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

3/7/2013

Certified Mail

Facility ID: 0744000150
Permit Number: P0110486
County: Lawrence

Raymond Sawyer
Duke Energy Hanging Rock II, LLC
1395 County Rd 1A
Ironton, OH 45638

RE: FINAL AIR POLLUTION CONTROL TITLE V PERMIT
Permit Type: Minor Permit Modification

Dear Permit Holder:

Enclosed is a finalOhio Environmental Protection Agency (EPA) Air Pollution Title V permit that allows you to operate the facility in the manner indicated in the permit. Because this permit may contain several conditions and restrictions, we urge you to read it 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 Title V permit 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/dapc/permitsurvey.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 regarding this permit, please contact the Portsmouth City Health Dept., Air Pollution Unit as indicated on page one of your permit.

Sincerely,

Michael W. Ahern

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

Cc: U.S. EPA Region 5 *Via E-Mail Notification*
Portsmouth City Health Dept., Air Pollution Unit

FINAL

Division of Air Pollution Control
Title V Permit
for
Duke Energy Hanging Rock II, LLC

Facility ID:	0744000150
Permit Number:	P0110486
Permit Type:	Minor Permit Modification
Issued:	3/7/2013
Effective:	3/7/2013
Expiration:	2/9/2017

Division of Air Pollution Control
Title V Permit
for
Duke Energy Hanging Rock II, LLC

Table of Contents

Authorization 1
A. Standard Terms and Conditions 2
1. Federally Enforceable Standard Terms and Conditions 3
2. Monitoring and Related Record Keeping and Reporting Requirements 3
3. Scheduled Maintenance 6
4. Risk Management Plans 6
5. Title IV Provisions 7
6. Severability Clause 7
7. General Requirements 7
8. Fees 8
9. Marketable Permit Programs 8
10. Reasonably Anticipated Operating Scenarios 8
11. Reopening for Cause 9
12. Federal and State Enforceability 9
13. Compliance Requirements 9
14. Permit Shield 11
15. Operational Flexibility 11
16. Emergencies 11
17. Off-Permit Changes 11
18. Compliance Method Requirements 12
19. Insignificant Activities or Emissions Levels 12
20. Permit to Install Requirement 12
21. Air Pollution Nuisance 13
22. Permanent Shutdown of an Emissions Unit 13
23. Title VI Provisions 13
24. Reporting Requirements Related to Monitoring and Record Keeping Requirements Under State Law Only 14
25. Records Retention Requirements Under State Law Only 14
26. Inspections and Information Requests 14
27. Scheduled Maintenance/Malfunction Reporting 15
28. Permit Transfers 15

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

B. Facility-Wide Terms and Conditions..... 16

C. Emissions Unit Terms and Conditions 19

1. Emissions Unit Group -Aux Boilers: B001,B002, ... 20

2. Emissions Unit Group -Combustion Turbines: P001,P002,P003,P004, ... 30

3. Emissions Unit Group -Cooling towers: P005,P006,..... 54

Authorization

Facility ID:	0744000150
Facility Description:	1270 MW Combined Cycle Power Plant
Application Number(s):	A0044951
Permit Number:	P0110486
Permit Description:	Title V Minor Permit Modification to remove duct burner operational restriction from combustion turbines (emissions units P001, P002, P003 and P004) without increasing annual emissions.
Permit Type:	Minor Permit Modification
Issue Date:	3/7/2013
Effective Date:	3/7/2013
Expiration Date:	2/9/2017
Superseded Permit Number:	P0107243

This document constitutes issuance of an OAC Chapter 3745-77 Title V permit to:

Duke Energy Hanging Rock II, LLC
1395 County Rd 1A
Ironton, OH 45638

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

Portsmouth City Health Dept., Air Pollution Unit
605 Washington Street
3rd Floor
Portsmouth, OH 45662
(740)353-5156

The above named entity is hereby granted a Title V permit pursuant to Chapter 3745-77 of the Ohio Administrative Code. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. You will be sent a notice approximately 18 months prior to the expiration date regarding the renewal of this permit. If you do not receive a notice, please contact the Portsmouth City Health Dept., Air Pollution Unit. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, if a timely renewal application is submitted. A renewal application will be considered timely if it is submitted no earlier than 18 months (540 days) and no later than 6 months (180 days) prior to the expiration date.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally
Director

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. 24., Reporting Requirements Related to Monitoring and Record Keeping Requirements of State-Only Enforceable Permit Terms and Conditions

(2) Standard Term and Condition A. 25., Records Retention Requirements for State-Only Enforceable Permit Terms and Conditions

(3) Standard Term and Condition A. 27., Scheduled Maintenance/Malfunction Reporting

(4) Standard Term and Condition A. 29., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

(Authority for term: ORC 3704.036(A))

2. 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 (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit), 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.

(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))

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 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.

(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))

c) The permittee shall submit required reports in the following manner:

(1) All reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations caused by malfunctions shall be submitted in the following manner:

Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the OAC rule 3745-77-07(A)(3)(c) deviation reporting requirements for malfunctions, written reports that identify each malfunction that occurred during each calendar quarter (including each malfunction reported only verbally in accordance with OAC rule 3745-15-06) shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year in accordance with Standard Term and Condition A.2.c)(2) below; and each report shall cover the previous calendar quarter. An exceedance of the visible emission limitations specified in OAC rule 3745-17-07(A)(1) that is caused by a malfunction is not a violation and does not need to be reported as a deviation if the owner or operator of the affected air contaminant source or air pollution control equipment complies with the requirements of OAC rule 3745-17-07(A)(3)(c).

In accordance with OAC rule 3745-15-06, a malfunction reportable under OAC rule 3745-15-06(B) is a deviation of the federally enforceable permit requirements. Even though verbal notifications and written reports are required for malfunctions pursuant to OAC rule 3745-15-06, the written reports required pursuant to this term must be submitted quarterly to satisfy the prompt reporting provision of OAC rule 3745-77-07(A)(3)(c).

In identifying each deviation caused by a malfunction, the permittee shall specify the emission limitation(s) (or control requirement(s)) for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing on a quarterly basis.

Any scheduled maintenance, as referenced in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described above for malfunctions.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

(2) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit or, in some cases, in section B. Facility-Wide Terms and Conditions of this Title V permit), all reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations of the emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:

Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the probable cause of such deviations, and (c) any corrective actions or preventive

measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. Except as provided below, the written reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

In identifying each deviation, the permittee shall specify the emission limitation(s), operational restriction(s), and/or control device operating parameter limitation(s) for which the deviation occurred, describe each deviation, and provide the estimated magnitude and duration of each deviation.

These written deviation reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations. Full compliance with OAC rule 3745-77-07(A)(3)(c) requires reporting of all other deviations of the federally enforceable requirements specified in the permit as required by such rule.

If an emissions unit has a deviation reporting requirement for a specific emission limitation, operational restriction, or control device operating parameter limitation that is not on a quarterly basis (e.g., within 30 days following the end of the calendar month, or within 30 or 45 days after the exceedance occurs), that deviation reporting requirement satisfies the reporting requirements specified in this Standard Term and Condition for that specific emission limitation, operational restriction, or control device parameter limitation. Following the provisions of that non-quarterly deviation reporting requirement will also satisfy (for the deviations so reported) the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations, and additional quarterly deviation reports for that specific emission limitation, operational restriction, or control device parameter limitation are not required pursuant to this Standard Term and Condition.

