) and dry low NOx burners for NOx control and good combustion practices for CO control.	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

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Emissions Unit ID: P002

None

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VI. Miscellaneous Requirements

Emissions Unit ID: P002

None

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Emissions Unit ID: P003

Issued: To be entered upon final issuance

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P003 - 305 MW combined cycle natural gas combustion turbine (GE PG7241FA or equivalent) with duct burners using selective catalytic reduction (SCR) and dry low NOx burners for NOx control and good combustion practices for CO control.	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-31-05(A)(3)

Emissions Unit ID: P003

	<p style="text-align: center;"><u>Applicable Emissions Limitations/Control Measures</u></p>	
<p>OAC rule 3745-17-07(A)(1) OAC rule 3745-17-11(B)(4)</p>	<p>The requirements of this rule also include compliance with the requirements of 40 CFR 60 Subpart GG, and OAC rules 3745-31-10 through 20.</p>	<p>Start-up and shut-down emissions shall not exceed the following (see section A.II.2.): NO_x - 54.6 tons per year CO - 316 tons per year VOC - 21.3 tons per year</p>
<p>OAC rule 3745-18-06(F) 40 CFR 60, Subpart Da 40 CFR 60, Subpart GG</p>	<p>Visible particulate emissions from any stack shall not exceed 10% opacity, as a six-minute average.</p>	<p>Total emissions (per unit), including duct burners, start-ups, and shut-downs, shall not exceed the following:</p>
<p>OAC rules 3745-31-10 through 3745-31-20</p>	<p>Emissions limits with duct burners firing: Nitrogen oxide (NO_x) emissions shall not exceed 3.5 ppmvd at 15% oxygen and 33.0 pounds per hour. Sulfur dioxide (SO₂) emissions shall not exceed 15.3 pounds per hour.</p>	<p>NO_x - 199.2 tons per year SO₂ - 67.1 tons per year CO - 688.3 tons per year VOC - 58.6 tons per year PE - 122.7 tons per year NH₃ - 149.0 tons per year Formaldehyde - 1.14 tons per year H₂SO₄ - 10.7 tons per year</p>
<p>40 CFR 75</p>	<p>Carbon monoxide (CO) emissions shall not exceed 15.7 ppmvd at 15% oxygen and 85.0 pounds per hour.</p>	<p>See section A.I.2.a.</p>
<p>OAC rule 3745-103</p>	<p>Volatile organic compounds (VOC) emissions shall not exceed 8.5 pounds per hour.</p>	<p>See section A.I.2.a.</p>
	<p>Particulate emissions (PE) shall not exceed 28.0 pounds per hour.</p>	<p>See section A.I.2.a.</p>
	<p>Ammonia (NH₃) emissions shall not exceed 34.0 pounds per hour.</p>	<p>See section A.I.2.b.</p>
	<p>Formaldehyde emissions shall not exceed 0.26 pound per hour.</p>	<p>NO_x - 199.2 tons per year SO₂ - 67.1 tons per year CO - 688.3 tons per year VOC - 58.6 tons per year PE - 122.7 tons per year H₂SO₄ - 10.7 tons per year</p>
	<p>Sulfuric acid (H₂SO₄) emissions shall not exceed 2.44 pounds per hour.</p>	<p>See section A.I.2.e.</p>
	<p>See section A.II. 1.</p>	<p>See section A.I.2.c.</p>

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

- 2.a** The emissions limit based on this applicable rule is equivalent to or less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3).
- 2.b** The emissions limits based on this applicable rule are equivalent to or less stringent than the limits established pursuant to OAC rule 3745-31-05(A)(3). Except as provided for in the terms and conditions in this permit, the permittee is not exempt from meeting any additional requirements of 40 CFR 60, Subpart GG.
- 2.c** If the permittee is subject to the requirements of 40 CFR 75 concerning acid rain, the permittee shall ensure that any effected 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.
- 2.d** The emissions of Hazardous Air Pollutants (HAPs), as defined in Section 112(b) of the Clean Air Act, from emissions units P001, P002, P003, and P004 combined, shall not exceed 10.0 tons per year for an individual HAP* and 25 tons per year for any combination of HAPs*, per rolling 12 month period.

*Using AP-42 emission factors, the potential to emit for all HAPs for emissions units P001, P002, P003, and P004 combined is approximately 40.9 tons per year, with approximately 28.3 tons per year being one individual HAP (formaldehyde). But, since the permittee has elected to use more restrictive "CARB" emission factors, the potential to emit for all HAPs combined is less than 25 tons and less than 10.0 tons for any single HAP, no monitoring, record keeping, or reporting requirements are necessary to meet these limits. However, testing will be required to demonstrate compliance as described in Part V of the Testing Requirements.

- 2.e** Per the requirements of OAC rule 3745-31-10 through 20, the permittee is required to perform a Best Available Control Technology (BACT) review for NO_x, SO₂, CO, VOC, PE, and H₂SO₄. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-05(A)(3) above. The following determinations have been made for each pollutant:

NO _x -	Use of selective catalytic reduction (SCR) and dry low NO _x (DLN) burners with a controlled rate of 3.5 ppmvd at 15% oxygen.
SO ₂ -	Burning natural gas in an efficient combustion turbine.
CO-	Use of good combustion practices with a rate of 15.7 ppmvd at 15% oxygen with duct burners ON. The effectiveness of this rate shall be verified through stack testing.

Emissions Unit ID: P003

VOC-	Use of efficient combustion technology in the operation of the turbine.
PE-	Burning natural gas in an efficient combustion turbine. For this permit, it is assumed that all PE are PM ₁₀ .
H ₂ SO ₄ -	Burning natural gas in an efficient combustion turbine.

- 2.f** The hourly emission limitations outlined are based upon the emissions unit's potential to emit (PTE); therefore, no hourly records are required to demonstrate compliance with these limits.

