John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

11/5/2013

Certified Mail

Yes	TOXIC REVIEW
Yes	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
Yes	CEMS
Yes	MACT/GACT
Yes	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
Yes	MODELING SUBMITTED
Yes	MAJOR GHG
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

Ms. Amy Frazier
Carroll County Energy LLC
31 Milk Street, Suite 1001
Boston, MA 02109

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0210002025
Permit Number: P0113762
Permit Type: Initial Installation
County: Carroll

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA)Air Pollution Permit-to-Install (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it carefully. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

The issuance of this PTI is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of $70.00, made payable to “Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General’s Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
77 South High Street, 17th Floor
Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging 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 Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/survey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Ohio EPA DAPC, Northeast District Office at (330)425-9171 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,

Michael W. Ahern

Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA
Ohio EPA-NEDO; Pennsylvania; West Virginia

Response to Comments

Facility ID:	0210002025
Facility Name:	Carroll County Energy LLC
Facility Description:	
Facility Address:	2061 Kensington Rd Washington Twp., OH 44615 Carroll County
Permit:	P0113762, Permit-To-Install - Initial Installation
A public notice for the draft permit issuance was published in the Ohio EPA Weekly Review and appeared in the Free Press Standard on 09/26/2013. The comment period ended on 10/26/2013.	
Hearing date (if held)	
Hearing Public Notice Date (if different from draft public notice)	

The following comments were received during the comment period specified. Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format. PDF copies of the original comments in the format submitted are available upon request.

1. Topic: Comments from consultant for applicant Carroll County Energy, LLC.

a. **Comment**: On page 32 of 70; bottom of the page: there's a minor typographical error, with the spelling of "Alternative."Response:

Response: Spelling of 'alternative' was corrected.

Comment: On page 45 of 70; item 4 b) (1), table row "c": please add the qualifier that the CO_{2e} emissions values of 859 lb/MW-hr at ISO conditions without duct firing, and the gross energy output value of 307,279 lbs/hour are at ISO conditions and **with duct firing.**

Response: Suggested change was made.

Comment: On page 46 of 70; same table as above, row "g": the correct reference should be: OAC rule 3745-110-03 **(K)** (19).

Response: Suggested change was made.

Comment: On page 68 of 70; second paragraph under (2)b: please clarify units by adding "**(lb/MMBtu)**" at the end of the sentence.

Response: Suggested change was made.

Comment: On page Page 68 of 70; under (2)c: please add the following test methods to those listed for CO_2: mass balance calculation using ASTM D1945-03 (Standard Method for Analysis of Natural Gas by Gas Chromatography) and/or ASTM D1826-94 (Standard Test Method for Calorific Value of Gases in Natural Gas Range by Continuous Recording Calorimeter).

Response: Suggested change was made.

FINAL

Division of Air Pollution Control
Permit-to-Install
for
Carroll County Energy LLC

Facility ID:	0210002025
Permit Number:	P0113762
Permit Type:	Initial Installation
Issued:	11/5/2013
Effective:	11/5/2013

Division of Air Pollution Control
Permit-to-Install
for
Carroll County Energy LLC

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Authorization

Facility ID:	0210002025
Facility Description:	
Application Number(s):	A0047258, A0048289
Permit Number:	P0113762
Permit Description:	Installation of a natural gas-fired combined cycle combustion turbine electric utility power plant, nominally rated at 742 MW.
Permit Type:	Initial Installation
Permit Fee:	$4,800.00
Issue Date:	11/5/2013
Effective Date:	11/5/2013

This document constitutes issuance to:

Carroll County Energy LLC
2061 Kensington Rd
Washington Twp., OH 44615

of a Permit-to-Install for the emissions unit(s) identified on the following page.

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

Ohio EPA DAPC, Northeast District Office
2110 East Aurora Road
Twinsburg, OH 44087
(330)425-9171

The above named entity is hereby granted a Permit-to-Install for the emissions unit(s) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the 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

Scott J. Nally
Director

Authorization (continued)

Permit Number: P0113762
Permit Description: Installation of a natural gas-fired combined cycle combustion turbine electric utility power plant, nominally rated at 742 MW.

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

Emissions Unit ID:	**B001**
Company Equipment ID:	Auxiliary Boiler
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P003**
Company Equipment ID:	Emergency Generator
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P004**
Company Equipment ID:	Emergency Fire Pump
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

Group Name: CTGs #1 and #2.

Emissions Unit ID:	**P001**
Company Equipment ID:	CTG Unit #1
Superseded Permit Number:	
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P002**
Company Equipment ID:	CTG Unit #2
Superseded Permit Number:	
General Permit Category andType:	Not Applicable

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:

(1) Standard Term and Condition A.2.a), Severability Clause

(2) Standard Term and Condition A.3.c) through A. 3.e)General Requirements

(3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements

(4) Standard Term and Condition A.9., Reporting Requirements

(5) Standard Term and Condition A.10., Applicability

(6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install

(7) Standard Term and Condition A.14., Public Disclosure

(8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

(9) Standard Term and Condition A.16., Fees

(10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. General Requirements

a) Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification.

b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.

c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.

d) This permit does not convey any property rights of any sort, or any exclusive privilege.

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

4. Monitoring and Related Record Keeping and Reporting Requirements

a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

(1) The date, place (as defined in the permit), and time of sampling or measurements.

(2) The date(s) analyses were performed.

(3) The company or entity that performed the analyses.

(4) The analytical techniques or methods used.

(5) The results of such analyses.

(6) The operating conditions existing at the time of sampling or measurement.

b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:

(1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Northeast District Office.

(2) Quarterly written reports of (i) any deviations from federally enforceable emissionlimitations, operationalrestrictions, andcontroldeviceoperatingparameterlimitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Ohio EPA DAPC, Northeast District Office. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.

(3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, andreportingrequirements contained in this permit shall be submitted to the Ohio EPA DAPC, Northeast District Office every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.

(4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

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

5. Scheduled Maintenance/Malfunction Reporting

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

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

6. Compliance Requirements

a) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the appropriate Ohio EPA District Office or contracted

local air agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the electronic signature date shall constitute the date that the required application, notification or report is considered to be "submitted". Any document requiring signature may be represented by entry of the personal identification number (PIN) by responsible official as part of the electronic submission process or by the scanned attestation document signed by the Authorized Representative that is attached to the electronically submitted written report.

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

b) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:

(1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.

(3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

(4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

c) The permittee shall submit progress reports to the Ohio EPA DAPC, Northeast District Office concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

(1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

(2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

7. Best Available Technology

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

8. Air Pollution Nuisance

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

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Northeast District Office.

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

10. Applicability

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

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

a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the

Director within a reasonable time before the termination date and the permittee shows good cause for any such extension.

c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as “permanently shut down” in “Air Services” along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update electronically will constitute notifying the Director of the permanent shutdown of the affected emissions unit(s).

d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

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

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

12. Permit-To-Operate Application

The permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77. The permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if operation of the proposed new or modified source(s) as authorized by this permit would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d)must be <u>obtained before</u>operating the source in a manner that would violate the existing Title V permit requirements.

13. Construction Compliance Certification

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

a) Completion of initial installation date shall be enteredupon completion of construction and prior to start-up.

b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. Public Disclosure

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

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

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

16. Fees

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

17. Permit Transfers

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

18. Risk Management Plans

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

19. Title IV Provisions

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

B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

   a) None.

2. The permittee shall ensure that any emissions unit(s) subject to the Clean Air Interstate Rule (CAIR) complies/comply with the requirements of the Ohio Administrative Code (OAC) Chapter 3745-109, which includes submitting timely permit applications.

3. The following emissions unit contained in this permit is subject to 40 CFR Part 60 Subparts A and Dc: B001. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the electronic Code of Federal Regulations (e-CFR) website www.ecfr.gov or by contacting the appropriate Ohio EPA district or local air agency.

4. The following emissions unit contained in this permit is subject to 40 CFR Part 60 Subparts A and IIII: P003 and P004. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the electronic Code of Federal Regulations (e-CFR) website www.ecfr.gov or by contacting the appropriate Ohio EPA district or local air agency.

5. The following emissions unit contained in this permit is subject to 40 CFR Part 60 Subparts A and KKKK: P001 and P002. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the electronic Code of Federal Regulations (e-CFR) website www.ecfr.gov or by contacting the appropriate Ohio EPA district or local air agency.

6. The following emissions unit contained in this permit is subject to 40 CFR Part 63 Subparts A and ZZZZ: P003 and P004. The complete MACT requirements, including the MACT General Provisions may be accessed via the internet from the electronic Code of Federal Regulations (e-CFR) website www.ecfr.gov or by contacting the appropriate Ohio EPA district or local air agency.

C. Emissions Unit Terms and Conditions

1. B001, Auxiliary Boiler

Operations, Property and/or Equipment Description:

99 mmBtu/hr (higher heating value (HHV)) natural gas-fired boiler with low-NO_x burners and flue gas re-circulation.

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)	See b)(2)a.
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001	Sulfur dioxide (SO_2) emissions shall not exceed 2.9E-03 pound per million Btu (lb/mmBtu) of heat input and 0.65 ton per year. See b)(2)a and b)(2)b.
c.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/2006	See b)(2)c.
d.	OAC rule 3745-31-10 through 20	Carbon monoxide (CO) emissions shall not exceed 0.055 pound per million Btu (lb/mmBtu) of heat input, 5.45 pounds per hour (lbs/hr), and 12.25 tons per rolling, 12-month period. Nitrogen oxides (NO_x) emissions shall not exceed 0.020 lb/mmBtu of heat input, 1.98 lbs/hr, and 4.46 tons per rolling, 12-month period. Particulate matter emissions less than 10 microns in diameter (PM_{10}) and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) shall not exceed 0.008 lb/mmBtu of heat input, 0.79 lb/hr, and 1.78 ton per rolling, 12-month period.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Volatile organic compound (VOC) emissions shall not exceed 0.006 lb/mmBtu of heat input, 0.59 lb/hr and 1.34 ton per rolling, 12-month period. Sulfuric acid mist (H_2SO_4) emissions shall not exceed 2.2E-04 lb/mmBtu, 0.02 lb/hr, and 0.05 ton per rolling, 12-month period. Carbon dioxide equivalent (CO_2e) emissions shall not exceed 26,259.76 tons per rolling, 12-month period. Visible particulate emissions from the stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average. See b)(2)d, b)(2)e and b)(2)k.
e.	OAC rule 3745-17-07(A)	See b)(2)f.
f.	OAC rule 3745-17-10(B)(1)	See b)(2)f.
g.	OAC rule 3745-110-03(J)(16)	Exemption. See b)(2)l.
h.	40 CFR Part 60, Subpart A	See b)(2)g.
i.	40 CFR Part 60, Subpart Dc	See b)(2)h and b)(2)i.
j.	40 CFR Part 63, Subpart JJJJJJ	See b)(2)j.