See A.29 below if no deviations occurred during the quarter.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

(3) All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) for other deviations of the federally enforceable permit requirements which are not reported in accordance with Standard Term and Condition A.2)c)(2) above shall be submitted in the following manner:

Unless otherwise specified by rule, written reports that identify deviations of the following federally enforceable requirements contained in this permit; Standard Terms and Conditions: A.3, A.4, A.5, A.7.e), A.8, A.13, A.15, A.19, A.20, A.21, and A.23 of this Title V permit, as well as any deviations from the requirements in section C. Emissions Unit Terms and Conditions of this Title V permit, and any monitoring, record keeping, and reporting requirements, which are not reported in accordance with Standard Term and Condition A.2.c)(2) above shall be submitted (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency by January 31 and July 31 of each year; and each report shall cover the previous six calendar months. Unless otherwise specified by rule, all other deviations from federally enforceable requirements identified in this permit shall be submitted annually as part of the annual compliance certification, including deviations of federally enforceable requirements not specifically addressed by permit or rule for the

insignificant activities or emissions levels (IEU) identified in section B. Facility-Wide Terms and Conditions of this Title V permit. Annual reporting of deviations is deemed adequate to meet the deviation reporting requirements for IEUs unless otherwise specified by permit or rule.

In identifying each deviation, the permittee shall specify the federally enforceable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation.

These semi-annual and annual written reports shall satisfy the reporting requirements of OAC rule 3745-77-07(A)(3)(c) for any deviations from the federally enforceable requirements contained in this permit that are not reported in accordance with Standard Term and Condition A.2.c)(2) above.

If no such deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no such deviations occurred during that period.

(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii) and OAC rule 3745-77-07(A)(13)(b))

(4) 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 (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete."

(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))

(5) Reports of any required monitoring and/or record keeping information shall be submitted to Portsmouth City Health Dept., Air Pollution Unit.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

3. Scheduled Maintenance

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. Except as provided in OAC rule 3745-15-06(A)(3), any scheduled maintenance necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s). Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described for malfunctions in Standard Term and Condition A.2.c)(1) above.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

4. Risk Management Plans

If applicable, the permittee shall 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"); and, pursuant to 40 C.F.R. 68.215(a), the permittee shall submit either of the following:

a) a compliance plan for meeting the requirements of 40 C.F.R. Part 68 by the date specified in 40 C.F.R. 68.10(a) and OAC 3745-104-05(A); or

b) as part of the compliance certification submitted under 40 C.F.R. 70.6(c)(5), a certification statement that the source is in compliance with all requirements of 40 C.F.R. Part 68 and OAC Chapter 3745-104, including the registration and submission of the risk management plan.

(Authority for term: OAC rule 3745-77-07(A)(4))

5. 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.

(Authority for term: OAC rule 3745-77-07(A)(5))

6. Severability Clause

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.

(Authority for term: OAC rule 3745-77-07(A)(6))

7. General Requirements

a) The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.

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

c) This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with Standard Term and Condition A.11 below. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.

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

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

Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

f) Except as otherwise indicated below, this Title V permit, or permit modification, is effective for five years from the original effective date specified in the permit. In the event that this facility becomes eligible for non-title V permits, this permit shall cease to be enforceable when:

(1) the permittee submits an approved facility-wide potential to emit analysis supporting a claim that the facility no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on the permanent shutdown and removal of one or more emissions units identified in this permit; or

(2) the permittee no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on obtaining restrictions on the facility-wide potential(s) to emit that are federally enforceable or legally and practically enforceable ; or

(3) a combination of (1) and (2) above.

The permittee shall continue to comply with all applicable OAC Chapter 3745-31 requirements for all regulated air contaminant sources once this permit ceases to be enforceable. The permittee shall comply with any residual requirements, such as quarterly deviation reports, semi-annual deviation reports, and annual compliance certifications covering the period during which this Title V permit was enforceable. All records relating to this permit must be maintained in accordance with law.

(Authority for term: OAC rule 3745-77-01(W), OAC rule 3745-77-07(A)(3)(b)(ii), OAC rule 3745-77(A)(7))

8. 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.

(Authority for term: OAC rule 3745-77-07(A)(8))

9. Marketable Permit Programs

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.

(Authority for term: OAC rule 3745-77-07(A)(9))

10. Reasonably Anticipated Operating Scenarios

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these standard terms and conditions shall apply to all operating scenarios authorized in this permit.

(Authority for term: OAC rule 3745-77-07(A)(10))

11. Reopening for Cause

This Title V permit will be reopened prior to its expiration date under the following conditions:

a) Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.

b) This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.

c) The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.

d) The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

(Authority for term: OAC rules 3745-77-07(A)(12) and 3745-77-08(D))

12. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

(Authority for term: OAC rule 3745-77-07(B))

13. Compliance Requirements

a) Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V 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 paragraph (E) of OAC rule 3745-77-03.

(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 appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

(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.

d) Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) and the Administrator of the U.S. EPA in the following manner and with the following content:

(1) Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted (i.e., postmarked) on or before April 30th of each year during the permit term.

(2) Compliance certifications shall include the following:

a. An identification of each term or condition of this permit that is the basis of the certification.

b. The permittee's current compliance status.

c. Whether compliance was continuous or intermittent.

d. The method(s) used for determining the compliance status of the source currently and over the required reporting period.

e. Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.

(3) Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

(Authority for term: OAC rules 3745-77-07(C)(1),(2),(4) and (5) and ORC section 3704.03(L))

14. Permit Shield

a) Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.

b) This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

(Authority for term: OAC rule 3745-77-07(F))

15. Operational Flexibility

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the appropriate Ohio EPA District Office or local air agency with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the appropriate District Office of the Ohio EPA or local air agency as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).

(Authority for term: OAC rules 3745-77-07(H)(1) and (2))

16. Emergencies

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met. This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.

(Authority for term: OAC rule 3745-77-07(G))

17. Off-Permit Changes

The owner or operator of a Title V source may make any change in its operations or emissions at the source that is not specifically addressed or prohibited in the Title V permit, without obtaining an amendment or modification of the permit, provided that the following conditions are met:

a) The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.

b) The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA, except that no such notice shall be required for changes that qualify as insignificant emissions levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.

c) The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).

d) The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

e) The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

Paragraph (I) of rule 3745-77-07 of the Administrative Code applies only to modification or amendment of the permittee's Title V permit. The change made may require a permit-to-install under Chapter 3745-31 of the Administrative Code if the change constitutes a modification as defined in that Chapter. Nothing in paragraph (I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.

(Authority for term: OAC rule 3745-77-07(I))

18. Compliance Method Requirements

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Fed. Reg. 8314, Feb. 24, 1997), in the context of any future proceeding.

(This term is provided for informational purposes only.)

19. Insignificant Activities or Emissions Levels

Each IEU that has one or more applicable requirements shall comply with those applicable requirements.

(Authority for term: OAC rule 3745-77-07(A)(1))

20. Permit to Install Requirement

Prior to the "installation" or "modification" of any "air contaminant source," as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.

(Authority for term: OAC rule 3745-77-07(A)(1))

21. 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.

(Authority for term: OAC rule 3745-77-07(A)(1))

22. Permanent Shutdown of an Emissions Unit

The permittee may notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification from the responsible 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 responsible official that the emissions unit was permanently shut down.

After the date on which an emissions unit is permanently shut down (i.e., that 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 and therefore ceases to meet the definition of an "emissions unit" as defined in OAC rule 3745-77-01(O)), rendering existing permit terms and conditions irrelevant, the permittee shall not be required, after the date of the certification and submission to Ohio EPA, to meet any Title V permit requirements applicable to that emissions unit, except for any residual requirements, such as the quarterly deviation reports, semi-annual deviation reports and annual compliance certification covering the period during which the emissions unit last operated. All records relating to the shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law.

No emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit to install pursuant to OAC Chapter 3745-31.

(Authority for term: OAC rule 3745-77-01)

23. Title VI Provisions

If applicable, the permittee shall comply with the standards for recycling and reducing emissions of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 CFR 82.156.

b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment specified in 40 CFR 82.158.

c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

(Authority for term: OAC rule 3745-77-01(H)(11))

24. Reporting Requirements Related to Monitoring and Record Keeping RequirementsUnder State Law Only

The permittee shall submit required reports in the following manner:

a) Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. 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 (i.e., postmarked) 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.)