II. Operational Restrictions

- The permittee shall burn only natural gas in this emissions unit. The maximum sulfur content of the natural gas shall not exceed 2 grains per 100 scf.
- Start-up and shut-down shall be defined as when the unit is running at less than 70% of electric load, but under no circumstances shall start-ups exceed 4.6 hours in duration and shut-downs shall not exceed 2 hours in duration. Start-up and shut-downs shall be limited to 400 cycles (one start-up and one shut-down) per year. Each start-up and shut-down shall be limited to the following:

<u>Pollutant</u>	<u>Pounds per start-up</u>	<u>Pounds per shut-down</u>	<u>Total pounds per one cycle</u>	<u>TPY for 400 cycles</u>
NO _x	234	39	273	54.6
CO	1,292	288	1,580	316
VOC	93.2	13.2	106.4	21.3

III. Monitoring and/or Recordkeeping Requirements

- The permittee shall maintain monthly records of the following information for this emissions unit:
 - number of start-ups;
 - duration of each start-up;
 - number of shut-downs;
 - duration of each shut-down;
 - the start-up and shut-down emissions for NO_x, CO, and VOC, in tons per month; and
 - the annual, year to date, emissions of NO_x, CO, and VOC, in tons per year.
- The permittee shall maintain monthly records of the following information for this emissions unit:
 - the natural gas usage rate for each month, in standard cubic feet;
 - the hours of operation;
 - the monthly emission rate for NO_x, SO₂, CO, VOC, PE, and H₂SO₄, in tons; and
 - the annual rolling 12-month, to date emissions of NO_x, SO₂, CO, VOC, PE, and H₂SO₄, in tons.

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3. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
4. The permittee shall operate and maintain equipment to continuously monitor* and record NO_x and CO from this emissions unit in the units established in this permit. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR 60.13 or as approved by the Ohio EPA, Central Office.

The permittee shall maintain records of all data obtained by the continuous NO_x and CO monitoring systems including, but not limited to, parts per million NO_x or CO on an instantaneous (one-minute) basis, emissions of NO_x and CO in the units established in this permit (with a three hour rolling averaging period), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

*The installation and operation of systems to continuously monitor and record emissions of NO_x shall be performed in lieu of monitoring the nitrogen content of the natural gas being fired in the turbine, as required by 40 CFR 60.334(b).

5. The permittee shall operate and maintain equipment to continuously monitor and record the O₂ from this emissions unit in percent O₂. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR 60.13 or as approved by the Ohio EPA, Central Office. The permittee may install a CO₂ monitor in lieu of an O₂ monitor with prior approval from the Ohio EPA, Central Office.

The permittee shall maintain records of all data obtained by the continuous O₂ monitoring system including, but not limited to percent O₂ on an instantaneous (one-minute) basis, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

6. The information management system for this emissions unit shall be capable of monitoring and recording the fuel flow (million cubic feet), hours of operation with duct burner firing, and hours of operation without duct burner firing.
7. The permittee shall operate and maintain equipment to continuously monitor and record fuel flow to this emissions unit.
8. The permittee shall maintain documentation on the sulfur contents and heating values of the fuels received. ASTM D 2880-71 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81 shall be used for the sulfur content of gaseous fuels. The permittee shall determine the heat value of the fuels using ASTM method D240. The applicable ranges of some ASTM methods mentioned above are not adequate to

Emissions Unit ID: P003

measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Ohio EPA. The newest or most recent revisions to the applicable test method shall be used for these analyses.

Alternative, equivalent methods and frequencies of sampling schedules may be used if they comply with the requirements specified in 40 CFR 60.13, and upon written approval by the Ohio EPA.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit deviation (excursion) reports that identify any record which shows that the sulfur content of the natural gas exceeded 2 grains per 100 scf. These reports are due by the date described in Part I - General Terms and Conditions of this permit.
3. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northeast District Office documenting the date, commencement and completion time, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of NO_x or CO values in excess of the limits specified in the terms and conditions of this permit.

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northeast District Office documenting any continuous NO_x or CO monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

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Columbiana County Energy LLC

PTI Application: 02-15426

Issued

Facility ID: 0215000349

Emissions Unit ID: P003

Issued: To be entered upon final issuance

Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031, the permittee shall submit a summary of the excess emission report pursuant to 40 CFR Part 60.7. The summary shall be submitted to the Ohio EPA, Northeast District Office within 30 days following the end of each calendar quarter in a manner prescribed by the Director.

4. In lieu of the excess emissions reports required under 40 CFR Part 60.334, the permittee shall submit excess and emissions reports for this emissions unit in accordance with this permit.
5. Unless otherwise specified, the above reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(1).
6. Pursuant to 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northeast District Office documenting all instances of continuous O₂ monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included in the quarterly report. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.
7. The permittee shall submit deviation (excursion) reports that identify each time when this emissions unit was not in compliance with the start-up/shut-down restrictions specified under section II. above. These reports are due by the date described in Part I - General Terms and Conditions of this permit.
8. This emissions unit is subject to the applicable provisions of Subpart Da and GG of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60. The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to 40 CFR Part 60.7, 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. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

**Column
PTI A**

Emissions Unit ID: P003

Issued: To be entered upon final issuance

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P. O. Box 163669
Columbus, Ohio 43216-3669

and

Ohio Environmental Protection Agency
Northeast District Office
Division of Air Pollution Control
2110 East Aurora Road
Twinsburg, Ohio 44087

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit 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 emissions unit will be operated, but not later than 180 days after initial start-up of such emissions unit.
 - b. The emission testing* shall be conducted to demonstrate compliance with the NO_x and CO outlet concentrations and the mass emissions limitations for NO_x, CO, and formaldehyde. Testing shall be conducted while the emissions unit is operating at or near its maximum capacity with duct burners firing, unless otherwise specified or approved by Ohio EPA.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable emissions limitations:

NO _x	Method 20 of 40 CFR Part 60, Appendix A
PM	Method 5 of 40 CFR Part 60, Appendix A
Formaldehyde	SW-846 Method 0011
VOC(as carbon)	Method 25 of 40 CFR Part 60, Appendix A
SO ₂	Method 6 of 40 CFR Part 60, Appendix A
CO	Method 10 of 40 CFR Part 60, Appendix A
Ammonia	CTM-027

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northeast District Office.