Note that values are based on higher heating value (HHV).

(2) Additional Terms and Conditions

a. Compliance with the requirements of this rule for CO, NO_x, $PM_{10}/PM_{2.5}$, and VOC emissions includes compliance with the requirements of OAC rule 3745-31-10 through 20.

b. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

c. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the NO_x, $PM_{10}/PM_{2.5}$, SO_2, and VOC emissions from this air contaminant source since the uncontrolled potential to emit for NO_x, $PM_{10}/PM_{2.5}$, SO_2, and VOC is less than 10 tons per year .

d. All particulate emissions are assumed to be less than 2.5 microns in diameter. The $PM_{10}/PM_{2.5}$ emission limitations include both filterable and condensable particulate emissions.

e. The lb/mmBtu and lb/hr emission limitations are based on the emissions unit's potentials to emit. Therefore, no monitoring, record keeping, and reporting requirements are necessary to ensure ongoing compliance with these emission limitations.

f. The emission limitation required by this applicable rule is less stringent than the emission limitation established by OAC rule 3745-31-10 through 20.

g. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 60.

h. This rule does not establish emission limitations for natural gas-fired boilers, but does require record keeping of gas usage per 40 CFR 60.48c(g).

i. 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.

j. This emissions unit is exempt from the requirements of this rule per 40 CFR 63.11195(e) due tocombusting only natural gas.

k. The maximum annual operating hours for this emissions unit shall not exceed 4,500 hours per rolling, 12-monthperiod.

To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the operating hours levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Operating Hours
1	744
1-2	1,488
1-3	2,232
1-4	2,976
1-5	3,720

Month(s)	Maximum Allowable Cumulative Operating Hours
1-6	4,464
1-7	4,500
1-8	4,500
1-9	4,500
1-10	4,500
1-11	4,500
1-12	4,500

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours.

l. The permittee is exempt from the requirements of OAC rule 3745-110-03(A) through (F), since this permit restricts NO_x emissions from this emissions unit to less than 25 tons per year.

c) Operational Restrictions

(1) The permittee shall burn only natural gas as fuel in this emissions unit.

d) 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 maintain monthly records of the following information:

a. the operating hours for each month; and

b. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the operating hours.

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

(3) See 40 CFR Part 60, Subpart Dc (40 CFR 60.4200-4219).

e) 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) Pursuant to the 40 CFR Part 60.7 and 60.48c(a), the permittee is hereby advised of the requirement to report the following at the appropriate times:

a. construction date (no later than 30 days after such date);

b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);

c. actual start-up date (within 15 days after such date); and

d. the design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

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

a. all exceedances of the rolling, 12-month limitation on the hours of operation for this emissions unit; and

b. for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative hours of operation.

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

(4) See 40 CFR Part 60, Subpart Dc (40 CFR 60.4200-4219).

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

f) Testing Requirements

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

a. <u>Emission Limitation</u>:

CO emissions shall not exceed 0.055 lb/mmBtu of heat input (HHV), 5.45 lbs/hr, and 12.25 tons per rolling, 12-month period.

<u>Applicable Compliance Method</u>:

The lb/mmBtu emission limitation is based on manufacturer's data (HHV). The hourly emission limitation was developed by multiplying the maximum heat input (99 mmBtu/hr) by the CO emission factor supplied by the manufacturer (0.055 lb/mmBtu) to determine the hourly emissions.

The annual CO emission limitation was developed by multiplying the hourly emission limitation (5.45 lbs/hr) by the maximum annual operating hours (4,500 hrs/yr) and dividing by 2,000 pounds per ton. Therefore, compliance with the

annual limitation shall be demonstrated if compliance with the hourly limitation is shown.

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

b. Emission Limitation:

NO_x emissions shall not exceed 0.020 lb/mmBtu of heat input (HHV), 1.98 lbs/hr, and 4.46 tons per rolling, 12-month period.

Applicable Compliance Method:

The lb/mmBtu limitation is based on manufacturer's data (HHV). The hourly emission limitation was developed by multiplying the maximum heat input (99 mmBtu/hr) by the NO_x emission factor supplied by the manufacturer (0.020 lb/mmBtu) to determine the hourly emissions.

The annual NO_x emission limitation was developed by multiplying the hourly emission limitation (1.98 lbs/hr) by the maximum annual operating hours (4,500 hrs/yr) and dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation is shown.

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

c. Emission Limitation:

PM_{10} and $PM_{2.5}$ shall not exceed 0.008 lb/mmBtu of heat input (HHV), 0.79 lb/hr, and 1.78 ton per rolling, 12-month period.

Applicable Compliance Method:

The lb/mmBtu limitation is based on manufacturer's data (HHV). The hourly emission limitation was developed by multiplying the maximum heat input (99 mmBtu/hr) by the $PM_{10}/PM_{2.5}$ emission factor supplied by the manufacturer (0.008 lb/mmBtu) to determine the hourly emissions.

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

The annual $PM_{10}/PM_{2.5}$ emission limitation was developed by multiplying the hourly emission limitation (0.79 lb/hr) by the maximum annual operating hours (4,500 hrs/yr) and dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation is shown.

d. Emission Limitation:

SO_2 emissions shall not exceed 2.9E-03 lb/mmBtu of heat input (HHV) and 0.65 ton/yr.

Applicable Compliance Method:

The lb/mmBtu limitation (HHV) was established based on using natural gas having a maximum sulfur content of 1.0 grain per 100 cubic feet according to the following calculation. Multiply the maximum sulfur content of natural gas (1.0 grain S/100 scf) by the molecular weight of SO_2 (64.07 lb SO_2/lb-mole) divide by the molecular weight of sulfur (32.06 lb S/lb-mole) divide by (7,000 grains/lb), divide by (1,000 Btu/scf), and multiply by (10^6 Btu/mmBtu).

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

The annual emission limitation was developed by multiplying the lb/mmBtu emission limitation (2.9E-03 lb/mmBtu) by the maximum heat input (99 mmBtu/hr), multiplied by the maximum operating hours (4,500 hrs/yr) and then dividing by 2,000 pounds per ton. Therefore compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation is shown.

e. Emission Limitation:

VOC emissions shall not exceed 0.006 lb/mmBtu of heat input, 0.59 lb/hr, and 1.34 ton per rolling, 12-month period.

Applicable Compliance Method:

The lb/mmBtu limitation is based on manufacturer's data (HHV). The hourly emission limitation was developed by multiplying the maximum heat input (99 mmBtu/hr) by the VOC emission factor supplied by the manufacturer (0.006 lb/mmBtu) to determine the hourly emissions.

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

The annual emission limitation was developed by multiplying the hourly emission limitation (0.59 lb/hr) by the maximum annual operating hours (4,500 hrs/yr) and dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation is maintained.

f. Emission Limitation:

H_2SO_4 emissions shall not exceed 2.2E-04 lb/mmBtu (HHV), 0.02 lb/hr, and 0.05 ton per rolling, 12-month period.

Applicable Compliance Method:

The lb/mmBtu emission limitation is based on the assumption that 5% of the SO_2 emissions are converted to SO_3 and then converted to H_2SO_4 when combined with water vapor by the following calculation.

2.9E-03 lb SO_2/mmBtu(0.05)(98 lb H_2SO_4/lb-mole)(lb-mole/64 lb SO_2) = 2.2E-04 lb H_2SO_4/mmBtu

Multiply the lb H_2SO_4/mmBtu (2.2E-04 lb/mmBtu) by the maximum heat input (99 mmBtu/hr) to determine the maximum hourly H_2SO_4 emissions (0.02 lb/hr), and multiply by the maximum annual hours of operation (4,500 hrs/yr) divided by 2,000 lbs/ton to determine the annual H_2SO_4 emissions (0.05 ton/yr).

If required, the permittee shall demonstrate compliance with thelb/mmBtu and lb/hr emission limitations using Methods 1 thru 4 and 8 of 40 CFR Part 60, Appendix A.

g. Emission Limitation:

CO_2e emissions shall not exceed 26,259.76 tons per rolling, 12-month period.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit by calculating the sum of the product of the maximum natural gas firing rate (99 mmBtu/hr) multiplied by the AP-42 emission factor for CO_2, N_2O, and $CH_4$from Table 1.4-2 dated 7/98 (120,000 lb/mmscf, 0.64 lb/mmscf, and 2.3 lb/mmscf, respectively), multiplied by the global warming potential for CO_2, N_2O, and CH_4 (1, 310, and 21, respectively from Table A-1 to Subpart A of 40 CFR Part 98). Divide by the average heating value used for AP-42 emission factors in Table 1.-42 dated 7/98 (1,020 Btu/scf), multiply by the maximum annual hours of operation (4,500 hrs/yr) and divide by 2,000 pounds per ton.

$$\left(99\frac{mmBtu}{hr}\right)x\left[\left(120{,}000\frac{lb}{mmscf}x(1)\right)+\left((0.64\frac{lb}{mmscf)}(310)\right)+\left(\left(2.3\frac{lb}{mmscf}\right)(21)\right)\right]x\left(\frac{mmscf}{1020mmBtu}\right)\left(4{,}500\frac{hrs}{hr}\right)x\left(\frac{ton}{2{,}000\ lb}\right)=26{,}259.76\frac{tons}{yr}$$

Since the CO_2e emissions are estimated to consist of more than 99% CO_2, compliance with this emission limitation will be assumed provided that the lb/scf CO_2 emission rate does not exceed 120,000 lb/mmscf.

If required, the permittee shall conduct emissions testing using Methods 1, 2, 3A and 4 of 40 CFR Part 60, Appendix A to determine the lb/scf CO_2 emission rate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

h. Emission Limitation:

Visible particulate emissions from the stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emission limitation shall be demonstrated through visible emission observations performed in accordance with the methods and procedures specified in40 CFR Part 60, Appendix A, Method 9.

(2) 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 startup of the emissions unit.

b. The emission testing shall be conducted to demonstrate compliance with the following emission limitations:

i. CO emissions in lb/hr and lb/mmBtu; and

ii. NO_x emissions in lb/hr and lb/mmBtu.

The emission testing shall also be conducted to determine the CO_2 emission rate in lb/scf.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

for CO, Methods 1 thru 4 and 10 of 40 CFR Part 60, Appendix A;

forNO_x Methods 1 thru 4 and 7E of 40 CFR Part 60, Appendix A; and

for CO_2, Methods 1, 2, 3A and 4 of 40 CFR Part 60, Appendix A.