25. Records Retention RequirementsUnder State Law Only

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.

26. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

(Authority for term: OAC rule 3745-77-07(C))

27. 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 of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. 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 emissions unit(s) that is (are) served by such control system(s).

28. Permit Transfers

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

(Authority for term: OAC rule 3745-77-01(C))

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

If no emission limitation (or control requirement), operational restriction and/or control device parameter limitation 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 (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

The permittee is not required to submit a quarterly report which states that no deviations occurred during that quarter for the following situations:

a) where an emissions unit has deviation reporting requirements for a specific emission limitation, operational restriction, or control device parameter limitation that override the deviation reporting requirements specified in Standard Term and Condition A.2.c)(2); or

b) where an uncontrolled emissions unit has no monitoring, record keeping, or reporting requirements and the emissions unit's applicable emission limitations are established at the potentials to emit; or

c) where the company's responsible official has certified that an emissions unit has been permanently shut down.

B. Facility-Wide Terms and Conditions

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

   a) None.

2. The following insignificant emissions units at this facility must comply with all applicable State and federal regulations, as well as any emissions limitations and/or control requirements contained within the identified permit to install for the emissions unit. The insignificant emissions units listed below are subject to one or more applicable requirements contained in a permit-to-install or in the SIP approved versions of OAC Chapters 3745-17, 3745-18, and 3745-21, and/or 40 CFR Part 60 or 63:

   P007 - 400 KW Emergency generator - Caterpillar #3406 - 1DZ04376 (OAC rule 3745-31-03, PBR issued 11/21/06);
   P008 - 400 KW Emergency generator - Caterpillar #3406-1DZ04353 (OAC rule 3745-31-03, PBR issued 11/21/06);
   P009 - 250 HP Emergency fire pump - John Deere #RG6081A145158 (OAC rule 3745-31-03, PBR issued 11/21/06); and
   P010 -335 KW emergency generator (water treatment)-Caterpillar #3406-1DZ11940 (OAC rule 3745-31-03, PBR issued 1/22/07)

3. The following insignificant emissions units located at this facility are exempt from permit requirements because they are not subject to any applicable requirements (as defined in OAC rule 3745-77-01(H)) or because they meet the “de minimis” criteria established in OAC rule 3745-15-05:

   F200 - Plant roadways and parking areas (formerly Z018);
   T200 - Fuel oil tank for PB1 EDG (formerly Z004);
   T201 - Fuel oil tank for PB1 EDG (formerly Z006);
   T202 - Fuel oil tank for EDFP (formerly Z008);
   T203 - Plant gasoline storage tank (formerly Z009);
   T204 - Plant diesel storage tank (formerly Z010);
   T205 - PB1 Ammonia storage tank (formerly Z011);
   T206 - PB2 Ammonia storage tank (formerly Z012);
   T207 - Sulfuric acid storage tank for WTB (formerly Z013);
   T208 - Sulfuric acid storage tank for PB1 (formerly Z014);
   T209 - Sulfuric acid storage tank for PB2 (formerly Z015);
   T210 - Oil water separator tank for PB1 (formerly Z016);
   T211 - Oil water separator tank for PB2 (formerly Z017); and
   T212 - Diesel generator storage tank.

4. The permittee shall ensure that any CAIR NO_x, SO_2, or NO_x ozone season units complies with the requirements of OAC 3745-109, which includes submitting timely permit applications. The permittee shall ensure that the affected emissions units comply with those requirements as outlined in the permit application submitted as required by OAC rules 3745-109-03, 109-10 and 109-16 for the affected emissions units.

5. The permittee shall also comply with any subsequent federally mandated programs that may replace the CAIR program affecting electric generating facilities.

6. Clean Air Interstate Rule – OAC Chapter 3745-109.

   P001 – 172 MW combined cycle combustion turbine;
   P002 – 172 MW combined cycle combustion turbine;
   P003 – 172 MW combined cycle combustion turbine;
   P004 – 172 MW combined cycle combustion turbine;

   Note: Ohio EPA DAPC has completed rule amendments for OAC Chapter 3745-14,specifically, OAC rule 3745-14-01 and OAC rule 3745-14-06, which facilitated the transition of the affected units from OAC Chapter 3745-14 into the federal Clean Air Interstate Rule (CAIR) program which began with the 2009 control periods. This began the process of “sunsetting” the parts of OAC Chapter 3745-14 which were no longer needed as a result of Ohio’s CAIR rules (OAC Chapter 3745-109).

C. Emissions Unit Terms and Conditions

1. Emissions Unit Group -Aux Boilers: B001,B002,

EU ID	Operations, Property and/or Equipment Description
B001	30.6 MMBtu/hr natural gas fired auxiliary boiler
B002	30.6 MMBtu/hr natural gas fired auxiliary boiler

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) b)(1)h, d)(4), d)(5), d)(6), d)(7) and e)(4).

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.	40 CFR 52.21 and OAC rules 3745-31-10 through 3745-31-20	Nitrogen oxides (NO_x) emissions shall not exceed 0.035 lb/mmBtuactual heat input, 1.07 lbs/hr and 1.6 tons per rolling, 12-month period. Sulfur dioxide (SO_2) emissions shall not exceed 0.001 lb/mmBtu actual heat input, 0.031 lb/hr and 0.046 ton per rolling, 12-month period. Carbon monoxide (CO) emissions shall not exceed 0.037 lb/mmBtuactual heat input, 1.13 lbs/hr and 1.69 tons per rolling, 12-month period. Volatile organic compounds (VOC) emissions shall not exceed 0.016 lb/mmBtu actual heat input, 0.49 lb/hr and 0.74 ton per rolling, 12-month period. Particulate (PM/PM_{10}) emissions shall not exceed 0.01 lb/mmBtuactual heat input, 0.31 lb/hr and 0.46 ton per rolling, 12-month period. See b)(2)b.
b.	OAC rule 3745-31-05(A)(3)	The requirements of this rule also

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	(PTI 07-00503 as issued 12/28/04)	include compliance with therequirements of 40 CFR Part 60,Subpart Dc, OAC rule 3745-18-06(A), OAC3745-17-10(B)(1), OAC rule3745-17-07(A), 40 CFR 52.21, OACrules 3745-31-10 through 3745-31-20 and OAC rule 3745-31-05(D).
c.	40 CFR Part 60, Subpart Dc	See b)(2)a.
d.	OAC rule 3745-17-07(A)	Visible particulate emissions fromany stack shall not exceed 20%opacity as a 6-minute average,except as provided by the rule.
e.	OAC rule 3745-31-05(D)	See b)(2)c and c)(2).
f.	OAC rule 3745-18-06(A)	See b)(2)a.
g.	OAC rule 3745-17-10(B)(1)	See b)(2)a.
h.	OAC rule 3745-114	See d)(4) through d)(7) and e)(4).

(2) Additional Terms and Conditions

a. The requirements of this applicable rule are less stringent than the requirements of 40 CFR 52.21 and OAC rules 3745-31-10 through 3745-31-20.

b. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of natural gas, low sulfur fuel and low NO_x burners constitutes BACT for this emissions unit. The emission limitations based on the BACT requirements are listed under 40 CFR 52.21 and OAC rules 3745-31-10 through 3745-31-20 above.

c. The requirements of this applicable rule are equivalent to the NO_x, SO_2, and PM/PM_{10} emissions per 40 CFR Part 52.21 and OAC rules 3745-31-10 through 3745-31-20.

c) Operational Restrictions

(1) The permittee shall burn only natural gas in this emissions unit. The maximum sulfur content of the natural gas shall not exceed 2 grains per 100 cubic feet.