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- d. The stack on this emissions unit shall be constructed such that the height and port locations meet the minimum requirements necessary to perform Methods 1-4 of 40 CFR Part 60, Appendix A.
 - e. The testing shall be performed at peak load (as defined by 40 CFR Part 60, Subpart GG), unless otherwise specified or approved by the Ohio EPA, Northeast District Office.
 - f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA, Northeast District Office's refusal to accept the results of the emission tests.
 - g. Personnel from the Ohio EPA, Northeast District Office shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
 - h. A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Northeast District Office within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Northeast District Office.
- *In lieu of the test methods and procedures required under 40 CFR Part 60.335, the permittee shall follow the testing requirements in accordance with this permit.
2. Within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial start-up of such emissions unit, the permittee shall conduct certification tests of the continuous NO_x and CO monitoring systems pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6*. Personnel from the Ohio EPA, Northeast District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, copies of all the test results shall be submitted within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA, Northeast District Office and the Ohio EPA, Central Office. Certification of the continuous NO_x and CO monitoring systems shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6*.

*The permittee may use 40 CFR Part 60, Appendix B, Performance Specification 2 and

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Performance Specification 4 in conjunction with a fuel flow monitor as described in 40 CFR Part 75 to meet these requirements if approved by the Ohio EPA, Central Office.

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3. Within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit, the permittee shall conduct certification tests of the continuous O₂ monitoring systems pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 3. Personnel from the Ohio EPA, Northeast District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA, Northeast District Office and the Ohio EPA, Central Office. Certification of the continuous O₂ monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 3.

4. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:
 - a. Emission Limitation
NO_x emissions shall not exceed:
3.5 ppmvd at 15% oxygen with duct burner firing
33.0 pounds per hour with duct burner firing
199.2 tons per year, which includes 54.6 tons for start-up and shut-down emissions

Applicable Compliance Method
Compliance with the allowable outlet concentration and the pound per hour emission limitations shall be demonstrated by the performance testing as described in condition A.V.1. and CEM requirements as described in conditions A.III.4 & 5 and A.V.2 & 3. Compliance with the annual emission limitation shall be determined by the record keeping required in condition A.III, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

 - b. Emission Limitation
SO₂ emissions shall not exceed:
15.3 pounds per hour with duct burner firing
67.1 tons per year

Applicable Compliance Method
Compliance with the allowable pound per hour emission limitation shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by the record keeping required in condition A.III, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

c. Emission Limitation

CO emissions shall not exceed:

15.7 ppmvd at 15% oxygen with duct burner firing

85.0 pounds per hour with duct burner firing

688.3 tons per year, which includes 316 tons for start-up and shut-down emissions

Applicable Compliance Method

Compliance with the allowable outlet concentration and the pound per hour emission limitations shall be demonstrated by the performance testing as described in condition A.V.1. and CEM requirements as described in conditions A.III.4 & 5 and A.V.2 & 3. Compliance with the annual emission limitation shall be determined by the record keeping required in condition A.III, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

d. Emission Limitation

VOC emissions shall not exceed:

8.5 pounds per hour with duct burner firing

58.6 tons per year, which includes 21.3 tons for start-up and shut-down emissions

Applicable Compliance Method

Compliance with the allowable pound per hour emission limitation shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by the record keeping required in condition A.III, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

e. Emission Limitation

Particulate emissions shall not exceed:

28.0 pounds per hour with duct burner firing

122.7 tons per year

Applicable Compliance Method

Compliance with the allowable pound per hour emission limitation shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by the record keeping required in condition A.III, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

f. Emission Limitation

NH₃ emissions shall not exceed:

34.0 pounds per hour with duct burner firing

149.0 tons per year

Issued: To be entered upon final issuanceApplicable Compliance Method

Compliance with the allowable pound per hour emission limitation shall be demonstrated by the performance testing as described in condition A.V.1. As long as the pound per hour emissions limitation is met, the annual emissions limitation is also assumed to be met because the annual emissions limitation is based upon the potential to emit of the emissions unit.

g. Emission Limitation

Formaldehyde emissions shall not exceed:
0.26 pounds per hour with duct burner firing
1.14 tons per year

Applicable Compliance Method

Compliance with the allowable pound per hour emission limitation shall be demonstrated by the performance testing as described in condition A.V.1. As long as the pound per hour emissions limitation is met, the annual emissions limitation is also assumed to be met because the annual emissions limitation is based upon the potential to emit of the emissions unit.

h. Emission Limitation

H₂SO₄ emissions shall not exceed:
2.44 pounds per hour with duct burner firing
10.7 tons per year

Applicable Compliance Method

Compliance with the allowable pound per hour emission limitation shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by the record keeping required in condition A.III, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

i. Emission Limitation

10% opacity for visible particulate emissions, as a six-minute average

Applicable Compliance Method

Compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in U.S. EPA reference method 9.

VI. Miscellaneous Requirements

Issued

Emissions Unit ID: P003

1. In accordance with good engineering practices, the SCR and Dry Low NO_x burner unit associated with this emissions unit shall be installed, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The permittee shall maintain on site, a copy of the operation & maintenance manual, as provided by the manufacturer.
2. Prior to the installation of the continuous NO_x and CO monitoring systems, 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 6 (or as described in condition A.V.1.) for approval by the Ohio EPA, Central Office.

Prior to the installation of the continuous O₂ 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 3 for approval by the Ohio EPA, Central Office.