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

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the Ohio EPA Northeast District Office. Although this generally consists of operating the emissions unit at its maximum material input/production

rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to 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 test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

f. Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the 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.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Northeast Office.

g) Miscellaneous Requirements

(1) None.

2. P003, Emergency Generator

Operations, Property and/or Equipment Description:

1,112 kW emergency diesel fired generator.

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001	Sulfur dioxide (SO_2) emissions shall not exceed 0.02 pound per hour (lb/hr) and 0.005 ton per year. See b)(2)a and b)(2)b.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/2006	See b)(2)c.
c.	OAC rule 3745-31-10 through 20	Carbon monoxide (CO) emissions shall not exceed 3.5 g/kW-hr, 8.57 pounds per hour (lbs/hr), and 2.14 tons per rolling, 12-month period. Nitrogen oxides (NO_x) emissions shall not exceed 5.61 g/kW-hr, 13.74 lbs/hr, and 3.44 tons per rolling, 12-month period. Particulate matter emissions less than 10 microns in diameter (PM_{10}) and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) shall not exceed 0.20 g/kW-hr, 0.49 lb/hr, and 0.12 ton per rolling, 12-month period. Volatile organic compound (VOC) emissions shall not exceed 0.79 g/kW-hr, 1.93 lbs/hr, and 0.48 ton per rolling, 12-month period. Sulfuric acid mist (H_2SO_4) emissions shall

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		not exceed 1.32E-04 g/kW-hr, 3.23E-04 lb/hr and 8.08E-05 ton per rolling, 12-month period. Carbon dioxide equivalent (CO_2e) emissions shall not exceed 433.96 tons per rolling, 12-month period. See b)(2)d and b)(2)e.
d.	OAC rule 3745-17-07(A)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
e.	OAC rule 3745-17-11(B)(5)(a)	See b)(2)f.
f.	OAC rule 3745-18-06(G)	Less stringent than 40 CFR Part 60, Subpart IIII.
g.	OAC rule 3745-110-03(J)(16) and (J)(19)	Exemptions. See b)(2)g.
h.	40 CFR Part 60, Subpart A (40 CFR 60.1 - 60.19)	Table 8 to Subpart IIII of 40 CFR Part 60 – Applicability of General Provisions to Subpart IIII shows which parts of the General Provisions in 40 CFR 60.1 - 60.19 apply.
i.	40 CFR Part 60, Subpart IIII (40 CFR 60.4200 – 60.4219) [In accordance with 40 CFR 60.4200(a)(2), this emissions unit is a compression ignition emergency stationary internal combustion engine (CI ICE) for which construction commenced after July 11, 2005 subject to the emissions limitation/control measures specified in this section.]	Non-methane hydrocarbon (NMHC) + NO_x emissions shall not exceed 6.4 g/kW-hr. CO emissions shall not exceed 3.5 g/kW-hr. PM emissions shall not exceed 0.20 g/kW-hr. Exhaust opacity shall not exceed: 20 percent during acceleration mode; 15 percent during lugging mode; and 50 percent during the peaks in either the acceleration or lugging modes. See b)(2)h. [60.4205(b) and 60.4207(b)]
j.	40 CFR Part 63, Subpart ZZZZ (40 CFR 63.6580-63.6675) [In accordance with 40 CFR	See b)(2)i. [63.6590(c), (c)(1)]

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	63.6590(c)(1), this emissions unit is a new stationary internal combustion engine (RICE) located at an area source of HAP emissions subject to the emissions limitation/control measures specified in this section.]	

Note that values are based on higher heating value (HHV).

(2) Additional Terms and Conditions

a. Compliance with the requirements of this rule for CO, NO_x, PM_{10}, $PM_{2.5}$, and VOC emissions includes compliance with the requirements of OAC rule 3745-31-10 through 20.

b. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

c. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the CO, NO_x, PM_{10}/$PM_{2.5}$, SO_2, and VOC emissions from this air contaminant source since the uncontrolled potential to emit for CO, NO_x, PM_{10}/$PM_{2.5}$, SO_2, and VOC is less than 10 tons per year taking into account the federally enforceable emission limitations and operating hours restriction specified by OAC rule 3745-31-10 through 20.

d. All particulate emissions are assumed to be less than 2.5 microns in diameter. The PM_{10}/$PM_{2.5}$ emission limitations include both filterable and condensable particulate emissions.

e. The maximum annual operating hours for this emissions unit shall not exceed 500 hours, based upon a rolling, 12-month summation of the operating hours.

To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the operating hours levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Operating Hours
1	500
1-2	500
1-3	500
1-4	500
1-5	500
1-6	500
1-7	500
1-8	500
1-9	500
1-10	500
1-11	500
1-12	500

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours.

f. The emission limitation required by this applicable rule is less stringent than the emission limitation established by OAC rule 3745-31-10 through 20.

g. The requirements of this rule do not apply, since:

i. NO_x emissions are restricted to less than 25 tons per year; and

ii. the emissions unit is subject to a BACT limitation for NO_x.

h. The permittee shall only combust ultra low sulfur diesel fuel in this emissions unit meeting the following per gallon standards:

i. 15 ppm maximum sulfur content; and

ii. a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

i. This emissions unit must meet the requirements of 40 CFR Part 60, Subpart IIII. No further requirements apply under this subpart.

c) Operational Restrictions

(1) See 40 CFR Part 60, Subpart IIII (40 CFR 60.4200 - 60.4219).

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information:

a. the operating hours for each month; and

b. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the operating hours.

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

(2) For each shipment ofultra low sulfurdiesel fuel received for burning in this emissions unit, the permittee shall maintain records of the oil supplier's (or permittee's) analyses for sulfur contentin parts per million (40 CFR 80.510). The permittee shall perform or require the supplier to perform the analyses for sulfur content in accordance with 40 CFR 80.585.

(3) The permittee shall also maintain documentation of supplier verification that the ultra low sulfur diesel fuel as purchased has a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

(4) See 40 CFR Part 60, Subpart IIII (40 CFR 60.4200 - 60.4219).

e) Reporting Requirements

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

a. each shipment of ultra low sulfur diesel fuel received for burning in this emissions unit which did not comply with the per gallon standards specified in b)(2); and

b. all exceedances of the rolling, 12-month limitation on the hours of operation for this emissions unit; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative hours of operation.

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

(2) See 40 CFR Part 60, Subpart IIII (40 CFR 60.4200 - 60.4219).

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

f) Testing Requirements

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

a. Emission Limitation:

CO emissions shall not exceed 3.5 g/kW-hr, 8.57 lbs/hr, and 2.14 tons per rolling, 12-month period.

Applicable Compliance Method:

The g/kW-hr limitation is based on the Tier 2 emission standards under 40 CFR 89.112(a), Subpart B, Table 1. The hourly emission limitation was developed by multiplying the maximum operating load (1,112 kW) by the CO emission factor supplied by the manufacturer (3.5 g/kW-hr) and dividing by (454 g/lb) to determine the hourly emissions.

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

The annual emission limitation was developed by multiplying the hourly emission limitation (8.57 lbs/hr) by the maximum annual operating hours (500 hrs/yr) and dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation and operating hours restriction is shown.

b. Emission Limitation:

NO_x emissions shall not exceed 5.61 g/kW-hr, 13.74lbs/hr, and 3.44 tons per rolling, 12-month period.

Applicable Compliance Method:

The g/kW-hr limitation is based on the combined NO_x + NMHC emission limitation specified by the Tier 2 standard in 40 CFR 89.112(a) Table 1 (6.4 g/kW-hr) multiplied by the Tier 1 emission limitation for NO_x in Table 1 (9.2 g/kW-hr) divided by the sum of the Tier 1 emission limitations for NO_x and HC in Table 1 (9.2 g/kW-hr + 1.3 g/kW-hr). The hourly emission limitation was developed by multiplying the maximum operating load (1,112 kW) by the NO_x g/kW-hr emission limitation (5.61 g/kW-hr) divided by (454 g/lb) to determine the hourly emissions.

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

The annual emission limitation was developed by multiplying the hourly emission limitation (13.74 lbs/hr) by the maximum annual operating hours (500 hrs/yr) and dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation and operating hours restriction is shown.

c. Emission Limitation:

$PM_{10}/PM_{2.5}$ emissions shall not exceed 0.20 g/kW-hr, 0.49lb/hr, and 0.12 ton per rolling, 12-month period.

Applicable Compliance Method:

The g/kW-hr limitation is based on manufacturer's emissions data. The hourly emission limitation was developed by multiplying the maximum operating load (1,112 kW) by the $PM_{10}/PM_{2.5}$ emission factor supplied by the manufacturer (0.20 g/kW-hr) divided by (454 g/lb) to determine the hourly emissions.

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

The annual emission limitation was developed by multiplying the hourly emission limitation (0.49 lb/hr) by the maximum annual operating hours (500 hrs/yr) and dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation and operating hours restriction is shown.

d. Emission Limitation:

SO_2 emissions shall not exceed 0.02 lb/hr and 0.005 ton/yr.

Applicable Compliance Method:

The hourly emission limitation is based dividing the AP-42 emission factor for SO_2 from AP-42 Table 3.4-1 dated 10/96 whenburning diesel fuel with a maximum sulfur content of 15 ppmw (0.0015 lb/mmBtu) by (10^6 Btu/mmBtu) multiplied by (7,000 Btu/hp-hr) and multiplied by the maximum power rating (1,491 hp).

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

The annual emission limitation was developed by multiplying the hourly emission limitation (0.02 lb/hr) by the maximum annual operating hours (500 hrs/yr) and dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation and operating hours restriction is shown.

e. Emission Limitation:

VOC emissions shall not exceed 0.79 g/kW-hr, 1.93 lbs/hr, and 0.48 ton per rolling, 12-month period.

Applicable Compliance Method:

The g/kW-hr limitation is based on the combined NO_x + NMHC emission limitation specified by the Tier 2 standard in 40 CFR 89.112(a) Table 1 (6.4 g/kW-hr) multiplied by the Tier 1 emission limitation for NMHC in Table 1 (1.3 g/kW-hr) divided by the sum of the Tier 1 emission limitations for NO_x and HC in Table 1 (9.2 g/kW-hr + 1.3 g/kW-hr). The hourly emission limitation was developed by multiplying the maximum operating load (1,112 kW) by the VOC emission factor supplied by the manufacturer (0.79 g/kW-hr) to determine the hourly emissions.