[Authority for term: PTI 07-00503 and OAC rule 3745-77-07(A)(1)]

(2) The maximum annual fuel heat input for this emissions unit shall not exceed 91,500 mmBtu, based upon a rolling, 12-month summation of heat input values.

[Authority for term: PTI 07-00503 and OAC rule 3745-77-07(A)(1)]

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.

[Authority for term: PTI 07-00503 and OAC rule 3745-77-07(C)(1)]

(2) The permittee shall monitor the sulfur content and gross calorific value of the fuel being fired in this emissions unit. Fuel sampling and analysis shall be conducted according to the procedures and at the frequency specified by 40 CFR Part 75, Appendix D.

[Authority for term: PTI 07-00503 and OAC rule 3745-77-07(C)(1)]

(3) The permittee shall maintain monthly records of the following information for this emissions unit:

a. monthly fuel heat input (mmBtu); and

b. the rolling, 12-month summation of fuel heat input (mmBtu).

[Authority for term: PTI 07-00503 and OAC rule 3745-77-07(C)(1)]

(4) The permit to install for these emissions units(B001, B002) 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**" hours per day and "**Y**" 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 significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Pollutant: Formaldehyde
TLV (ug/m3): 272
Maximum Hourly Emission Rate (lb/hr): 1.98*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.93
MAGLC (ug/m3): 6.48

Pollutant: Sulfuric Acid
TLV (ug/m3): 1000
Maximum Hourly Emission Rate (lb/hr): 8.8*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 8.875
MAGLC (ug/m3): 24

Pollutant: Ammonia
TLV (ug/m3): 17000
Maximum Hourly Emission Rate (lb/hr): 151.2*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 153.83
MAGLC (ug/m3): 405

Pollutant: Toluene
TLV (ug/m3): 188,000
Maximum Hourly Emission Rate (lb/hr): 1.02*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 6.023
MAGLC (ug/m3): 4476

Pollutant: Xylene
TLV (ug/m3): 434,000
Maximum Hourly Emission Rate (lb/hr): 0.5*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.94
MAGLC (ug/m3): 10333

Pollutant: Acetaldehyde
TLV (ug/m3): 180,000

Maximum Hourly Emission Rate (lb/hr): 0.311*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1.842
MAGLC (ug/m3): 4286

Pollutant: Hexane
TLV (ug/m3): 176,000
Maximum Hourly Emission Rate (lb/hr): 0.44*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.585
MAGLC (ug/m3): 4190

Pollutant: Zinc
TLV (ug/m3): 5000
Maximum Hourly Emission Rate (lb/hr): 0.29*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1.69
MAGLC (ug/m3): 119

* This was modeled for emissions units B001, B002, P001, P002, P003 and P004 combined.

[Authority for term: PTI 07-00503, OAC rule 3745-77-07(C)(1), ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

(5) 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.

[Authority for term: PTI 07-00503, OAC rule 3745-77-07(C)(1), ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

(6) 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.

[Authority for term: PTI 07-00503, OAC rule 3745-77-07(C)(1), ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

(7) 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.

[Authority for term: PTI 07-00503, OAC rule 3745-77-07(C)(1), ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

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.

[Authority for term: PTI 07-00503 and OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit deviation (excursion) reports that identify any record which shows that the sulfur content of the natural gas exceeded 2 grains per 100 standard cubic feet.

These quarterly reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: PTI 07-00503 and OAC rule 3745-77-07(C)(1)]

(3) The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month fuel heat input limitation.

These quarterly reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: PTI 07-00503 and OAC rule 3745-77-07(C)(1)]

(4) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the quarterly deviation (excursion) reports. If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

[ORC 3704.03(F)(3)(c) and F(4)], OAC rule 3745-114-01, Option A, Engineering Guide #70]

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>

0.035 lb/mmBtu and 1.07 lbs/hrNO_x

<u>Applicable Compliance Method:</u>

Compliance with the lb/mmBtu emission limitation may be demonstrated using the manufacturer supplied emission factor of 0.035 lb/mmBtu.

Compliance with the lbs/hr emission limitation may be demonstrated by multiplying the manufacturer supplied NO_x emission factor (0.035 lb/mmBtu) by the actual heat input rate (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu and lb/hr emission limitations through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7.

b. Emission Limitation:

0.001 lb/mmBtu and 0.031 lb/hr SO_2

Applicable Compliance Method:

Compliance with the lb/mmBtu emission limitation may be demonstrated using the manufacturer supplied emission factor of 0.001 lb/mmBtu.

Compliance with the lb/hr emission limitation may be demonstrated by multiplying the manufacturer supplied SO_2 emission factor (0.001 lb/mmBtu) by the actual heat input rate (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu and lb/hr emission limitations through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

c. Emission Limitation:

0.037 lb/mmBtu and 1.13 lbs/hr CO

Applicable Compliance Method:

Compliance with the lb/mmBtu emission limitation may be demonstrated using the manufacturer supplied emission factor of 0.037 lb/mmBtu.

Compliance with the lbs/hr emission limitation may be demonstrated by multiplying the manufacturer supplied CO emission factor (0.037 lb/mmBtu) by the actual heat input rate (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu and lb/hr emission limitations through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10.

d. Emission Limitation:

0.016 lb/mmBtu and 0.49 lb/hr VOC

Applicable Compliance Method:

Compliance with the lb/mmBtu emission limitation may be demonstrated using the manufacturer supplied emission factor of 0.016 lb/mmBtu.

Compliance with the lb/hr emission limitation may be demonstrated by multiplying the manufacturer supplied VOC emission factor (0.016 lb/mmBtu) by the actual heat input rate (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu and lb/hr emission limitations through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 25.

e. Emission Limitation:

0.01 lb/mmBtu and 0.31 lb/hr PM/PM_{10}

Applicable Compliance Method:

Compliance with the lb/mmBtu emission limitation may be demonstrated using the manufacturer supplied emission factor of 0.01 lb/mmBtu.

Compliance with the lb/hr emission limitation may be demonstrated by multiplying the manufacturer supplied PM/PM_{10} emission factor (0.01 lb/mmBtu) by the actual heat input rate (mmBtu/hr)

If required, the permittee shall demonstrate compliance with the lb/mmBtu and lb/hr emission limitations through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and 40 CFR Part 51, Appendix M, Method 202. Alternative USEPA-approved test methods may be used with prior approval by Ohio EPA.

f. Emission Limitations:

Emissions, in tons per rolling, 12-month period, shall not exceed the following:

NO_x - 1.6;
SO_2 - 0.046;
PM/PM_{10} - 0.46;
CO - 1.69; and
VOC - 0.74.

Applicable Compliance Method:

Compliance with the annual emission limitations shall be demonstrated by multiplying the actual fuel heat input (mmBtu/yr) by the associated emission factors (lb/mmBtu) specified in section f)(1) or emissions unit specific emission factors established through emission testing, and then dividing by 2,000 lbs/ton.

g. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be demonstrated in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(1).

[Authority for term: PTI 07-00503 and OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

2. Emissions Unit Group -Combustion Turbines: P001,P002,P003,P004,

EU ID	Operations, Property and/or Equipment Description
P001	172 MW GE 7FA natural-gas-fired dry low NO_x (DLN) combustion turbine No. 1 with duct firing operating in combined cycle mode controlled by Selective Calalytic Reduction (SCR)
P002	172 MW GE 7FA natural-gas-fired dry low NO_x (DLN) combustion turbine No. 2 with duct firing operating in combined cycle mode controlled by Selective Catalytic Reduction (SCR)
P003	172 MW GE 7FA natural-gas-fired dry low NO_x (DLN) combustion turbine No. 3 with duct firing operating in combined cycle mode controlled by Selective Catalytic Reduction (SCR)
P004	172 MW GE 7FA natural-gas-fired dry low NO_x (DLN) combustion turbine No. 4 with duct firing operating in combined cycle mode controlled by Selective Catalytic Reduction (SCR)

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) b)(1)l, d)(9), d)(10), d)(11), d)(12) and e)(8).