3. No later than 90 days prior to the certification testing of the CEM systems, the permittee shall submit a written quality assurance/quality control plan for the continuous NO_x, CO, and O₂ monitoring systems designed to ensure continuous valid and representative readings of NO_x, CO, and O₂ emissions in the units established in this permit. The plan shall follow the requirements of 40 CFR Part 60, Appendix F or as approved by the Ohio EPA, Central office. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x, CO, and O₂ monitoring systems must be kept on site and available for inspection during regular office hours.
4. This emissions unit, as described in this Permit to Install (PTI), is subject to the applicable provisions of the NSPS, as promulgated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR Part 60. The requirements of 40 CFR Part 60 are delegated to the Ohio EPA and are federally enforceable.

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P003 - 305 MW combined cycle natural gas combustion turbine (GE PG7241FA or equivalent) with duct burners using selective catalytic reduction (SCR) and dry low NOx burners for NOx control and good combustion practices for CO control.	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

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None

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VI. Miscellaneous Requirements

Emissions Unit ID: P003

None

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Emissions Unit ID: P004

Issued: To be entered upon final issuance

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P004 - 305 MW combined cycle natural gas combustion turbine (GE PG7241FA or equivalent) with duct burners using selective catalytic reduction (SCR) and dry low NOx burners for NOx control and good combustion practices for CO control.	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-31-05(A)(3)

Emissions Unit ID: P004

	Applicable Emissions Limitations/Control Measures	
<p>OAC rule 3745-17-07(A)(1) OAC rule 3745-17-11(B)(4)</p>	<p>The requirements of this rule also include compliance with the requirements of 40 CFR 60 Subpart GG, and OAC rules 3745-31-10 through 20.</p>	<p>Start-up and shut-down emissions shall not exceed the following (see section A.II.2.): NO_x - 54.6 tons per year CO - 316 tons per year VOC - 21.3 tons per year</p>
<p>OAC rule 3745-18-06(F) 40 CFR 60, Subpart Da 40 CFR 60, Subpart GG</p>	<p>Visible particulate emissions from any stack shall not exceed 10% opacity, as a six-minute average.</p>	<p>Total emissions (per unit), including duct burners, start-ups, and shut-downs, shall not exceed the following:</p>
<p>OAC rules 3745-31-10 through 3745-31-20</p>	<p>Emissions limits with duct burners firing: Nitrogen oxide (NO_x) emissions shall not exceed 3.5 ppmvd at 15% oxygen and 33.0 pounds per hour. Sulfur dioxide (SO₂) emissions shall not exceed 15.3 pounds per hour.</p>	<p>NO_x - 199.2 tons per year SO₂ - 67.1 tons per year CO - 688.3 tons per year VOC - 58.6 tons per year PE - 122.7 tons per year NH₃ - 149.0 tons per year Formaldehyde - 1.14 tons per year H₂SO₄ - 10.7 tons per year</p>
<p>40 CFR 75</p>	<p>Carbon monoxide (CO) emissions shall not exceed 15.7 ppmvd at 15% oxygen and 85.0 pounds per hour.</p>	<p>See section A.I.2.a.</p>
<p>OAC rule 3745-103</p>	<p>Volatile organic compounds (VOC) emissions shall not exceed 8.5 pounds per hour.</p>	<p>See section A.I.2.a.</p>
	<p>Particulate emissions (PE) shall not exceed 28.0 pounds per hour.</p>	<p>See section A.I.2.a.</p>
	<p>Ammonia (NH₃) emissions shall not exceed 34.0 pounds per hour.</p>	<p>See section A.I.2.a.</p>
	<p>Formaldehyde emissions shall not exceed 0.26 pound per hour.</p>	<p>See section A.I.2.b.</p>
	<p>Sulfuric acid (H₂SO₄) emissions shall not exceed 2.44 pounds per hour.</p>	<p>NO_x - 199.2 tons per year SO₂ - 67.1 tons per year CO - 688.3 tons per year VOC - 58.6 tons per year PE - 122.7 tons per year H₂SO₄ - 10.7 tons per year See section A.I.2.e.</p>
	<p>See section A.II. 1.</p>	<p>See section A.I.2.c.</p>

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

- 2.a** The emissions limit based on this applicable rule is equivalent to or less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3).
- 2.b** The emissions limits based on this applicable rule are equivalent to or less stringent than the limits established pursuant to OAC rule 3745-31-05(A)(3). Except as provided for in the terms and conditions in this permit, the permittee is not exempt from meeting any additional requirements of 40 CFR 60, Subpart GG.
- 2.c** If the permittee is subject to the requirements of 40 CFR 75 concerning acid rain, the permittee shall ensure that any effected 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.
- 2.d** The emissions of Hazardous Air Pollutants (HAPs), as defined in Section 112(b) of the Clean Air Act, from emissions units P001, P002, P003, and P004 combined, shall not exceed 10.0 tons per year for an individual HAP* and 25 tons per year for any combination of HAPs*, per rolling 12 month period.

*Using AP-42 emission factors, the potential to emit for all HAPs for emissions units P001, P002, P003, and P004 combined is approximately 40.9 tons per year, with approximately 28.3 tons per year being one individual HAP (formaldehyde). But, since the permittee has elected to use more restrictive "CARB" emission factors, the potential to emit for all HAPs combined is less than 25 tons and less than 10.0 tons for any single HAP, no monitoring, record keeping, or reporting requirements are necessary to meet these limits. However, testing will be required to demonstrate compliance as described in Part V of the Testing Requirements.

- 2.e** Per the requirements of OAC rule 3745-31-10 through 20, the permittee is required to perform a Best Available Control Technology (BACT) review for NO_x, SO₂, CO, VOC, PE, and H₂SO₄. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-05(A)(3) above. The following determinations have been made for each pollutant:

NO _x -	Use of selective catalytic reduction (SCR) and dry low NO _x (DLN) burners with a controlled rate of 3.5 ppmvd at 15% oxygen.
SO ₂ -	Burning natural gas in an efficient combustion turbine.
CO-	Use of good combustion practices with a rate of 15.7 ppmvd at 15% oxygen with duct burners ON. The effectiveness of this rate shall be verified through stack testing.