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

The annual emission limitation was developed by multiplying the hourly emission limitation (1.93 lbs/hr) by the maximum annual operating hours (500 hrs/yr) and dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation and operating hours restriction is shown.

f. Emission Limitation:

H_2SO_4 emissions shall not exceed 1.32E-04 g/kW-hr, 3.23E-04 lb/hr and 8.08E-05 ton per rolling, 12-month period.

Applicable Compliance Method:

The g/kW-hr emission is based on the sulfuric acid mist emission factor from page 276 of Toxic Air Pollution Emission Factors, EPA 450/2-90-011 (8.9 ng/J x %sulfur in fuel = 8.9(0.0015) = 0.01335 ng/J). The H_2SO_4 emission factor (0.01335 ng/J) was converted to g/kW-hr by multiplying by (1055.1 J/Btu), multiplying by (7000 Btu/hp-hr), multiplying by (g/10^9ng), and multiplying by (1.341 hp/kW) = 1.32E-04 g/kW-hr.

The pound per hour emissions limitation was developed by multiplying the g/kW-hr allowable H_2SO_4 emission limitation (1.32E-04 g/kW-hr) by the maximum operating load (1,112 kW) and divided by 454 grams per pound to determine the hourly emissions (3.23E-04 lb/hr).

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

The ton per year emission limitation was developed by multiplying the hourly allowable H_2SO_4 emission limitation (3.23E-04 lb/hr) by the maximum annual

hours of operation (500 hours), and then dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation and operating hours restriction is shown.

g. Emission Limitation:

CO_2e emissions shall not exceed 433.96 tons per rolling, 12-month period.

Applicable Compliance Method:

This emissions limitation was established to reflect the potential to emit for this emissions unit by calculating the sum of the maximum capacity (1,491 hp) by the emission factor for CO_2, N_2O, and CH_4, multiplied by the global warming potential for CO_2, N_2O, and CH_4 (1, 310, and 21, respectively from Table A-1 to Subpart A of 40 CFR 98). Multiply the sum by the maximum annual hours of operation (500 hrs/yr) and divide by 2,000 pounds per ton. The CO_2 emission factor was obtained from AP-42 Table 3.4-1 dated 10/96 (1.16 lb/hp-hr). The N_2O emission factor was obtained from 40 Table C-2 to Subpart C of 40 CFR 98 (0.6 g/mmBtu). The CH_4 emission factor was obtained from AP-42 Table 3.4-1 dated 10/96 (7.05E-04 lb TOC/hp-hr x 0.09 lb CH_4/lb TOC = 6.34E-05 lb CH_4/hp-hr).

$$(1{,}491\ hp)x\left[\left(1.16\frac{lb}{hp-hr}(1)\right) + \left(\left(0.6\frac{g}{mmBtu}\right)\left(7000\frac{Btu}{hp-hr}\right)\left(\frac{mmBtu}{1E06Btu}\right)\left(\frac{lb}{454g}\right)(310)\right) + \left(6.34E-05\frac{lb}{(hp-hr)}\right)(21)\right]x\left(500\frac{hrs}{hr}\right)x\left(\frac{ton}{2{,}000lb}\right) = 433.96\ tons/yr$$

Since the CO_2e emissions are estimated to consist of more than 99% CO_2, compliance with this emission limitation will be assumed provided that the lb/hp-hr CO_2 emission rate does not exceed 1.16 lb/hp-hr. If required, the permittee shall conduct emissions testing using Methods 1, 2, 3A and 4 of 40 CFR Part 60, Appendix A to determine the lb/hp-hr CO_2 emission rate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

h. Emission Limitation:

The permittee shall only combust diesel fuel in this emissions unit meeting the following per gallon standard: 15 ppm maximum sulfur content

Applicable Compliance Method:

The records required by d)(2) shall be used to demonstrate compliance.

i. Emission Limitation:

The permittee shall only combust ultra low sulfur diesel fuel in this emissions unit meeting the following per gallon standard: a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

Applicable Compliance Method:

The records required by d)(2) and d)(3) shall serve as demonstration of compliance.

j. Emission Limitation:

Visible particulate emissions from the stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided in the rule.

Applicable Compliance Method:

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

k. Emission Limitation:

NMHC + NO_x emissions shall not exceed 6.4 g/kW-hr.

CO emissions shall not exceed 3.5 g/kW-hr.

PM emissions shall not exceed 0.20 g/kW-hr.

Exhaust opacity shall not exceed:

20 percent during acceleration mode;

15 percent during lugging mode; and

50 percent during the peaks in either the acceleration or lugging modes.

Applicable Compliance Method:

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

g) Miscellaneous Requirements

(1) None.

3. P004, Emergency Fire Pump

Operations, Property and/or Equipment Description:

400 hp (298 kW) emergency diesel-fired fire pump engine.

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001	Sulfur dioxide (SO_2) emissions shall not exceed 0.004 lb/hr and 1.0 E-03 ton/yr. See b)(2)a and b)(2)b.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/2006	See b)(2)c.
c.	OAC rule 3745-31-10 through 20	Carbon monoxide (CO) emissions shall not exceed 3.5 g/kW-hr, 2.3 pounds per hour (lbs/hr), and 0.57 ton per rolling, 12-month period. Nitrogen Oxides (NO_x) emissions shall not exceed 3.5 g/kW-hr, 2.3 lb/hr, and 0.57 ton per rolling, 12-month period. Particulate matter emissions less than 10 microns in diameter (PM_{10}) and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) shall not exceed 0.20 g/kW-hr, 0.131 lb/hr, and 0.033 ton per rolling, 12-month period. Volatile organic compound (VOC) emissions shall not exceed 0.50 g/kW-hr, 0.325 lb/hr, and 0.08 ton per rolling, 12-month period. H_2SO_4 emissions shall not exceed 1.32 E-04 g/kW-hr, 8.7E-05 lb/hr and 2.2E-05

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		ton per rolling, 12-month period Carbon dioxide equivalent (CO_2e) emissions shall not exceed 115.75 tons per rolling, 12-month period. See b)(2)d and b)(2)e.
d.	OAC rule 3745-17-07(A)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
e.	OAC rule 3745-17-11(B)(5)(a)	See b)(2)f.
f.	OAC rule 3745-110-03(J)(16) and (J)(19)	Exemption. See b)(2)g.
g.	40 CFR Part 60, Subpart A (40 CFR 60.1 - 60.19)	Table 8 to Subpart IIII of 40 CFR Part 60 – Applicability of General Provisions to Subpart IIII shows which parts of the General Provisions in 40 CFR 60.1 - 60.19 apply.
h.	40 CFR Part 60, Subpart IIII (40 CFR 60.4200–4219) [In accordance with 40 CFR 60.4200(a)(2), this emissions unit is a compression ignition stationary internal combustion fire pump engine for which construction commenced after July 11, 2005 subject to the emissions limitation/control measures specified in this section.]	Non-methane hydrocarbon (NMHC) + NO_x emissions shall not exceed 4.0 g/kW-hr. CO emissions shall not exceed 3.5 g/kW-hr. PM emissions shall not exceed 0.20 g/kW-hr. See b)(2)h. [60.4205(c) and 60.4207(b)]
i.	40 CFR Part 63, Subpart ZZZZ (40 CFR 63.6580-63.6675) [In accordance with 40 CFR 63.6590(c)(1), this emissions unit is a new stationary reciprocating internal combustion engine (RICE) located at an area source of HAP emissions subject to the emissions limitation/control measures specified in this section.]	See b)(2)i. [63.6590(c), (c)(1)]
j.	40 CFR Part 63, Subpart A (40 CFR 63.1 - 63.16)	Table 8 to Subpart ZZZZ of 40 CFR Part 63 – Applicability of General Provisions to Subpart ZZZZ shows which parts of the

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		General Provisions in 40 CFR 63.1 - 63.16 apply.

(2) Additional Terms and Conditions

a. Compliance with the requirements of this rule for CO, NO_x, PM_{10}, $PM_{2.5}$, and VOC emissions includes compliance with the requirements of OAC rule 3745-31-10 through 20.

b. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

c. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the CO, NO_x, PM_{10}/$PM_{2.5}$, SO_2, and VOC emissions from this air contaminant source since the uncontrolled potential to emit for CO, NO_x, PM_{10}/$PM_{2.5}$, SO_2, and VOC is less than 10 tons per year taking into consideration the federally enforceable emission limitations and operating hours restriction specified by OAC rule 3745-31-10 through 20.

d. All particulate emissions are assumed to be less than 2.5 microns in diameter. The PM_{10}/$PM_{2.5}$ emission limitations include both filterable and condensable particulate emissions.

e. The maximum annual operating hours for this emissions unit shall not exceed 500 hours, based upon a rolling, 12-month summation of the operating hours.

To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the operating hours levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Operating Hours
1	500
1-2	500
1-3	500
1-4	500
1-5	500
1-6	500
1-7	500
1-8	500
1-9	500
1-10	500
1-11	500
1-12	500

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours.

f. The emission limitation required by this applicable rule is less stringent than the emission limitation established by OAC rule 3745-31-10 through 20.

g. The requirements of this rule do not apply, since:

i. NO_x emissions are restricted to less than 25 tons per year; and

ii. the emissions unit is subject to a BACT limitation for NO_x.

h. The permittee shall only combust ultra low sulfur diesel fuel in this emissions unit meeting the following per gallon standards:

i. 15 ppm maximum sulfur content; and

ii. a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

i. This emissions unit must meet the requirements of 40 CFR Part 60, Subpart IIII. No further requirements apply under this subpart.

c) Operational Restrictions

(1) See 40 CFR Part 60, Subpart IIII (40 CFR 60.4200-4219).

d) Monitoring and/or Recordkeeping Requirements

(1) Thepermittee shall maintain monthly records of the following information:

a. the operating hours for each month; and

b. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the operating hours.

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

(2) For each shipment ofultra low sulfurdiesel fuel received for burning in this emissions unit, the permittee shall maintain records of the oil supplier's (or permittee's) analyses for sulfur contentin parts per million (40 CFR 80.510). The permittee shall perform or require the supplier to perform the analyses for sulfur content in accordance with 40 CFR 80.585.

(3) Thepermittee shall also maintain documentation of supplier verification that the ultra low sulfur diesel fuel as purchased has a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

(4) See 40 CFR Part 60, Subpart IIII (40 CFR 60.4200-4219).

e) Reporting Requirements

(1) Thepermittee shall submit quarterly deviation (excursion) reports that identify the following:

a. each shipment ofultra low sulfur diesel fuel received for burning in this emissions unit which did not comply with the per gallon standards specified in b)(2); and

b. all exceedances of the rolling, 12-month limitation on the hours of operation for this emissions unit; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative hours of operation.