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	40 CFR 52.21 and OAC rules 3745-31-10 through 3745-31-20	**EMISSION LIMITS WITHOUT DUCT BURNER FIRING** Nitrogen oxides (NO_x) emissions shall not exceed 3.0 ppmvd at 15% oxygen (based on a 3-hour block averaging period). NO_x emissions shall not exceed 21.1 lbs/hr. Particulate (PM/PM_{10}) emissions shall not exceed 15 lbs/hr. Sulfur dioxide (SO_2) emissions shall not exceed 1.2 lbs/hr. Carbon monoxide (CO) emissions shall not exceed 6 ppmvd at 15% oxygen (based on a 24-hour block averaging period).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		CO emissions shall not exceed 25.7 lbs/hr. Volatile organic compounds (VOC) emissions shall not exceed 3.2 lbs/hr. Sulfuric acid (H_2SO_4) emissions shall not exceed 0.18 lb/hr. **EMISSION LIMITS WITH DUCT BURNER FIRING** NO_x emissions shall not exceed 3.0 ppmvd at 15% oxygen (based on a 3-hour block averaging period). NO_x emissions shall not exceed 27.6 lbs/hr. PM/PM_{10} emissions shall not exceed 19.9 lbs/hr. SO_2 emissions shall not exceed 1.52 lbs/hr. CO emissions shall not exceed 8 ppmvd at 15% oxygen (based on a 24-hour block averaging period). CO emissions shall not exceed 45.9 lbs/hr. VOC emissions shall not exceed 7.3 lbs/hr. H_2SO_4 emissions shall not exceed 0.23 lb/hr. **TOTAL ANNUAL EMISSIONS** NO_x emissions shall not exceed 120.9 tpy based on a rolling, 12-month average, including startup and shutdown emissions. SO_2 emissions shall not exceed 6.7 tpy based on a rolling, 12-month average.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		PM/PM_{10} emissions shall not exceed 87.2 tpy based on a rolling, 12-month average. CO emissions shall not exceed 278.0 tpy based on a rolling, 12-month average, including startup and shutdown emissions. VOC emissions shall not exceed 44.1 tpy based on a rolling, 12-month average, including startup and shutdown emissions. H_2SO_4 emissions shall not exceed 1.01 tpy based on a rolling, 12-month average. See b)(2)d.
b.	OAC rule 3745-31-05(A)(3) (PTI P0110487 as issued 12/18/12)	The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart GG, OAC rule 3745-18-06(F), OAC rule 3745-17-11(B)(4), OAC rule 3745-17-07(A), 40 CFR 52.21, and OAC rules 3745-31-10 through3745-31-20. **EMISSION LIMITS WITHOUT DUCT BURNER FIRING** Ammonia (NH_3) emissions shall not exceed 28 lbs/hr. Formaldehyde emissions shall not exceed 0.45 lb/hr. **EMISSION LIMITS WITH DUCT BURNER FIRING** NH_3 emissions shall not exceed 31.7lbs/hr. Formaldehyde emissions shall not exceed 0.45lb/hr. **TOTAL ANNUAL EMISSIONS** NH_3 emissions shall not exceed 138.8tpy.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Formaldehyde emissions shall not exceed 1.97tpy. Visible particulate emissions shall not exceed 10% opacity as a 6-minute average. See b)(2)e.
c.	40 CFR Part 60, Subpart GG	See b)(2)b.
d.	40 CFR Part 60, Subpart Da	See b)(2)a.
e.	40 CFR Part 75	See b)(2)c.
f.	OAC chapter 3745-109	See B.4.
g.	OAC rule 3745-18-06(F)	See b)(2)a.
h.	OAC rule 3745-17-11(B)(4)	See b)(2)a.
i.	OAC rule 3745-17-07(A)	See b)(2)a.
j.	OAC chapter 3745-103	See b)(2)c.
k.	OAC rule 3745-114-01	See d)(9) through d)(12) and e)(8).
l.	40 CFR Part 64	See b)(2)f.

(2) Additional Terms and Conditions

a. The emission limitation required by this applicable rule is equivalent to or less stringent than the emission limitation established pursuant to 40 CFR 52.21 and OAC rules 3745-31-10 through 3745-31-20.

b. The emission limitations required by this applicable rule are equivalent to or less stringent than the emission limitations established pursuant to 40 CFR 52.21 and OAC rules 3745-31-10 through 3745-31-20. Except as provided for in the terms and conditions of this permit, the permittee is not exempt from meeting any additional requirements of 40 CFR Part 60, Subpart GG.

c. If the permittee is subject to the requirements of OAC chapter 103 and 40 CFR Parts 72 and 75 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.

d. The permittee is required to perform a Best Available Control Technology (BACT) review for NO_x, SO_2, CO, PM_{10}, H_2SO_4, and VOC. The emission limitations based on the BACT requirements are listed under 40 CFR 52.21 and OAC rules 3745-31-10 through 3745-31-20 above. The following determinations have been made for each pollutant:

PM - Burning natural gas in an efficient combustion turbine. For this permit, it is assumed that all PM emissions are PM_{10}.

NO_x - Use of DLN burners and employment of SCR with a controlled rate of 3.0 ppmvd at 15% oxygen (based on a 3-hour block averaging period).

CO - Use of good combustion practices with a rate of 6 ppmvd at 15% oxygen (based on a 24-hour block averaging period) without duct firing and 8ppmvd at 15% oxygen (based on a 24-hour block averaging period) with duct firing.

VOC - Use of efficient combustion technology in the operation of the turbine.

SO_2 - Burning natural gas in an efficient combustion turbine and burning low sulfur fuel.

H_2SO_4 - Burning natural gas in an efficient combustion turbine.

e. The requirements of this applicable rule are equivalent to the NO_x, SO_2 and PM/PM_{10} emissions per 40 CFR 52.21 and OAC rules 3745-31-10 through 3745-31-20.

f. This rule is applicable for NO_x, but exempt per 64.2(b)(1)(vi) because NO_x CEMs are required by the Acid Rain Program and the permit.

c) Operational Restrictions

(1) The permittee shall burn only pipeline quality natural gas in this emissions unit. The maximum sulfur content of the natural gas shall not exceed 0.5 grains per 100 standard cubic feet.

[Authority for term: PTI P0110487 and OAC rule 3745-77-07(A)(1)]

(2) Startup shall be defined as the period between when the combustion turbine is initially started until the combustion turbine achieves combustion operational Mode 6. Shutdown shall be defined as the period beginning when the combustion turbine leaves operational Mode 6 and ending when combustion has ceased. Mode 6 is defined by the manufacturer as the low emissions mode during which all 6 of the burner nozzles are in use, burning a lean premixed gas for steady-state operation (i.e., in compliance with the NO_x and CO lbs/hr emission limitations listed in b)(1) above). The continuous emission monitoring system will indicate and record the combustion turbine operational mode, including when the emissions unit is shutdown and when operating in start-up and shutdown modes. This system will also be used to demonstrate compliance with the NO_x and CO emissions limitations during steady-state operation (Mode 6) and startups/shutdowns.

Startups shall not exceed 250 minutes in duration and shutdowns shall not exceed 120 minutes in duration. The total of all start-ups and shutdowns shall be limited to 260 cycles (each cycle consists of one start-up and one shutdown) per year.

Each startup and shutdown shall be limited to the following:

Pollutant	*Maximum Emission Rate (lbs/hr per turbine)*
NO_x	400
CO	1,658
VOC	94

Compliance with the above CO and NO_xlbs/hr startup and shutdown emission limitations shall be demonstrated using the continuous emissions monitoring system based on a 1-hour block average. Compliance with the VOC lbs/hr startup and shutdown emission limitation shall be demonstrated through the record keeping requirements specified in section d) of this permit.