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- VOC- Use of efficient combustion technology in the operation of the turbine.
- PE- Burning natural gas in an efficient combustion turbine. For this permit, it is assumed that all PE are PM₁₀.
- H₂SO₄- Burning natural gas in an efficient combustion turbine.

2.f The hourly emission limitations outlined are based upon the emissions unit’s potential to emit (PTE); therefore, no hourly records are required to demonstrate compliance with these limits.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit. The maximum sulfur content of the natural gas shall not exceed 2 grains per 100 scf.
2. Start-up and shut-down shall be defined as when the unit is running at less than 70% of electric load, but under no circumstances shall start-ups exceed 4.6 hours in duration and shut-downs shall not exceed 2 hours in duration. Start-up and shut-downs shall be limited to 400 cycles (one start-up and one shut-down) per year. Each start-up and shut-down shall be limited to the following:

<u>Pollutant</u>	<u>Pounds per start-up</u>	<u>Pounds per shut-down</u>	<u>Total pounds per one cycle</u>	<u>TPY for 400 cycles</u>
NO _x	234	39	273	54.6
CO	1,292	288	1,580	316
VOC	93.2	13.2	106.4	21.3

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. number of start-ups;
 - b. duration of each start-up;
 - c. number of shut-downs;
 - d. duration of each shut-down;
 - e. the start-up and shut-down emissions for NO_x, CO, and VOC, in tons per month; and
 - f. the annual, year to date, emissions of NO_x, CO, and VOC, in tons per year.
2. The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the natural gas usage rate for each month, in standard cubic feet;
 - b. the hours of operation;
 - c. the monthly emission rate for NO_x, SO₂, CO, VOC, PE, and H₂SO₄, in tons; and
 - d. the annual rolling 12-month, to date emissions of NO_x, SO₂, CO, VOC, PE, and H₂SO₄, in tons.

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3. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
4. The permittee shall operate and maintain equipment to continuously monitor* and record NO_x and CO from this emissions unit in the units established in this permit. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR 60.13 or as approved by the Ohio EPA, Central Office.

The permittee shall maintain records of all data obtained by the continuous NO_x and CO monitoring systems including, but not limited to, parts per million NO_x or CO on an instantaneous (one-minute) basis, emissions of NO_x and CO in the units established in this permit (with a three hour rolling averaging period), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

*The installation and operation of systems to continuously monitor and record emissions of NO_x shall be performed in lieu of monitoring the nitrogen content of the natural gas being fired in the turbine, as required by 40 CFR 60.334(b).

5. The permittee shall operate and maintain equipment to continuously monitor and record the O₂ from this emissions unit in percent O₂. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR 60.13 or as approved by the Ohio EPA, Central Office. The permittee may install a CO₂ monitor in lieu of an O₂ monitor with prior approval from the Ohio EPA, Central Office.

The permittee shall maintain records of all data obtained by the continuous O₂ monitoring system including, but not limited to percent O₂ on an instantaneous (one-minute) basis, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

6. The information management system for this emissions unit shall be capable of monitoring and recording the fuel flow (million cubic feet), hours of operation with duct burner firing, and hours of operation without duct burner firing.
7. The permittee shall operate and maintain equipment to continuously monitor and record fuel flow to this emissions unit.
8. The permittee shall maintain documentation on the sulfur contents and heating values of the fuels received. ASTM D 2880-71 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81 shall be used for the sulfur content of gaseous fuels. The permittee shall determine the heat value of the fuels using ASTM method D240. The applicable ranges of some ASTM methods mentioned above are not adequate to

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measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Ohio EPA. The newest or most recent revisions to the applicable test method shall be used for these analyses.

Alternative, equivalent methods and frequencies of sampling schedules may be used if they comply with the requirements specified in 40 CFR 60.13, and upon written approval by the Ohio EPA.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit deviation (excursion) reports that identify any record which shows that the sulfur content of the natural gas exceeded 2 grains per 100 scf. These reports are due by the date described in Part I - General Terms and Conditions of this permit.
3. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northeast District Office documenting the date, commencement and completion time, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of NO_x or CO values in excess of the limits specified in the terms and conditions of this permit.

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northeast District Office documenting any continuous NO_x or CO monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

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Columbiana County Energy LLC

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Facility ID: 0215000349

Emissions Unit ID: P004

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Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031, the permittee shall submit a summary of the excess emission report pursuant to 40 CFR Part 60.7. The summary shall be submitted to the Ohio EPA, Northeast District Office within 30 days following the end of each calendar quarter in a manner prescribed by the Director.

4. In lieu of the excess emissions reports required under 40 CFR Part 60.334, the permittee shall submit excess and emissions reports for this emissions unit in accordance with this permit.
5. Unless otherwise specified, the above reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(1).
6. Pursuant to 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northeast District Office documenting all instances of continuous O₂ monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included in the quarterly report. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.
7. The permittee shall submit deviation (excursion) reports that identify each time when this emissions unit was not in compliance with the start-up/shut-down restrictions specified under section II. above. These reports are due by the date described in Part I - General Terms and Conditions of this permit.
8. This emissions unit is subject to the applicable provisions of Subpart Da and GG of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60. The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to 40 CFR Part 60.7, 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. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

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Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P. O. Box 163669
Columbus, Ohio 43216-3669

and

Ohio Environmental Protection Agency
Northeast District Office
Division of Air Pollution Control
2110 East Aurora Road
Twinsburg, Ohio 44087

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit 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 emissions unit will be operated, but not later than 180 days after initial start-up of such emissions unit.
 - b. The emission testing* shall be conducted to demonstrate compliance with the NO_x and CO outlet concentrations and the mass emissions limitations for NO_x, CO, and formaldehyde. Testing shall be conducted while the emissions unit is operating at or near its maximum capacity with duct burners firing, unless otherwise specified or approved by Ohio EPA.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable emissions limitations:

NO _x	Method 20 of 40 CFR Part 60, Appendix A
PM	Method 5 of 40 CFR Part 60, Appendix A
Formaldehyde	SW-846 Method 0011
VOC(as carbon)	Method 25 of 40 CFR Part 60, Appendix A
SO ₂	Method 6 of 40 CFR Part 60, Appendix A
CO	Method 10 of 40 CFR Part 60, Appendix A
Ammonia	CTM-027

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northeast District Office.