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

(2) See 40 CFR Part 60, Subpart IIII (40 CFR 60.4200-4219).

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

f) Testing Requirements

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

a. Emission Limitation:

CO emissions shall not exceed 3.5 g/kW-hr, 2.3 lbs/hr, and 0.57 ton per rolling, 12-month period.

Applicable Compliance Method:

The g/kW-hr limitation is based on the standard specified in Table 4 to 40 CFR Part 60, Subpart IIII. The hourly emission limitation was developed by multiplying the maximum operating load (298 kW) by the g/kW-hr CO emission limitation (3.5 g/kW-hr) divided by (454 g/lb) to determine the hourly emissions.

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

The annual emission limitation was developed by multiplying the hourly emission limitation (2.3 lbs/hr) by the maximum annual operating hours (500 hrs/yr) and dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation and operating hours restriction is shown.

b. Emission Limitation:

NO_x emissions shall not exceed 3.5 g/kW-hr, 2.3 lbs/hr, and 0.57 ton per rolling, 12-month period.

Applicable Compliance Method:

The g/kW-hr limitation is based on the combined NO_x + NMHC emission limitation specified by the Table 2 to 40 CFR Part 60, Subpart IIII (4.0 g/kW-hr) multiplied by the Tier 1 emission limitation for NO_x in Table 1 to 40 CFR 89.112(a) (9.2 g/kW-hr) divided by the sum of the Tier 1 emission limitations for NO_x and HC in Table 1 to 40 CFR 89.112(a) (9.2 g/kW-hr + 1.3 g/kW-hr). The hourly emission limitation was developed by multiplying the maximum operating load (298 kW) by the g/kW-hr NO_x emission limitation (3.5 g/kW-hr) divided by (454 g/lb) to determine the hourly emissions.

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

The annual emission limitation was developed by multiplying the hourly emission limitation (2.3 lbs/hr) by the maximum annual operating hours (500 hrs/yr) and dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation and operating hours restriction is shown.

c. Emission Limitation:

$PM_{10}/PM_{2.5}$ emissions shall not exceed 0.20 g/kW-hr, 0.131 lb/hr, and 0.033 ton per rolling, 12-month period.

Applicable Compliance Method:

The g/kW-hr limitation is based on manufacturer's emissions data. The hourly emission limitation was developed by multiplying the maximum operating load (298 kW) by the $PM_{10}/PM_{2.5}$ emission factor supplied by the manufacturer (0.20 g/kW-hr) divided by (454 g/lb) to determine the hourly emissions.

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

The annual emission limitation was developed by multiplying the hourly emission limitation (0.131 lb/hr) by the maximum annual operating hours (500 hrs/yr) and dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation is shown.

d. Emission Limitation:

SO_2 emissions shall not exceed 0.004 lb/hr and 1.0E-03 ton/yr.

Applicable Compliance Method:

The hourly emission limitation is based dividing the AP-42 emission factor for SO_2 from AP-42 Table 3.4-1 dated 10/96 whenburning diesel fuel with a maximum sulfur content of 15 ppmw (0.0015 lb/mmBtu) by (10^6 Btu/mmBtu) multiplied by (7,000 Btu/hp-hr) and multiplied by the maximum power rating (400 hp).

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

The annual emission limitation was developed by multiplying the hourly emission limitation (0.004 lb/hr) by the maximum annual operating hours (500 hrs/yr) and dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation is shown.

e. Emission Limitation:

VOC emissions shall not exceed 0.50 g/kW-hr, 0.325 lb/hr, and 0.08 ton/yr as a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

The g/kW-hr limitation is based on the combined NO_x + NMHC emission limitation specified by the Table 2 to 40 CFR Part 60, Subpart IIII (4.0 g/kW-hr) multiplied by the Tier 1 emission limitation for NMHC in Table 1 to 40 CFR 89112(a) (1.3 g/kW-hr) divided by the sum of the Tier 1 emission limitations for NO_x and HC in Table 1 to 40 CFR 89.112(a) (9.2 g/kW-hr + 1.3 g/kW-hr). The hourly emission limitation was developed by multiplying the maximum operating load (298 kW) by the g/kW-hr VOC emission limitation (0.50 g/kW-hr) divided by (454 g/lb) to determine the hourly emissions.

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

The annual emission limitation was developed by multiplying the hourly emission limitation (0.325 lb/hr) by the maximum annual operating hours (500 hrs/yr) and dividing by 2,000 pounds per ton. Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation is shown.

f. Emission Limitation:

H_2SO_4 emissions shall not exceed 1.32E-04 g/kW-hr, 8.7E-05 lb/hr and 2.2E-05 ton per rolling, 12-month period.

Applicable Compliance Method:

The g/kW-hr emission is based on the sulfuric acid mist emission factor from page 276 of Toxic Air Pollution Emission Factors, EPA 450/2-90-011 (8.9 ng/J x %sulfur in fuel = 8.9(0.0015) = 0.01335 ng/J). The H_2SO_4 emission factor (0.01335 ng/J) was converted to g/kW-hr by multiplying by (1055.1 J/Btu), multiplying by (7000 Btu/hp-hr), multiplying by (g/10^9ng), and multiplying by (1.341 hp/kW) = 1.32E-04 g/kW-hr.

The pound per hour emissions limitation was developed by multiplying the g/kW-hr allowable H_2SO_4 emission limitation (1.32E-04 g/kW-hr) by the maximum operating load (298 kW) and divided by 454 grams per pound to determine the hourly emissions (8.7E-05 lb/hr).

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

The ton per year emission limitation was developed by multiplying the hourly allowable H_2SO_4 emission limitation (8.7E-05 lb/hr) by the maximum annual hours of operation (500 hours), and then dividing by 2,000 pounds per ton.

Therefore, compliance with the annual limitation shall be demonstrated if compliance with the hourly limitation and operating hours restriction is shown.

g. Emission Limitation:

CO_2e emissions shall not exceed 115.75 tons per rolling, 12-month period.

Applicable Compliance Method:

This emissions limitation was established to reflect the potential to emit for this emissions unit by calculating the sum of the maximum capacity (400 hp) by the emission factor for CO_2, N_2O, and CH_4, multiplied by the global warming potential for CO_2, N_2O, and CH_4 (1, 310, and 21, respectively from Table A-1 to Subpart of 40 CFR 98). Multiply the sum by the maximum annual hours of operation (500 hrs/yr) and divide by 2,000 pounds per ton. The CO_2 emission factor was obtained from AP-42 Table 3.3-1 dated 10/96 (1.15 lb/hp-hr). The N_2O emission factor was obtained from Table C-2 to Subpart C of 40 CFR 98 (0.6 g/mmBtu). The CH_4 emission factor was obtained from AP-42 Table 3.3-1 dated 10/96 (2.47E-03 lb TOC/hp-hr (0.09 lb CH_4/lb TOC)= 2.223E-04 lb CH_4/hp-hr, this table did not include an estimate of how much methane comprises the TOC emission factor, so the value of 9% from AP-42 Table 3.4-1 dated 10/96 was used).

$$(400\ hp)x\left[\left(1.15\frac{lb}{hp-hr}(1)\right)+\left(\left(0.6\frac{g}{mmBtu}\right)\left(7000\frac{Btu}{hp-hr}\right)\left(\frac{mmBtu}{1E06Btu}\right)(\frac{lb}{454g})(310)\right)+\left(2.223E-04\frac{lb}{(hp-hr)}\right)(21)\right]x\left(500\frac{hrs}{hr}\right)x\left(\frac{ton}{2{,}000lb}\right)=115.75\ tons/yr$$

Since the CO_2e emissions are estimated to consist of more than 99% CO_2, compliance with this emission limitation will be assumed provided that the lb/hp-hr CO_2 emission rate does not exceed 1.15 lb/hp-hr. If required, the permittee shall conduct emissions testing using Methods 1, 2, 3A and 4 of 40 CFR Part 60, Appendix A to determine the lb/hp-hr CO_2 emission rate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

h. Emission Limitation:

The permittee shall only combust ultra low sulfur diesel fuel in this emissions unit meeting the following per gallon standard: 15 ppm maximum sulfur content

Applicable Compliance Method:

The records required by d)(2) shall be used to demonstrate compliance.

i. Emission Limitation:

The permittee shall only combust diesel fuel in this emissions unit meeting the following per gallon standard: a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

Applicable Compliance Method:

The records required by d)(2) and d)(3) shall serve as demonstration of compliance.

j. Emission Limitation:

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

Applicable Compliance Method:

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

k. Emission Limitation:

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

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

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

Applicable Compliance Method:

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

g) Miscellaneous Requirements

(1) None.

4. Emissions Unit Group - CTGs #1 and #2.: P001,P002,

EU ID	Operations, Property and/or Equipment Description
P001	General Electric 7FA combined cycle combustion turbine (2,045mmBtu/hr heat input turbine at ISO conditions and 566mmBtu/hr heat input duct burner, HHV) with dry low NO_x combustors, selective catalytic reduction (SCR), and catalytic oxidizer.
P002	General Electric 7FA combined cycle combustion turbine (2,045mmBtu/hr heat input turbine at ISO conditions and 566mmBtu/hr heat input duct burner, HHV) with dry low NO_x combustors, selective catalytic reduction (SCR), and catalytic oxidizer.

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

(1) d)(11), d)(12), d)(13), d)(14) and e)(6)

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)	Sulfur dioxide (SO_2) emissions shall not exceed 0.0029 lb/mmBtu of heat input. See b)(2)b.
b.	OAC rule 3745-31-05(D)	SO_2 emissions shall not exceed 32.4 tons per rolling, 12-month period. See b)(2)e and b)(2)f.
c.	OAC rule 3745-31-10 through 20	Visible particulate emissions from the stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average. Carbon dioxide equivalent (CO_2e) emissions shall not exceed 859 lb/MW-hr at ISO conditions and without duct firing and 307,279 lbs/hr gross energy output value at ISO conditions and with duct firing. See b)(2)c, b)(2)d, b)(2)g through b)(2)n and b)(2)v through b)(2)x.
d.	OAC rule 3745-17-07(A)	See b)(2)i.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	OAC rule 3745-17-11(B)(4)	See b)(2)i.
f.	OAC rule 3745-18-06(A)	See b)(2)k.
g.	OAC rule 3745-110-03(K)(19)	Exemption
h.	OAC rule 3745-114	See d)(11), d)(12), d)(13, d)(14) and e)(6)
i.	40 CFR Part 60, Subpart A (40 CFR 60.1 – 60.19)	See b)(2)l.
j.	40 CFR Part 60, Subpart KKKK (40 CFR 60.4300 – 60.4420) [In accordance with 40 CFR 60.4305(a), this emissions unit is a stationary combustion turbine with a heat input at peak load greater than 10 mmBtu/hr with a heat recovery steam generator/duct burners subject to the emission limitations/control measures specified in this section.]	See b)(2)j and b)(2)m.
k.	40 CFR Part 63, Subpart YYYY	See b)(2)n.
l.	40 CFR Part 63, Subpart JJJJJJ	See b)(2)o.