[Authority for term: PTI P0110487 and OAC rule 3745-77-07(A)(1)]

(3) Except during periods of startup, the SCR shall be in operation at all times including periods of shutdown mode of the unit.

[Authority for term: PTI P0110487 and OAC rule 3745-77-07(A)(1)]

(4) This emission unit has been in operation more than 12 months and, as such, the permittee has existing records to generate the rolling, summation of emissions upon issuance of this permit.

[Authority for term: PTI P0110487 and OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information for this emissions unit:

a. the natural gas usage rate (in standard cubic feet);

b. the hours of operation of the combustion turbine;

c. the number of start-ups, and the duration, in minutes, of each start-up;

d. the number of shutdowns, and the duration, in minutes, of each shutdown;

e. the total number of start-up/shutdown cycles;

f. the VOC emissions for each start-up/shutdown event, in tons, by using the emission factor of 94 pounds per hour during startup and shutdown;

g. the total VOC emissions, in tons, not including start-up/shutdown emissions;

h. the total NO_x emissions, in tons, including start-up/shutdown emissions;

i. the total CO emissions, in tons, including start-up/shutdown emissions;

j. the total VOC emissions, in tons, including start-up/shutdown emissions (i.e., f+g);

k. the total SO_2, PM/PM_{10}, NH_3, formaldehyde, and H_2SO_4 emissions, in pounds;

l. the rolling, 12-month summation of the NO_x emissions, in tons, including start-up/shutdown emissions;

m. the rolling, 12-month summation of the total CO emissions, in tons, including start-up/shutdown emissions;

n. the rolling, 12-month summation of the VOC emissions, in tons, including start-up/shutdown emissions; and

o. the rolling, 12-month summation of the SO_2, H_2SO_4 and PM/PM_{10} emissions, in tons.

[Authority for term: PTI P0110487 and OAC rule 3745-77-07(C)(1)]

(2) The permittee shall operate and maintain equipment to continuously monitor* and record NO_x emissions from this emissions unit in the units established in this permit. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 and/or 40 CFR Part 75, or as approved by the Ohio EPA, Central Office.

The permittee shall maintain records of 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_xin units established in this permit in the appropriate averaging period during Mode 6, and including start-up and shutdown;

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

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

All valid data points generated and recorded by the 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.

In conjunction with the operation of the NO_x CEMS, the permittee shall operate and maintain a system to monitor when the duct burners are being fired. The data measured by this system shall be compiled with the data recorded by the NO_x CEMS.

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

[Authority for term: PTI P0110487, OAC rule 3745-77-07(C)(1), 40 CFR 60.13, 40 CFR Part 60, Appendices B & F and 40 CFR Part 75]

(3) The permittee shall operate and maintain equipment to continuously monitor and record CO emissions from this emissions unit in the units established in this permit. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 and/or 40 CFR Part 75, or as approved by the Ohio EPA, Central Office.

The permittee shall maintain records of 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 units established in this permit in the appropriate averaging period during Mode 6, and including start-up and shutdown

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 and continuous CO monitoring system;

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

h. the date, time, and hours of operation of the emissions unit during any malfunction of the continuous CO monitoring system; and

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

All valid data points generated and recorded by the 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.

In conjunction with the operation of the CO CEMS, the permittee shall operate and maintain a system to monitor when the duct burners are being fired. The data measured by this system shall be compiled with the data recorded by the CO CEMS.

[Authority for term: PTI P0110487, OAC rule 3745-77-07(C)(1), 40 CFR 60.13 and 40 CFR Part 60, Appendices B & F]

(4) The permittee shall operate and maintain equipment to continuously monitor and record O_2 emitted from this emissions unit in percent O_2. The continuous monitoring and recording equipment shall comply with the requirements specified 40 CFR Part 60.13 and/or 40 CFR Part 75, or as approved by the Ohio EPA, Central Office.

The permittee shall maintain records of data obtained by the continuous O_2 monitoring system including, but not limited to:

a. percent $O_2$for each cycle time of the analyzer, with no resolution less than one data point per minute required;

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

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

d. results of required relative accuracy test audit(s);

e. hours of operation of the emissions unit and continuous O_2 monitoring system;

f. the date, time, and hours of operation of the emissions unit without the continuous O_2 monitoring system;

g. the date, time, and hours of operation of the emissions unit during any malfunction of the continuous O_2 monitoring system; and

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

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.

[Authority for term: PTI P0110487, OAC rule 3745-77-07(C)(1), 40 CFR 60.13, 40 CFR Part 60, Appendices B & F and 40 CFR Part 75]

(5) The permittee shall operate and maintain equipment to continuously monitor and record the actual fuel flow to this emissions unit when the emissions unit is in operation. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 75. If the fuel flow monitoring and/or recording equipment is

(are) not in service when the emissions unit is in operation, the permittee shall comply with the approved data substitution protocol.

Fuel flow data that is substituted in accordance with 40 CFR Part 75, Appendix D, is not to be used when verifying compliance with the hourly NOx and CO pounds per hour emission limits. Hours in which fuel flow is substituted should be included as NOx and CO monitoring system downtime.

[Authority for term: PTI P0110487 and OAC rule 3745-77-07(C)(1)]

(6) The permittee shall monitor the sulfur content and gross calorific value of the fuel being fired in the combustion turbine and duct burner. In accordance with 40 CFR Part 60, Subpart GG, section 60.334 (h)(3), the permittee has demonstrated that the gaseous fuel meets the definition of natural gas in 40 CFR Part 60, Subpart GG, section 60.331(u). Therefore, fuel sampling and analysis shall be conducted according to the procedures and at the frequency specified by 40 CFR Part 75, Appendix D. Per 40 CFR Part 75, Appendix D section 2.3.1.4, the permittee has demonstrated that the gaseous fuel is pipeline natural gas. Therefore, ongoing sampling of the fuel's sulfur content is required annually and whenever the fuel supply sources change. Sampling and analysis of the fuel gross calorific value is required monthly.

[Authority for term: PTI P0110487 and OAC rule 3745-77-07(C)(1)]

(7) The permittee shall determine the hourly heat input rate to the combustion turbine and duct burner from the fuel flow rate as determined in d)(5) and gross calorific value as determined in d)(6). The heat input rate shall be calculated in accordance with the procedures in section 5 of 40 CFR Part 75, Appendix F.

[Authority for term: PTI P0110487 and OAC rule 3745-77-07(C)(1)]

(8) 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.

[Authority for term: PTI P0110487 and OAC rule 3745-77-07(C)(1)]

(9) The permit to install for these emissions units(P001-P004) 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**" hours per day and "**Y**" 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):

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

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Pollutant: Formaldehyde
TLV (ug/m3): 272
Maximum Hourly Emission Rate (lb/hr): 1.98*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.93
MAGLC (ug/m3): 6.48

Pollutant: Sulfuric Acid
TLV (ug/m3): 1000
Maximum Hourly Emission Rate (lb/hr): 8.8*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 8.875
MAGLC (ug/m3): 24

Pollutant: Ammonia
TLV (ug/m3): 17000
Maximum Hourly Emission Rate (lb/hr): 151.2*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 153.83
MAGLC (ug/m3): 405

Pollutant: Toluene
TLV (ug/m3): 188,000
Maximum Hourly Emission Rate (lb/hr): 1.02*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 6.023
MAGLC (ug/m3): 4476

Pollutant: Xylene
TLV (ug/m3): 434,000
Maximum Hourly Emission Rate (lb/hr): 0.5*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.94
MAGLC (ug/m3): 10333

Pollutant: Acetaldehyde
TLV (ug/m3): 180,000
Maximum Hourly Emission Rate (lb/hr): 0.311*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1.842
MAGLC (ug/m3): 4286

Pollutant: Hexane
TLV (ug/m3): 176,000
Maximum Hourly Emission Rate (lb/hr): 0.44*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.585
MAGLC (ug/m3): 4190

Pollutant: Zinc
TLV (ug/m3): 5000
Maximum Hourly Emission Rate (lb/hr): 0.29*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1.69
MAGLC (ug/m3): 119

* This was modeled for emissions units B001, B002, P001, P002, P003 and P004, combined.