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- d. The stack on this emissions unit shall be constructed such that the height and port locations meet the minimum requirements necessary to perform Methods 1-4 of 40 CFR Part 60, Appendix A.
 - e. The testing shall be performed at peak load (as defined by 40 CFR Part 60, Subpart GG), unless otherwise specified or approved by the Ohio EPA, Northeast District Office.
 - f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA, Northeast District Office's refusal to accept the results of the emission tests.
 - g. Personnel from the Ohio EPA, Northeast District Office shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
 - h. A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Northeast District Office within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Northeast District Office.
- *In lieu of the test methods and procedures required under 40 CFR Part 60.335, the permittee shall follow the testing requirements in accordance with this permit.
2. Within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial start-up of such emissions unit, the permittee shall conduct certification tests of the continuous NO_x and CO monitoring systems pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6*. Personnel from the Ohio EPA, Northeast District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, copies of all the test results shall be submitted within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA, Northeast District Office and the Ohio EPA, Central Office. Certification of the continuous NO_x and CO monitoring systems shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6*.

*The permittee may use 40 CFR Part 60, Appendix B, Performance Specification 2 and

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Emissions Unit ID: P004

Issued: To be entered upon final issuance

Performance Specification 4 in conjunction with a fuel flow monitor as described in 40 CFR Part 75 to meet these requirements if approved by the Ohio EPA, Central Office.

Issued: To be entered upon final issuance

3. Within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit, the permittee shall conduct certification tests of the continuous O₂ monitoring systems pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 3. Personnel from the Ohio EPA, Northeast District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA, Northeast District Office and the Ohio EPA, Central Office. Certification of the continuous O₂ monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 3.

4. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:
 - a. Emission Limitation
NO_x emissions shall not exceed:
3.5 ppmvd at 15% oxygen with duct burner firing
33.0 pounds per hour with duct burner firing
199.2 tons per year, which includes 54.6 tons for start-up and shut-down emissions

Applicable Compliance Method
Compliance with the allowable outlet concentration and the pound per hour emission limitations shall be demonstrated by the performance testing as described in condition A.V.1. and CEM requirements as described in conditions A.III.4 & 5 and A.V.2 & 3. Compliance with the annual emission limitation shall be determined by the record keeping required in condition A.III, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

 - b. Emission Limitation
SO₂ emissions shall not exceed:
15.3 pounds per hour with duct burner firing
67.1 tons per year

Applicable Compliance Method
Compliance with the allowable pound per hour emission limitation shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by the record keeping required in condition A.III, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

c. Emission Limitation

CO emissions shall not exceed:

15.7 ppmvd at 15% oxygen with duct burner firing

85.0 pounds per hour with duct burner firing

688.3 tons per year, which includes 316 tons for start-up and shut-down emissions

Applicable Compliance Method

Compliance with the allowable outlet concentration and the pound per hour emission limitations shall be demonstrated by the performance testing as described in condition A.V.1. and CEM requirements as described in conditions A.III.4 & 5 and A.V.2 & 3. Compliance with the annual emission limitation shall be determined by the record keeping required in condition A.III, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

d. Emission Limitation

VOC emissions shall not exceed:

8.5 pounds per hour with duct burner firing

58.6 tons per year, which includes 21.3 tons for start-up and shut-down emissions

Applicable Compliance Method

Compliance with the allowable pound per hour emission limitation shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by the record keeping required in condition A.III, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

e. Emission Limitation

Particulate emissions shall not exceed:

28.0 pounds per hour with duct burner firing

122.7 tons per year

Applicable Compliance Method

Compliance with the allowable pound per hour emission limitation shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by the record keeping required in condition A.III, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

f. Emission Limitation

NH₃ emissions shall not exceed:

34.0 pounds per hour with duct burner firing

149.0 tons per year

Issued: To be entered upon final issuanceApplicable Compliance Method

Compliance with the allowable pound per hour emission limitation shall be demonstrated by the performance testing as described in condition A.V.1. As long as the pound per hour emissions limitation is met, the annual emissions limitation is also assumed to be met because the annual emissions limitation is based upon the potential to emit of the emissions unit.

g. Emission Limitation

Formaldehyde emissions shall not exceed:
0.26 pounds per hour with duct burner firing
1.14 tons per year

Applicable Compliance Method

Compliance with the allowable pound per hour emission limitation shall be demonstrated by the performance testing as described in condition A.V.1. As long as the pound per hour emissions limitation is met, the annual emissions limitation is also assumed to be met because the annual emissions limitation is based upon the potential to emit of the emissions unit.

h. Emission Limitation

H₂SO₄ emissions shall not exceed:
2.44 pounds per hour with duct burner firing
10.7 tons per year

Applicable Compliance Method

Compliance with the allowable pound per hour emission limitation shall be demonstrated by the performance testing as described in condition A.V.1. Compliance with the annual emission limitations shall be determined by the record keeping required in condition A.III, plus the potential to emit from other DeMinimis or non-permitted sources located at the facility.

i. Emission Limitation

10% opacity for visible particulate emissions, as a six-minute average

Applicable Compliance Method

Compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in U.S. EPA reference method 9.

VI. Miscellaneous Requirements

Issued

Emissions Unit ID: P004

1. In accordance with good engineering practices, the SCR and Dry Low NO_x burner unit associated with this emissions unit shall be installed, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The permittee shall maintain on site, a copy of the operation & maintenance manual, as provided by the manufacturer.
2. Prior to the installation of the continuous NO_x and CO monitoring systems, 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 6 (or as described in condition A.V.1.) for approval by the Ohio EPA, Central Office.