Note that values are based on higher heating value (HHV).

(2) Additional Terms and Conditions

a. All requirements specified in this Section of the permit for Emissions Unit Group P001 and P002 apply to each combined cycle combustion turbine (P001 and P002).

b. Compliance with the requirements of this rule for CO, NO_x, PM_{10}, $PM_{2.5}$ and VOC includes compliance with the requirements of OAC rule 3745-31-10 through 20.

c. The emissions from this emissions unit shall be vented to the SCR and catalytic oxidation units at all times during which the emissions unit is in operation.

d. All particulate emissions are assumed to be less than 2.5 microns in diameter. The PM_{10}/$PM_{2.5}$ emission limitations include both filterable and condensable particulate emissions.

e. The sulfur content of natural gas burned in this emissions unit shall not exceed 1.0 grain per 100 standard cubic feet.

f. The permittee shall comply with the following emission limitations:

Allowable Emissions				
Pollutant	**Operating Mode[a]**	**Emission Rate[b,e]**	**Emission rate, lb/hr[b]**	**Emission rate, tons per rolling, 12-month period**
CO	CT with DB	2.0[c]	12.5	-
	CT only	2.0[c]	9.9	-
	All operating modes, including startup periods	-	-	213.2
NO_x	CT with DB	2.0[c]	20.5	-
	CT only	2.0[c]	16.3	-
	All operating modes, including startup periods			103.2
$PM_{10}/PM_{2.5}$	CT with DB	0.0078[d]	19.8	-
	CT only	0.0108[d]	12.4	-
	All operating modes, including startup periods	-	-	85.7
VOC	CT With DB	0.0026[d]	7.1	-
	CT only	0.0013[d]	2.8	-
	All operating modes, including startup periods	-	-	40.2
H_2SO_4	CT only	0.0012[d]	2.52	-
	CT with DB	0.0016[d]	4.26	-
	All operating modes, including startup periods	-	-	17.74
CO_2e	All operating modes, including startup periods	-	-	1,345,883.48

Allowable Emissions				
Pollutant	**Operating Mode[a]**	**Emission Rate[b,e]**	**Emission rate, lb/hr[b]**	**Emission rate, tons per rolling, 12-month period**
a. CT = combustion turbine DB = duct burner b. Emission limitation does not apply during periods of startup and shutdown. c. Parts per million by volume dry (ppmvd) at 15% oxygen d. Pound per million Btu of heat input e. Emission limitations are based on an hourly average.				

g. The permittee shall comply with the following requirements during periods of startup and shutdown.

	Emission Limitations During Startup (lbs/hr)[a]			
	Cold Startup	**Hot Startup**	**Warm Startup**	**Shutdown**
CO	869.5	627.9	801.4	243.0
NO_x	116.6	124.1	115.3	76.8
VOC	140.2	53.8	151.7	75.6
[a] Pound per hour emissions rates as presented are averaged over the duration of the event where (for the lead/lag turbine) the duration of a cold start is 245/220 minutes, the duration of a warm start is 140/115 minutes, the duration of a hot start is 83/58 minutes, and the duration of a shutdown is less than 1 hour. Emissions reflect the higher of the lead or lag turbine, on a pollutant-specific basis.				

"Cold Startup" is defined as a combustion turbine startup that occurs more than 72 hours after a combustion turbine shutdown. The period of startup is defined as the lesser of the first 245 minutes of continuous fuel flow to the combustion turbine after fuel flow is initiated or the period of time from combustion turbine fuel flow initiation until the combustion turbine achieves ten consecutive CEM data points in compliance with the ppmvd emission limitations for CO and NO_x.

"Hot Startup" is defined as a combustion turbine startup that occurs within 8 hours of a combustion turbine shutdown. The period of hot startup is defined as the lesser of the first 83 minutes of continuous fuel flow to the combustion turbine after fuel flow is initiated or the period of time from combustion turbine fuel flow initiation until the combustion turbine achieves ten consecutive CEM data points in compliance with the ppmvd emission limitations for CO and NO_x.

"Warm Startup" is defined as a combustion turbine startup that occurs between 8 hours of and 72 hours of a combustion turbine shutdown. The period of startup is defined as the lesser of the first 140 minutes of continuous fuel flow to the combustion turbine after fuel flow is initiated or the period of time from combustion turbine fuel flow initiation until the combustion turbine achieves ten consecutive CEM data points in compliance with the ppmvd emission limitations for CO and NO_x.

h. The design net plant base load heat rate shall not exceed 7,350 Btu/kW-hr HHV (ISO conditions without duct firing).

i. The emission limitation specified by this rule is less stringent than the limitation established by OAC rule 3745-31-10 through 20.

j. The emission limitation required by this applicable rule is less stringent than the emission limitation established by ORC 3704.03(T).

k. This emissions unit is exempt from the requirements of this rule, since only natural gas is burned.

l. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 60.

m. This emissions unit is subject to the applicable provisions of Subpart KKKK 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.

n. This emissions unit is not subject to the requirements of 40 CFR Part 63, Subpart YYYY, since it is not located at a major source of HAP emissions.

o. The duct burner is exempt from the requirements of this rule per 40 CFR 63.11195(e) due tocombusting only natural gas.

p. Each continuous NO_x monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6. At least 45 days before commencing certification testing of the continuous NO_x monitoring system(s), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of NO_x emissions from the continuous monitor(s), in units of the applicable standard(s). Except as allowed below, the plan shall follow the requirements of 40 CFR Part 60, Appendix F and 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct relative accuracy test audits for the continuous NO_x monitoring system in accordance with the frequencies

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

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

q. Each continuous carbon monoxide (CO) monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 4 or 4a and 6. At least 45 days before commencing certification testing of the continuous CO monitoring system(s), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of CO emissions from the continuous monitor(s), in units of the applicable standard(s). The fuel flow monitor/meter shall be maintained as required in Part 75, Appendix D. Except as allowed below, the plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous monitoring system must be kept on site and available for inspection during regular office hours.

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

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

r. TheNO_x and CO continuous emission monitoring systems consist of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

c) Operational Restrictions

(1) The permittee shall only burn natural gas as fuel in this emissions unit.

(2) See 40 CFR Part 60, Subpart KKKK (40 CFR 60.4300 – 60.4420).

d) 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) For purposes of demonstrating compliance with the natural gas sulfur concentration restriction of 1.0 grain/dscf, the permittee shall sample and analyze the natural gas burned in this emissions unit monthly to determine the sulfur content using the appropriate ASTM or Gas Processors Association standards. Fuel supplier data may be used to comply with this requirement, provided that it is demonstrated to be representative of the fuel received for burning at this emissions unit.

(3) The permittee shall maintain monthly records of the following information:

a. the CO, NO_x, $PM_{10}/PM_{2.5}$, VOC and H_2SO_4 emission rate for each month of operation; and

b. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the CO, NO_x, $PM_{10}/PM_{2.5}$, VOC and H_2SO_4emissions.

Also, during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative CO, NO_x, $PM_{10}/PM_{2.5}$, VOC and H_2SO_4emissions for each calendar month.

(4) The permittee may elect not to monitor the total sulfur content of the fuel combusted in the turbine as specified in d)(2), if the fuel is demonstrated not to exceed potential sulfur emissions of 0.0029 lb SO_2/mmBtu. The permittee shall use one of the following sources of information to make the required demonstration:

a. the fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content for natural gas is 1.0 grain of sulfur or less per 100 standard cubic feet and has potential sulfur emissions of less than 0.0029 lb SO_2/mmBtu heat input;

b. representative fuel sampling data which show that the sulfur content of the fuel does not exceed 0.0029lb SO_2/mmBtu heat input. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of appendix D to part 75 of this chapter is required; or

c. one of the custom sulfur monitoring schedules outlined in 40 CFR 60.4370(c) may be used to comply with the 0.0029 lb SO_2/mmBtu standard.

(5) The permittee shall maintain monthly records of the following information for this emissions unit for purposes of calculating rolling, 12-month emissions:

a. date, time, and duration of each cold, warm and hot startup and shutdown period;

b. the hours of operation of the combustion turbine;

c. the hours of operation of the duct burner;

d. the total duration of all cold startup periods in hours per rolling, 12-month period;

e. the total duration of all hot startup periods in hours per rolling, 12-month period;

f. the total duration of all warm startup periods in hours per rolling, 12-month period;

g. the total duration of all shutdown periods in hours per rolling, 12-month period;

h. the total duration of steady-state operation without duct burner firing in hours per rolling, 12-month period; and

i. the total duration of steady-state operation with duct burner firing in hours per rolling, 12-month period.

(6) Prior to the installation of the continuous NO_x monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 2. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous NO_x monitoring system meets the requirements of Performance Specifications 2 and 6; and the U.S. EPA shall certify that the continuous NO_x monitoring system meets the requirements under 40 CFR Part 75, which may be approved through the recommendation for certification by Ohio EPA to U.S. EPA. Once received, the letter(s)/document(s) of certification under Part 60 and certification or recommendation for certification under Part 75 shall be maintain on-site and made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

(7) The permittee shall install, operate, and maintain equipment to continuously monitor and record NO_x emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60 and 40 CFR Part 75.

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

a. emissions of NO_x in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;

b. emissions of NO_x in pounds per hour and in units of the applicable standard(s) in the appropriate averaging period;

c. results of quarterly cylinder gas audits or linearity checks;

d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

f. hours of operation of the emissions unit, continuous NO_x monitoring system, and control equipment;

g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous NO_x monitoring system;

h. malfunction of the control equipment and/or the continuous NO_x monitoring system; as well as,

i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

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

(8) Prior to the installation of the continuous carbon monoxide (CO) monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 4 or 4a (as appropriate). The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous CO monitoring system meets the requirements of Performance Specifications 4 or 4a and 6. Once received, the letter(s)/document(s) of certification shall be maintained on-site and shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

(9) The permittee shall operate and maintain equipment to continuously monitor and record CO emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Parts 60.