[Authority for term: PTI P0110487, OAC rule 3745-77-07(C)(1), ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

(10) 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.

[Authority for term: PTI P0110487, OAC rule 3745-77-07(C)(1), ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

(11) 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.

[Authority for term: PTI P0110487, OAC rule 3745-77-07(C)(1), ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

(12) 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.

[Authority for term: PTI P0110487, OAC rule 3745-77-07(C)(1), ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

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 occurred.

[Authority for term: PTI P0110487 and OAC rule 3745-77-07(C)(1)]

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

a. all records which show that the sulfur content of the natural gas exceeded 0.5 grains per 100 standard cubic feet;

b. all records which show that the start-up duration exceeded 250 minutes;

c. all records which show that the shutdown duration exceeded 120 minutes;

d. all records which show that the total number of start-up/shutdown cycles exceeded 260;

e. all exceedances of the NO_x, CO, and/or VOC start-up limitations; and

f. allexceedances of the rolling, 12-month NO_x, CO, VOC, SO_2, and/or PM/PM_{10} emission limitations.

These quarterly reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: PTI P0110487 and OAC rule 3745-77-07(C)(1)]

(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 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 in e.(3)a;

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 dates of quarterly cylinder gas audits or linearity checks;

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 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. These reports shall also contain the total NO_x emissions for the calendar quarter (in tons), including all data collected during start-up and shutdown periods and all data generated pursuant to the missing data procedures specified in 40 CFR Part 75 and/or the approved data substitution protocol. 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.

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

[Authority for term: PTI P0110487, OAC rule 3745-77-07(C)(1), 40 CFR 60.7 and 40 CFR Part 75]

(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, 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 in e.(4)a;

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, and/or emissions unit;

xii. the date, time, and duration of any downtime** of the continuous CO monitoring system 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. These reports shall also contain the total CO emissions for the calendar quarter (in tons), including all data collected during start-up and shutdown periods and all data generated pursuant to the missing data procedures specified in 40 CFR Part 75 and/or the approved data substitution protocol. 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

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

[Authority for term: PTI P0110487, OAC rule 3745-77-07(C)(1) and 40 CFR 60.7]

(5) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous O_2 monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 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 continuous O_2 monitoring system downtime and malfunction while the emissions unit was on line.

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 O_2 monitor;

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 total operating time (hours) of the emissions unit;

v. the total operating time of the continuous O_2 monitoring system while the emissions unit was in operation;

vi. results and dates of quarterly cylinder gas audits or linearity checks;

vii. unless previously submitted, results and dates of the relative accuracy test audit(s) (during appropriate quarter(s));

viii. unless previously submitted, the results of any relative accuracy test audit showing the continuous O_2 monitor out-of-control and the compliant results following any corrective actions;

ix. the date, time, and duration of any/each malfunction* of the continuous O_2 monitoring system while the emissions unit was in operation;

x. the date, time, and duration of any downtime* of the continuous O_2 monitoring system while the emissions unit was in operation; and

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

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

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

[Authority for term: PTI P0110487, OAC rule 3745-77-07(C)(1), 40 CFR 60.7 and 40 CFR Part 75]

(6) In lieu of the excess emissions reports required under 40 CFR Part 60.334, the permittee shall submit excess emissions reports for this emissions unit in accordance with this permit.

[Authority for term: PTI P0110487 and OAC rule 3745-77-07(C)(1)]

(7) The permittee shall submit annual reports that specify the total NO_x, CO, PM/PM_{10}, SO_2, VOC, NH_3, formaldehyde, and H_2SO_4 emissions from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

[Authority for term: PTI P0110487 and OAC rule 3745-77-07(C)(1)]

(8) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the quarterly deviation (excursion) reports. If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

[ORC 3704.03(F)(3)(c) and F(4)], OAC rule 3745-114-01, Option A, Engineering Guide #70]

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 Limitations:</u>

NO_x emissions shall not exceed:

3.0 ppmvd at 15% oxygen (based on a 3-hour block averaging period);
21.1 lbs/hr without duct firing;
27.6lbs/hr with duct firing; and
120.9tpy based on a rolling, 12-month summation, including startup and shutdown emissions.

<u>Applicable Compliance Method:</u>

Compliance with the allowable outlet concentration, and the lb/hr emission limitations was demonstrated by emission testing performed in August 2012.

Ongoing compliance with these emission limitations during Mode 6 operation, as well as the annual emission limitations, including startup and shutdown emissions, shall be demonstrated based upon the NO_x and O_2 CEMS and record keeping requirements specified in this permit.

b. <u>Emission Limitations</u>:

PM/PM_{10} emissions shall not exceed:

15 lbs/hr without duct burner firing;
19.9lbs/hr with duct burner firing; and
87.2tpy based on a rolling, 12-month summation.
<u>Applicable Compliance Method:</u>

Compliance with the lbs/hr emission limitations may be demonstrated through the record keeping requirements specified in this permit and the emissions unit specific PM/PM_{10} emission factors established during the emissions testing that demonstrated that the emissions unit was in compliance.

Compliance with the tpy emission limitation shall be demonstrated by multiplying the hourly emission rate by the actual annual hours of operation, and then dividing by 2000 lbs/ton. The monthly emissions shall be added to the previous 11 months to determine the rolling, 12-month total emissions.

If required, the permittee shall demonstrate compliance with the hourly emission limitations through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and 40 CFR Part 51, Appendix M, Method 202. Alternative USEPA-approved test methods may be used with prior approval by Ohio EPA.

c. Emission Limitations:

SO_2 emissions shall not exceed:

1.2lbs/hr without duct burner firing;
1.52lbs/hr with duct burner firing; and
6.7tpy based on a rolling, 12-month summation.

Applicable Compliance Methods:

Compliance with the lbs/hr emission limitations may be demonstrated by the record keeping requirements specified in this permit.

Compliance with the tpy emission limitation shall be demonstrated by multiplying the hourly emission rate by the actual annual hours of operation, and then dividing by 2000 lbs/ton. The monthly emissions shall be added to the previous 11 months to determine the rolling, 12-month total emissions.

If required, the permittee shall demonstrate compliance with the hourly emission limitations through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

d. Emission Limitations:

VOC emissions shall not exceed:

3.2 lbs/hr without duct burner firing;
7.3lbs/hr with duct burner firing; and
44.1tpy based on a rolling, 12-month summation, including startup and shutdown emissions.

Applicable Compliance Method:

Compliance with the lbs/hr emission limitations may be demonstrated through the record keeping requirements specified in this permit and the emissions unit specific VOC emission factors established during the emission testing that demonstrated that the emissions unit was in compliance.

Compliance with the tpy emission limitation, including startup and shut down emissions, shall be demonstrated by multiplying the hourly emission rate by the actual annual hours of operation, and then dividing by 2000 lbs/ton. The monthly emissions shall be added to the previous 11 months to determine the rolling, 12-month total emissions.

If required, the permittee shall demonstrate compliance with the hourly emission limitations through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 25.

e. Emission Limitations:

CO emissions shall not exceed:

6 ppmvd at 15% oxygen without duct burner firing (based on a 24-hour block averaging period);
8ppmvd at 15% oxygen with duct burner firing (based on a 24-hour block averaging period);
25.7 lbs/hr without duct burner firing;
45.9lbs/hr with duct burner firing; and
278.0 tpy based on a rolling, 12-month summation, including startup and shutdown emissions.

Applicable Compliance Method:

Compliance with the allowable outlet concentration and the lbs/hr emission limitations was demonstrated through emission testing performed in August 2012.