Prior to the installation of the continuous O₂ 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 3 for approval by the Ohio EPA, Central Office.

3. No later than 90 days prior to the certification testing of the CEM systems, the permittee shall submit a written quality assurance/quality control plan for the continuous NO_x, CO, and O₂ monitoring systems designed to ensure continuous valid and representative readings of NO_x, CO, and O₂ emissions in the units established in this permit. The plan shall follow the requirements of 40 CFR Part 60, Appendix F or as approved by the Ohio EPA, Central office. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x, CO, and O₂ monitoring systems must be kept on site and available for inspection during regular office hours.
4. This emissions unit, as described in this Permit to Install (PTI), is subject to the applicable provisions of the NSPS, as promulgated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR Part 60. The requirements of 40 CFR Part 60 are delegated to the Ohio EPA and are federally enforceable.

**Column
PTI A**

Emissions Unit ID: P004

Issued: To be entered upon final issuance

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P004 - 305 MW combined cycle natural gas combustion turbine (GE PG7241FA or equivalent) with duct burners using selective catalytic reduction (SCR) and dry low NOx burners for NOx control and good combustion practices for CO control.	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

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PTI A

Issued: To be entered upon final issuance

Emissions Unit ID: P004

None

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PTI A

Issued: To be entered upon final issuance

VI. Miscellaneous Requirements

Emissions Unit ID: P004

None

Issued: To be entered upon final issuance

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P005 - Cooling Tower No. 1 with drift eliminator.	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-10 through 20 and OAC rule 3745-17-07(A)(1).
	OAC rule 3745-17-07(A)(1)	Particulate emissions (PE) shall not exceed 3.43 pounds per hour and 15.1 tons per year
	OAC rule 3745-17-11(B)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rules 3745-31-10 through 3745-31-20	See section A.I.2.a.
		See section A.I.2.b.

2. Additional Terms and Conditions

- 2.a The emissions limit based on this applicable rule is less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3).
- 2.b Per the requirements of OAC rules 3745-31-10 through 3745-31-20, the permittee is required to perform a Best Available Control Technology (BACT) review for PM/PM₁₀. The implementation of high efficiency drift eliminators constitute BACT for this emissions

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PTI Application: 02-15426

Issued

Facility ID: 0215000349

Emissions Unit ID: P005

unit.

Issued: To be entered upon final issuance

II. Operational Restrictions

1. The permittee shall maintain an average total dissolved solids (TDS) content of 12,000 ppm or less in this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform the following monitoring requirements for the predominately operating emissions unit (P001 through P004) on a monthly basis:
 - a. test and record the total dissolved solids content; and
 - b. determine the average dissolved solids content based on a rolling 12 month average.

IV. Reporting Requirements

1. The permittee shall submit deviation reports in accordance with the general terms and conditions of this permit that identify any exceedances of the average total dissolved solids content.

V. Testing Requirements

1. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:

- a. Emission Limitation
3.43 pounds per hour and 15.1 tons per year of particulate emissions

Applicable Compliance Method

Compliance with the pound per hour emission limitation shall be demonstrated by applying the maximum drift loss factor, 0.002 percent, to the maximum average total dissolved solids content of 12,000 ppm for the cooling water. If required, the permittee shall submit a testing proposal which will demonstrate that the maximum drift loss does not exceed 0.002 percent. Compliance with the annual emission limitation shall be demonstrated by the multiplying the hourly emission rate by 8,760 hours and dividing by 2,000 pounds per ton.

- b. Emission Limitation
20% opacity for visible particulate emissions, as a six-minute average

Applicable Compliance Method

Compliance shall be determined by visible emission evaluations performed in accordance

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PTI A

Emissions Unit ID: P005

Issued: To be entered upon final issuance

with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in U.S. EPA reference method 9.

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Column

PTI A

Issued: To be entered upon final issuance

VI. Miscellaneous Requirements

Emissions Unit ID: P005

None

Issued: To be entered upon final issuance

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P005 - Cooling Tower No. 1 with drift eliminator.	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P006 - Cooling Tower No. 2 with drift eliminator.	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-10 through 20 and OAC rule 3745-17-07(A)(1).
	OAC rule 3745-17-07(A)(1)	Particulate emissions (PE) shall not exceed 3.43 pounds per hour and 15.1 tons per year
	OAC rule 3745-17-11(B)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rules 3745-31-10 through 3745-31-20	See section A.I.2.a.
		See section A.I.2.b.

2. Additional Terms and Conditions

- 2.a The emissions limit based on this applicable rule is less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3).
- 2.b Per the requirements of OAC rules 3745-31-10 through 3745-31-20, the permittee is required to perform a Best Available Control Technology (BACT) review for PM/PM₁₀. The implementation of high efficiency drift eliminators constitute BACT for this emissions unit.

Issued: To be entered upon final issuance

II. Operational Restrictions

1. The permittee shall maintain an average total dissolved solids (TDS) content of 12,000 ppm or less in this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform the following monitoring requirements for the predominately operating emissions unit (P001 through P004) on a monthly basis:
 - a. test and record the total dissolved solids content; and
 - b. determine the average dissolved solids content based on a rolling 12 month average.

IV. Reporting Requirements

1. The permittee shall submit deviation reports in accordance with the general terms and conditions of this permit that identify any exceedances of the average total dissolved solids content.

V. Testing Requirements

1. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:

- a. Emission Limitation
3.43 pounds per hour and 15.1 tons per year of particulate emissions

Applicable Compliance Method

Compliance with the pound per hour emission limitation shall be demonstrated by applying the maximum drift loss factor, 0.002 percent, to the maximum average total dissolved solids content of 12,000 ppm for the cooling water. If required, the permittee shall submit a testing proposal which will demonstrate that the maximum drift loss does not exceed 0.002 percent. Compliance with the annual emission limitation shall be demonstrated by the multiplying the hourly emission rate by 8,760 hours and dividing by 2,000 pounds per ton.