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

a. emissions of CO in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;

b. emissions of CO in pounds per hour and in units of the applicable standard(s) in the appropriate averaging period;

c. results of quarterly cylinder gas audits;

d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

f. hours of operation of the emissions unit, continuous CO monitoring system, and control equipment;

g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous CO monitoring system;

h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous CO monitoring system; as well as,

i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

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

(10) The permittee shall calculate and record the monthly CO_2 emissions from P001 and P002 using the procedures set forth in 40 CFR Part 75, Appendix G. In accordance with 40 CFR Part 75, Appendix G, Section 2.3, the permittee may use the hourly heat input from fuel flow measurements to calculate hourly CO_2 mass emission rates From this data, the permittee shall calculate the CO_2 emissions from P001 and P002 per rolling, 12-month period.

(11) The Permit to Install application for these emissions units, P001 and P002, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or

ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological

Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X = 24" hours per day and "Y = 7" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

TLV/10 x 8/X x 5/Y = 4 TLV/XY = MAGLC

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

Toxic Contaminant: H_2SO_4

TLV (mg/m3): 0.2 mg/m^3

Maximum Hourly Emission Rate (lbs/hr): 4.1

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m3): 0.9

MAGLC (µg/m3): 4.76

The permittee, has demonstrated that emissions of H_2SO_4, from emissions unit(s) P001 and P002, is calculated to be less than eighty percent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

(12) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and

c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

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

(13) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);

c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

(14) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

(15) See 40 CFR Part 60, Subpart KKKK (40 CFR 60.4300 – 60.4420)

e) 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 quarterly deviation (excursion) reports that identify the following:

a. any monthly record showing an exceedance of the allowable sulfur content of natural gas,1.0 grain per 100 standard cubic feet.

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

(3) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NO_x monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of NO_x emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, 40 CFR Parts 75 and 76, OAC Chapters 3745-14 and 3745-23, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).

b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous NO_x and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total NO_x emissions for the calendar quarter (tons);

vi. the total operating time (hours) of the emissions unit;

vii. the total operating time of the continuous NO_x monitoring system while the emissions unit was in operation;

viii. results and date of quarterly cylinder gas audits or linearity checks;

ix. unless previously submitted, results and date of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

x. unless previously submitted, the results of any relative accuracy test audit showing the continuous NO_x monitor out-of-control and the compliant results following any corrective actions;

xi. the date, time, and duration of any/each malfunction** of the continuous NO_x monitoring system, emissions unit, and/or control equipment;

xii. the date, time, and duration of any downtime** of the continuous NO_x monitoring system and/or control equipment while the emissions unit was in operation; and

xiii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (xii).

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

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

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

(4) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous CO monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of CO emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 3745-21, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as, the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).

b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous CO and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total CO emissions for the calendar quarter (tons);

vi. the total operating time (hours) of the emissions unit;

vii. the total operating time of the continuous CO monitoring system while the emissions unit was in operation;

viii. results and dates of quarterly cylinder gas audits;

ix. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

x. unless previously submitted, the results of any relative accuracy test audit showing the continuous CO monitor out-of-control and the compliant results following any corrective actions;

xi. the date, time, and duration of any/each malfunction** of the continuous CO monitoring system, emissions unit, and/or control equipment;

xii. the date, time, and duration of any downtime** of the continuous CO monitoring system and/or control equipment while the emissions unit was in operation; and

xiii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (xii).

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

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

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

(5) The permittee shall collect, record, and maintain measurements, data, records, and reports required per 40 CFR Part 75; and shall submit certification, recertification, notifications, applications, monitoring plans, petitions for alternative monitoring systems, electronic quarterly reports and any other pertinent record and/or report to the Administrator (U.S. EPA), as required by this Part.

(6) The permittee shall submit annual reports that include any changes to any parameter or value used in the dispersion model used to demonstrate compliance with the "Toxic Air Contaminate Statute", ORC 3704.03(F), through the predicted 1 hour maximum concentration. The report should include:

a. the original model input;

b. the updated model input;

c. the reason for the change(s) to the input parameter(s); and

d. a summary of the results of the updated modeling, including the input changes; and

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

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statementto that effect.

(7) See 40 CFR Part 60, Subpart KKKK (40 CFR 60.4300 – 60.4420).

f) Testing Requirements

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

a. <u>Emission Limitation</u>:

CO emissions from this emissions unit shall not exceed 2.0 ppmvd at 15% oxygen as an hourly average and 9.9 lbs/hr when the duct burner is not in operation; and, 2.0 ppmvd at 15% oxygen as an hourly average and 12.5 lbs/hr when the duct burner is in operation.

<u>Applicable Compliance Method</u>:

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

Compliance shall be demonstrated based upon an emission test as required in f)(2).

b. Emission Limitation:

CO emissions from this emissions unit shall not exceed 213.2 tons per rolling, 12-month period.

Applicable Compliance Method:

This emissions limitation is based on the following anticipated worst case emissions: 50 cold startups per year, with a minimum downtime preceding cold startup of 72 hours and a cold startup duration of 245 minutes, maximum CO emissions of 3,244 pounds during each cold startup period; 250 hot startups per year with a duration of 83 minutes each and maximum CO emissions of 745 pounds during each hot startup period; hourly CO emissions at ISO conditions during steady state operation of 11.90lbs/hr based on manufacturer's data and steady state operating hours was determined by the following equation.

$$8{,}760\ hrs - \left(50\left(72\ hrs + \frac{245\ min}{60\left(\frac{min}{hr}\right)}\right) + 250\left(\frac{83\ min}{60\left(\frac{min}{hr}\right)}\right) + 300\ \left(\frac{20\ min}{60\left(\frac{min}{hr}\right)}\right)\right) = 4{,}510 \text{ hours}$$

The allowable annual emission rate was determined by the following calculation using the above information.

$$\frac{\left[\left(50\frac{CS}{yr}\right)\left(3{,}244\frac{lbs}{CS}\right)+\left(250\frac{HS}{yr}\right)\left(745\frac{lbs}{HS}\right)+\left(4{,}510\frac{hrs}{yr}\right)\left(11.9\frac{lbs}{hr}\right)+\left(300\frac{SD}{yr}\right)\left(81\frac{lbs}{SD}\right)\right]}{2000\frac{lbs}{ton}} = 213.2 \text{ tons}$$

where:

CS = cold starts;
HS = hot starts; and
SD = shutdowns.

Ongoing compliance with this emission limitation shall be based on the pounds per hour emission data from the CO CEMS and the actual hours of operation of this emissions unit.

c. Emission Limitation:

CO emissions from this emissions unit shall not exceed 869.5 lbs/hr during cold startup, 627.9lbs/hr during hot startup, 801.4lbs/hr during warm startup, and 243 lbs/hr during shutdown averaged over the duration of the event.

Applicable Compliance Method:

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

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

d. Emission Limitation:

NO_x emissions from this emissions unit shall not exceed 2.0 ppmvd at 15% oxygen as an hourly average and 16.3 lbs/hr when the duct burner is not in operation; and, NO_x emissions shall not exceed 2.0 ppmvd at 15% oxygen as an hourly average and 20.5 lbs/hr when the duct burner is in operation.

Applicable Compliance Method:

These emissions limitations are based on manufacturer's data. Ongoing compliance with the NO_x emissions limitations shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60 and 40 CFR Part 75.

Compliance shall be demonstrated based upon an emission test as required in f)(2).

e. Emission Limitation:

NO_x emissions shall not exceed 103.2 tons per rolling, 12-month period.

Applicable Compliance Method:

This emissions limitation is based on the following anticipated worst case emissions: 250 hot startups per year with a duration of 83 minutes each and maximum NO_x emissions of 149 pounds during each hot startup period; hourly NO_x emissions at ISO conditions during steady state operation of 19.54lbs/hr based on manufacturer's data and steady state operating hours as calculated by the following equation.

$$8{,}760\ hrs - \left(250\left(\frac{83\ min}{60\ \left(\frac{min}{hr}\right)}\right) + 250\left(\frac{20\ min}{60\ \left(\frac{min}{hr}\right)}\right)\right) = 8{,}330.8\ hours\ during\ normal\ operation$$

The allowable annual emission rate was determined by the following calculation using the above information.

$$\frac{\left(250\frac{HS}{yr}\right)\left(149\frac{lbs}{HS}\right)+\left(250\frac{SD}{yr}\right)\left(25.6\frac{lbs}{SD}\right)+\left(8{,}330.8\frac{hrs}{yr}\right)\left(19.54\frac{lbs}{hr}\right)}{2000\frac{lbs}{ton}} = 103.2\ \text{tons}\ NO_x$$

where:

HS = hot starts; and
SD = shutdowns.

Ongoing compliance with this emissions limitation shall be determined using the pounds per hour emission data from the NO_x CEMS and the actual hours of operation of this emissions unit.

f. Emission Limitation:

NO_xemissions from this emissions unit shall not exceed 116.6 lbs/hr during cold startup, 124.1 lbs/hr during hot startup, 115.3 lbs/hr during warm startup, and 76.8lbs/hr during shutdown averaged over the duration of the event.

Applicable Compliance Method:

These emissions limitations are based on manufacturer's data. Ongoing compliance with the NO_x emissions limitations shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60 and 40 CFR Part 75.

g. Emission Limitation:

PM_{10} emissions and $PM_{2.5}$ emissions shall not exceed 0.0108 lb/mmBtu of heat input and 12.4 lbs/hr when the duct burner is not in operation; and, PM_{10} and $PM_{2.5}$ shall not exceed 0.0078lb/mmBtu of heat input (HHV) and 19.8 lbs/hr when the duct burner is in operation.

Applicable Compliance Method:

These emissions limitations are based on manufacturer's data.

Compliance shall be demonstrated based upon an emission test as required in f)(2).

h. Emission Limitation:

PM_{10} and $PM_{2.5}$ emissions from this emissions unit shall not exceed 85.7 tons per rolling, 12-month period.

Applicable Compliance Method:

This emission limitation was developed by multiplying the short-term allowable $PM_{10}/PM_{2.5}$ emission limitationat ISO conditions (19.56 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 pounds per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

i. Emission Limitation:

The sulfur content of natural gas burned shall not exceed 1.0 grain per standard cubic feet.

Applicable Compliance Method:

Compliance with the sulfur content limitation shall be demonstrated by the monitoring and record keeping specified in 40 CFR 60.4365 or 40 CFR 60.4370.

If required, the permittee shall demonstrate compliance using the procedures specified in 40 CFR 60.4415(a)(1). Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

j. Emission Limitation:

SO_2 emissions shall not exceed 0.0029 lb/mmBtu of heat input (HHV).