Ongoing compliance with these emission limitations during Mode 6 operation, as well as the annual emission limitations, including startup and shutdown emissions, may be demonstrated based upon the CO and O_2 CEMS and the record keeping requirements specified in this permit.

f. Emission Limitations:

NH_3 emissions shall not exceed:

28 lbs/hr without duct burner firing;
31.7lbs/hr with duct burner firing; and
138.8tpy.

Applicable Compliance Method:

Compliance with the lbs/hr emission limitations may be demonstrated through the record keeping requirements specified in this permit and the emissions unit specific NH_3 emission factors established during the emission testing that demonstrated that the emissions unit was in compliance.

Compliance with the tpy emission limitation shall be demonstrated by multiplying the hourly emission rate by the actual annual hours of operation, and then dividing by 2000 lbs/ton.

If required, the permittee shall demonstrate compliance with the hourly emission limitations through emission testing performed in accordance with CTM-027 or other USEPA-approved methods.

g. Emission Limitations:

Formaldehyde emissions shall not exceed:

0.45 lb/hr without duct burner firing;
0.45lb/hr with duct burner firing; and
1.97tpy.

Applicable Compliance Method:

Compliance with the lbs/hr emission limitations may be demonstrated through the record keeping requirements specified in this permit and the emissions unit specific formaldehyde emission factors established during the emission testing that demonstrated that the emissions unit was in compliance.

Compliance with the tpy emission limitation shall be demonstrated by multiplying the hourly emission rate by the actual annual hours of operation, and then dividing by 2000 lbs/ton.

If required, the permittee shall demonstrate compliance with the hourly emission limitations through emission testing performed in accordance with SW-846 Method 0011 or EPA Method 316 or other USEPA-approved methods.

h. Emission Limitations:

H_2SO_4 emissions shall not exceed:

0.18 lb/hr without duct burner firing;
` 0.23 lb/hr with duct burner firing; and
1.01tpy based on a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the lbs/hr emission limitation may be demonstrated by multiplying the emission factor of 0.00009 lb/mmBtu (supplied by permittee) by the maximum heat input. Compliance with the tpy emission limitation shall be demonstrated based upon the record keeping requirements specified in this permit.

If required, the permittee shall demonstrate compliance by emission testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 8.

i. Emission Limitation:

Visible particulate emissions shall not exceed 10% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

[Authority for term: PTI P0110487 and OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) In accordance with good engineering practices, the SCR units on emission units P001-P004 shall be operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The permittee shall maintain on site a copy of the operation and maintenance manual, as provided by the manufacturer.

[Authority for term: PTI P0110487 and OAC rule 3745-77-07(C)(1)]

(2) The permittee shall maintain a written quality assurance/quality control plan for the continuous NO_x monitoring system, designed to ensure continuous valid and representative readings of NO_x emissions 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 and 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x 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_xmonitoring system in accordance with the frequencies required pursuant to 40 CFR Part 60 and 40 CFR Part 75; or may follow relative accuracy test audit frequency requirements for monitoring systems subject to 40 CFR 75, Appendix B, in lieu of frequencies required in 40 CFR Part 60. In either case, results shall be recorded and reported in units of the applicable standard(s) in accordance with 40 CFR Part 60.

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

[Authority for term: PTI P0110487, OAC rule 3745-77-07(C)(1), 40 CFR 60.13, 40 CFR Part 60, Appendix F and 40 CFR Part 75]

(3) The permittee shall maintain a written quality assurance/quality control plan for the continuous CO monitoring system, designed to ensure continuous valid and representative readings of CO emissions in units of the applicable standard(s). 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 CO monitoring system must be kept on site and available for inspection during regular office hours.

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

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

[Authority for term: PTI P0110487, OAC rule 3745-77-07(C)(1), 40 CFR 60.13, and 40 CFR Part 60, Appendix F]

(4) The permittee shall maintain a written quality assurance/quality control plan for the continuous O_2 monitoring system, designed to ensure continuous valid and representative readings of O_2 emissions 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 O_2 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 O_2 monitoring system in accordance with the frequencies required pursuant to 40 CFR Part 60 and 40 CFR Part 75; or may follow relative accuracy test audit frequency requirements for monitoring systems subject to 40 CFR 75, Appendix B, in lieu of frequencies required in 40 CFR Part 60. In either case, results shall be recorded and reported in units of the applicable standard(s) in accordance with 40 CFR Part 60.

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

[Authority for term: PTI P0110487, OAC rule 3745-77-07(C)(1), 40 CFR 60.13, 40 CFR Part 60, Appendix F and 40 CFR Part 75]

3. Emissions Unit Group -Cooling towers: P005,P006,

EU ID	Operations, Property and/or Equipment Description
P005	10 Cell Mechanical Draft Cooling Tower with drift eliminators
P006	10 Cell Mechanical Draft Cooling Tower with drift eliminators

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.	40 CFR 52.21 and OAC rules 3745-31-10 through 3745-31-20	Particulate (PM/PM_{10}) emissionsshall not exceed 2.60 lbs/hr. PM/PM_{10}emissions shall notexceed 11.39 tpybased on a rolling,12-month average. See b)(2)a.
b.	OAC rule 3745-31-05(A)(3) (PTI 07-00503 as issued 12/28/04)	See b)(2)b.
c.	OAC rule 3745-17-11(B)(4)	See b)(2)c.
d.	OAC rule 3745-17-07(A)	Visible particulate emissions fromany stack shall not exceed 20%opacity as a 6-minute average,except as provided by the rule. See b)(2)d.

(2) Additional Terms and Conditions

a. Per the requirements of 40 CFR 52.21, the permittee is required to perform a Best Available Control Technology (BACT) review for PM/PM_{10}. The implementation of drift eliminators constitutes BACT for this emissions unit.

b. The requirements of this applicable rule also include compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20, OAC rule 3745-17-07(A) and 40 CFR Part 52.21.

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

d. It shall not be deemed to be a violation of this rule, where the presence of uncombined water is the only reason for visible particulate emissions from the stack exceeding 20% opacity as a 6-minute average.

c) Operational Restrictions

(1) The permittee shall maintain an average total dissolved solids content of 3,000 ppm or less in the combined circulating cooling water discharge for emissions units P005 and P006.

[Authority for term: PTI 07-00503 and OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform the following monitoring requirements on a monthly basis:

a. test and record the total dissolved solids content of the combined circulating water discharge for emissions units P005 and P006, in ppm; and

b. determine and record the average total dissolved solids content based on a rolling, 12-month average.

[Authority for term: PTI 07-00503 and OAC rule 3745-77-07(C)(1)]

(2) The permittee shall maintain monthly records of the hours of operation of this emissions unit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports that identify any exceedances of the average total dissolved solids content limitation. These quarterly reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: PTI 07-00503 and OAC rule 3745-77-07(C)(1)]

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 Limitations:</u>

PM/PM_{10} emissions shall not exceed 2.60 lbs/hr and 11.39 tpy.

Applicable Compliance Methods:

Compliance with the lbs/hr emission limitation shall be demonstrated by multiplying the maximum drift loss factor of 0.001 percent by the circulating water flow rate (gal/min), and by the average total dissolved solid content (ppm) of the cooling water, and by the appropriate conversion factors (8.34 lbs/gal, 60 min/hr), and then dividing by 1,000,000 (ppm).

If required, the permittee shall submit a testing proposal that will demonstrate that the maximum drift loss does not exceed 0.001 percent.

Compliance with the annual emission limitation shall be demonstrated by multiplying the hourly emission rate by the actual monthly operating hours, and then dividing by 2000 lbs/ton. The monthly emissions shall be added to the previous 11 months to determine the rolling, 12-month total emissions.

b. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be demonstrated through visible emission observations performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(1).

[Authority for term: PTI 07-00503 and OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.