- b. Emission Limitation
20% opacity for visible particulate emissions, as a six-minute average

Applicable Compliance Method

Compliance shall be determined by visible emission evaluations performed in accordance

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PTI A

Emissions Unit ID: P006

Issued: To be entered upon final issuance

with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in U.S. EPA reference method 9.

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Column

PTI A

Issued: To be entered upon final issuance

VI. Miscellaneous Requirements

Emissions Unit ID: P006

None

Column
PTI A

Emissions Unit ID: P006

Issued: To be entered upon final issuance

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P006 - Cooling Tower No. 2 with drift eliminator.	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P007 - Cooling Tower No. 3 with drift eliminator.	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-10 through 20 and OAC rule 3745-17-07(A)(1).
	OAC rule 3745-17-07(A)(1)	Particulate emissions (PE) shall not exceed 3.43 pounds per hour and 15.1 tons per year
	OAC rule 3745-17-11(B)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rules 3745-31-10 through 3745-31-20	See section A.I.2.a.
		See section A.I.2.b.

2. Additional Terms and Conditions

- 2.a The emissions limit based on this applicable rule is less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3).
- 2.b Per the requirements of OAC rules 3745-31-10 through 3745-31-20, the permittee is required to perform a Best Available Control Technology (BACT) review for PM/PM₁₀. The implementation of high efficiency drift eliminators constitute BACT for this emissions unit.

Issued: To be entered upon final issuance

II. Operational Restrictions

1. The permittee shall maintain an average total dissolved solids (TDS) content of 12,000 ppm or less in this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform the following monitoring requirements for the predominately operating emissions unit (P001 through P004) on a monthly basis:
 - a. test and record the total dissolved solids content; and
 - b. determine the average dissolved solids content based on a rolling 12 month average.

IV. Reporting Requirements

1. The permittee shall submit deviation reports in accordance with the general terms and conditions of this permit that identify any exceedances of the average total dissolved solids content.

V. Testing Requirements

1. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:

- a. Emission Limitation
3.43 pounds per hour and 15.1 tons per year of particulate emissions

Applicable Compliance Method

Compliance with the pound per hour emission limitation shall be demonstrated by applying the maximum drift loss factor, 0.002 percent, to the maximum average total dissolved solids content of 12,000 ppm for the cooling water. If required, the permittee shall submit a testing proposal which will demonstrate that the maximum drift loss does not exceed 0.002 percent. Compliance with the annual emission limitation shall be demonstrated by the multiplying the hourly emission rate by 8,760 hours and dividing by 2,000 pounds per ton.

- b. Emission Limitation
20% opacity for visible particulate emissions, as a six-minute average

Applicable Compliance Method

Compliance shall be determined by visible emission evaluations performed in accordance

Columbiana County Energy LLC

PTI Application: 02-15426

Issued

Facility ID: 0215000349

Emissions Unit ID: P007

with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in U.S. EPA reference method 9.

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PTI A

Issued: To be entered upon final issuance

VI. Miscellaneous Requirements

Emissions Unit ID: P007

None

Issued: To be entered upon final issuance

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P007 - Cooling Tower No. 3 with drift eliminator.	None	None

2. Additional Terms and Conditions

- 2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Issued: To be entered upon final issuance

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P008 - Cooling Tower No. 4 with drift eliminator.	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-10 through 20 and OAC rule 3745-17-07(A)(1).
	OAC rule 3745-17-07(A)(1)	Particulate emissions (PE) shall not exceed 3.43 pounds per hour and 15.1 tons per year
	OAC rule 3745-17-11(B)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rules 3745-31-10 through 3745-31-20	See section A.I.2.a.
		See section A.I.2.b.

2. Additional Terms and Conditions

- 2.a The emissions limit based on this applicable rule is less stringent than the limit established pursuant to OAC rule 3745-31-05(A)(3).
- 2.b Per the requirements of OAC rules 3745-31-10 through 3745-31-20, the permittee is required to perform a Best Available Control Technology (BACT) review for PM/PM₁₀. The implementation of high efficiency drift eliminators constitute BACT for this emissions

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**Issued: To be entered upon final issuance
unit.**

Emissions Unit ID: P008

Issued: To be entered upon final issuance

II. Operational Restrictions

1. The permittee shall maintain an average total dissolved solids (TDS) content of 12,000 ppm or less in this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform the following monitoring requirements for the predominately operating emissions unit (P001 through P004) on a monthly basis:
 - a. test and record the total dissolved solids content; and
 - b. determine the average dissolved solids content based on a rolling 12 month average.

IV. Reporting Requirements

1. The permittee shall submit deviation reports in accordance with the general terms and conditions of this permit that identify any exceedances of the average total dissolved solids content.

V. Testing Requirements

1. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:

- a. Emission Limitation
3.43 pounds per hour and 15.1 tons per year of particulate emissions

Applicable Compliance Method

Compliance with the pound per hour emission limitation shall be demonstrated by applying the maximum drift loss factor, 0.002 percent, to the maximum average total dissolved solids content of 12,000 ppm for the cooling water. If required, the permittee shall submit a testing proposal which will demonstrate that the maximum drift loss does not exceed 0.002 percent. Compliance with the annual emission limitation shall be demonstrated by the multiplying the hourly emission rate by 8,760 hours and dividing by 2,000 pounds per ton.

- b. Emission Limitation
20% opacity for visible particulate emissions, as a six-minute average

Applicable Compliance Method

Compliance shall be determined by visible emission evaluations performed in accordance

Columbiana County Energy LLC

PTI Application: 02-15426

Issued

Facility ID: 0215000349

Emissions Unit ID: P008

with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in U.S. EPA reference method 9.

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Issued: To be entered upon final issuance

VI. Miscellaneous Requirements

Emissions Unit ID: P008

None

**Column
PTI A**

Emissions Unit ID: P008

Issued: To be entered upon final issuance

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P008 - Cooling Tower No. 4 with drift eliminator.	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None