Applicable Compliance Method:

The lb/mmBtu limitation was established based on using natural gas having a maximum sulfur content of 1.0 grains per 100 cubic feet according to the following calculation. Multiply the maximum sulfur content of natural gas (1.0 grain S/100 scf) by the molecular weight of SO_2 (64.07 lb SO_2/lb-mole) divide by the molecular weight of sulfur (32.06 lb S/lb-mole) divide by (7,000 grains/lb), divide by (1,000 Btu/scf), and multiply by (10^6 Btu/mmBtu).

Compliance shall be demonstrated based upon an emission test as required in f)(2).

k. Emission Limitation:

The SO_2 emissions shall not exceed 32.4 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance with this emissions limitation shall be determined by the following calculation based on the records required by d). Multiply the maximum sulfur content of natural gas (1.0 gr S/100 scf) by the molecular weight of SO_2 (64.07 lb/lb-mole), divide by the molecular weight of sulfur (32.06 lb/lb-mole), divide by (7,000 gr/lb), multiply by the monthly natural gas usage (scf), and divide by (2,000 lbs/ton) to determine the monthly SO_2 emissions (tons). Add the SO_2 emissions calculated for the current month to the total SO_2 emissions calculated for the previous 11 months to determine the tons SO_2 emissions per rolling, 12-month period.

l. Emission Limitation:

VOC emissions shall not exceed 1.0 ppmvd at 15% oxygen as an hourly average and 2.8 lbs/hr when the duct burner is not in operation; and, VOC emissions shall

not exceed 2.0 ppmvd at 15% oxygen as an hourly average and 7.1 lbs/hr when the duct burner is in operation.

Applicable Compliance Method:

These emissions limitations are based on manufacturer's data.

Compliance shall be demonstrated based upon an emission test as required in f)(2).

m. Emission Limitation:

VOC emissions shall not exceed 40.2 tons per rolling, 12-month period.

Applicable Compliance Method:

This emissions limitation is based on the following anticipated worst case emissions: 50 cold startups per year, with a minimum downtime preceding cold startup of 72 hours and a cold startup duration of 245 minutes, maximum VOC emissions of 525 pounds during each cold startup period; 250 hot startups per year with a of duration of 83 minutes each and maximum VOC emissions of 64 pounds during each hot startup period; hourly VOC emissions at ISO conditions during steady state operation of 6.8lbs/hr based on manufacturer's data and steady state operating hours was determined by the following equation.

$$8{,}760\ hrs - \left(50\left(72\ hrs + \frac{245\ min}{60\left(\frac{min}{hr}\right)}\right) + 250\left(\frac{83\ min}{60\left(\frac{min}{hr}\right)}\right) + 300\left(\frac{20\ min}{60\left(\frac{min}{hr}\right)}\right)\right) = 4{,}510 \text{ hours}$$

The allowable annual emission rate was determined by the following calculation using the above information.

$$\frac{\left[\left(50\frac{CS}{yr}\right)\left(525\frac{lbs}{CS}\right)+\left(250\frac{HS}{yr}\right)\left(64\frac{lbs}{HS}\right)+\left(4{,}510\frac{hrs}{yr}\right)\left(6.8\frac{lbs}{hr}\right)+\left(300\frac{SD}{yr}\right)\left(25.2\frac{lbs}{SD}\right)\right]}{2000\frac{lbs}{ton}} = 40.2 \text{ tons}$$

where:

CS = cold starts;
HS = hot starts; and
SD = shutdowns.

Ongoing compliance with this emissions limitation shall be based on the following calculation.

$$VOC = \frac{\left[(\#CS)\left(140.2\frac{lbs}{hr}\right) + (\#HS)\left(53.8\frac{lbs}{HS}\right) + (\#WS)\left(151.7\frac{lbs}{hr}\right) + (\mathrm{SD})(75.6) + (\#SSDB)\left(6.8\frac{lbs}{hr}\right) + (\#SSNDB)(2.7\frac{lbs}{hr})\right]}{2000\frac{lbs}{ton}}$$

where:

VOC = tons VOC emissions per rolling, 12-month period;

#CS = hours operated in cold startup per rolling, 12-month period;

#HS = hours operated in hot startup per rolling, 12-month period;

#WS = hours operated in warm startup per rolling, 12-month period;

#SD = hours operated in shutdown, rolling 12-month period;

#SSDB = hours operated in steady state with duct burner per rolling, 12-month period; and

#SSNDB = hours operated in steady state without duct burner per rolling, 12-month period.

n. Emission Limitation:

VOC emissions from this emissions unit shall not exceed 140.2 lbs/hr during cold startup, 53.8 lbs/hr during hot startup, 151.7 lbs/hr during warm startup, and 75.6lbs/hr during shutdown averaged over the duration of the event.

Applicable Compliance Method:

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

o. Emission Limitation:

H_2SO_4 emissions shall not exceed 0.0012 lb/mmBtu of heat input (HHV) and 2.52 lbs/hr when the duct burner is not in operation; and, H_2SO_4 emissions shall not exceed 0.0016 lb/mmBtu of heat input (HHV) and 4.26 lbs/hr when the duct burner is in operation.

Applicable Compliance Method:

These emissions limitations are based on manufacturer's data.

Compliance shall be demonstrated based upon an emission test as required in f)(2).

p. Emission Limitation:

H_2SO_4 emissions shall not exceed 17.74 tons per rolling, 12-month period.

Applicable Compliance Method:

This emission limitation was developed by multiplying the short-term allowable H_2SO_4 emission limitation at ISO conditions (4.05 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 pounds per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

q. Emission Limitation:

CO_2e emissions shall not exceed 307,279.33lbs/hr at ISO conditions and 1,345,883.48 tons per rolling, 12-month period.

Applicable Compliance Method:

The hourly emission limitation is based on the sum of following manufacturer's data (306,632 lbs/hr CO_2, 5.804lbs/hr CH_4, and 1.695lbs/hr N_2O) multiplied by the associated global warming potential for each pollutant (CO_2=1, CH_4=21, N_2O=310 from Table A-1 of 40 CFR 98).

$$\left[\left(306{,}632\frac{lbs}{hr}\right)(1)+\left(5.804\frac{lbs}{hr}\right)(21)+\left(1.695\frac{lbs}{hr}\right)(310)\right]=307{,}279.33\ lbs/hr$$

Since the CO_2e emissions are estimated to consist of more than 99% CO_2, compliance with this emission limitation will be assumed provided that the hourly CO_2 emission rate does not exceed 307,279.33 lbs/hr at ISO conditions.

Compliance shall be demonstrated based upon an emission test as required in f)(2).

The annual emission limitation is based on the sum of following manufacturer's data (306,632 lbs/hr CO_2, 5.804lbs/hr CH_4, and 1.695lbs/hr N_2O) multiplied by the associated global warming potential for each pollutant (CO_2=1, CH_4=21, N_2O=310 from Table A-1 of 40 CFR 98), multiplied by the maximum annual hours of operation (8,760 hrs/yr) and divided by (2,000 lbs/ton).

$$\left[\left(306{,}632\frac{lbs}{hr}\right)(1)+\left(5.804\frac{lbs}{hr}\right)(21)+\left(1.695\frac{lbs}{hr}\right)(310)\right]\left(8{,}760\frac{hrs}{yr}\right)\left(\frac{ton}{2000lbs}\right)$$
$$=1{,}345{,}883.48\ tons/yr$$

Since the CO_2e emissions are estimated to consist of more than 99% CO_2, compliance with this emission limitation will be assumed provided that the rolling, 12-month CO_2 emissions as calculated in section d) above do not exceed 1,345,883.48 tons per rolling, 12-month period (307,729.33 lbs/hr x 8760 hrs/yr x ton/2000 lb = 1,345,883.48 tons/yr).

r. Emission Limitation:

Visible particulate emissions from any stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average.

Applicable Compliance Method:

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

(2) 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 startup of the emissions unit.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for CO, NO_x, PM_{10}, $PM_{2.5}$, VOC, SO_2 and H_2SO_4, in the appropriate averaging period(s).

The emission testing shall also be conducted to determine a site-specific emission factor for CO_2 (lb/mmBtu).

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

for CO, Methods 1 thru 4 and 10 of 40 CFR Part 60, Appendix A;

for NO_x, Methods 1 thru 4 and 7E of 40 CFR Part 60, Appendix A, and the procedures specified in 40 CFR 60.4400;

for PM_{10} and $PM_{2.5}$, Methods 201A and 202 of 40 CFR Part 52, Appendix M;

for SO_2, 40 CFR 60.4415;

for VOC, Methods 1 through 4 and 18, 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A with the use of Method 18, 25 or 25A to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents;

for H_2SO_4, Methods 1 thru 4 and 8 of 40 CFR Part 60, Appendix A; and

for CO_2, Methods 1, 2, 3A, and 4 of 40 CFR Part 60, Appendix A, mass balance calculations using ASTM D1945-03 (Standard Test Method for Analysis of Natural Gas by Gas Chromatography) and/or ASTM D1826-94 (Standard Test Method for Calorific Value of Gases in Natural Gas Range by Continuous Recording Calorimeter).

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

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified by the Ohio EPA Northeast District Office. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to 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 test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

f. Personnel from the Ohio EPA Northeast District Officeshall be permitted to witness the test(s), 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.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Northeast District Officewithin 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office.

(3) Within 60 days of achieving the maximum production rate at which the emissions unit(s) will be operated, but not later than 180 days after initial startup, the permittee shall conduct certification tests of the continuous NO_x monitoring system, in units of the applicable standard(s), to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specification 2; Performance Specification 6 relative accuracy requirements; ORC section 3704.03(I); and 40 CFR Part 75.

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

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

Certification, or recommendation for certification by Ohio EPA to U.S. EPA, of the continuous NO_x monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specification 2; Performance Specification 6 relative accuracy requirements; ORC section 3704.03(I); and 40 CFR Part 75.

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

(4) Within 60 days of achieving the maximum production rate at which the emissions unit(s) will be operated, but not later than 180 days after initial startup, the permittee shall conduct certification tests of the continuous CO monitoring system in units of the applicable standard(s), to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specification 4 or 4a (as appropriate); Performance Specification 6 relative accuracy requirements; and ORC section 3704.03(I).

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

Personnel from the Ohio EPA Central Office and 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. Two copies of the test results shall be submitted to Ohio EPA, one copy to the Ohio EPA Northeast District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification of the continuous CO monitoring system shall be granted upon determination by the Ohio EPA Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specification 4 or 4a (as appropriate); Performance Specification 6 relative accuracy requirements; and ORC section 3704.03(I).

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

g) Miscellaneous Requirements

(1) None.