



State of Ohio Environmental Protection Agency

Street Address:

Lazarus Gov. Center  
122 S. Front Street  
Columbus, OH 43215

TELE: (614) 644-3020 FAX: (614) 644-2329

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Lazarus Gov. Center  
P.O. Box 1049  
Columbus, OH 43216-1049

04/05/06

**CERTIFIED MAIL**

**RE: Preliminary Proposed Title V  
Chapter 3745-77 permit**

08-57-04-2072  
DPL Energy, LLC  
Mandy Goubeaux  
1065 Woodman Drive  
Dayton, OH 45432

Dear Mandy Goubeaux:

Enclosed is the Ohio EPA Preliminary Proposed Title V permit that was issued in draft form on 01/11/06. The comment period for the Draft permit has ended. We are now ready to submit this permit to USEPA for approval.

We are submitting this for your review and comment. If you do not agree with the Preliminary Proposed Title V permit as written, you now have the opportunity to raise your concerns. **In order to facilitate our review of all the comments or concerns you may have with the enclosed preliminary proposed permit, please provide a hand marked-up copy of the permit showing the changes you think are necessary, along with any additional summary comments, within fourteen (14) days from your receipt of this letter to:**

**Andrew Hall  
Permit Review/Development Section  
Ohio EPA, Division of Air Pollution Control  
122 South Front Street  
Columbus, Ohio 43215**

and

RAPCA  
117 South Main Street  
Dayton, OH 45422-1280  
(937) 225-4435

Also, if you believe that it is necessary to have an informal conference with us, then, as part of your written comments, you should request a conference concerning the written comments.

If comments are not submitted within fourteen (14) days of your receipt of this letter, we will forward the proposed permit to USEPA for approval. All comments received will be carefully considered before proceeding to the proposed permit.

Sincerely,

*Michael W. Ahern*  
Michael W. Ahern, Manager  
Permit Issuance and Data Management Section  
Division of Air Pollution Control

cc: RAPCA  
File, DAPC PIER



State of Ohio Environmental Protection Agency

**PRELIMINARY PROPOSED TITLE V PERMIT**

<b>Issue Date:</b> 04/05/06	<b>Effective Date:</b> To be entered upon final issuance	<b>Expiration Date:</b> To be entered upon final issuance
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This document constitutes issuance of a Title V permit for Facility ID: 08-57-04-2072 to:

DPL Energy, LLC  
2101 Arbor Boulevard  
Moraine, OH 45439-1762

**Emissions Unit ID (Company ID)/Emissions Unit Activity Description**

P001 (CT4 - Combustion Turbine No. 4) Natural gas-fired combustion turbine w/ No. 2 oil backup; 1,114.6 MMBtu/hr (80 MW) nominal capacity.	backup; 1,114.6 MMBtu/hr (80 MW) nominal capacity.	P004 (CT7 - Combustion Turbine No. 7) Natural gas-fired combustion turbine w/ No. 2 oil backup; 1,114.6 MMBtu/hr (80 MW) nominal capacity.
P002 (CT5 - Combustion Turbine No. 5) Natural gas-fired combustion turbine w/ No. 2 oil	P003 (CT6 - Combustion Turbine No. 6) Natural gas-fired combustion turbine w/ No. 2 oil backup; 1,114.6 MMBtu/hr (80 MW) nominal capacity.	

You will be contacted approximately eighteen (18) months prior to the expiration date regarding the renewal of this permit. If you are not contacted, please contact the appropriate Ohio EPA District Office or local air agency listed below. 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. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-04(A) and in accordance with the terms of this permit beyond the expiration date, provided that a complete renewal application is submitted no earlier than eighteen (18) months and no later than one-hundred eighty (180) days prior to the expiration date.

Described below is the current Ohio EPA District Office or local air agency that is responsible for processing and administering your Title V permit:

RAPCA  
117 South Main Street  
Dayton, OH 45422-1280  
(937) 225-4435

OHIO ENVIRONMENTAL PROTECTION AGENCY

\_\_\_\_\_  
Joseph P. Koncelik  
Director

## PART I - GENERAL TERMS AND CONDITIONS

### A. State and Federally Enforceable Section

#### 1. 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 A.III of Part III of this Title V permit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

- i. The date, place (as defined in the permit), and time of sampling or measurements.
- ii. The date(s) analyses were performed.
- iii. The company or entity that performed the analyses.
- iv. The analytical techniques or methods used.
- v. The results of such analyses.
- vi. The operating conditions existing at the time of sampling or measurement.  
(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:

- i. **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 General Term and Condition A.1.c.ii below; and each report shall cover the previous calendar quarter.

In accordance with OAC rule 3745-15-06, a malfunction reportable under OAC rule 3745-15-06(B) constitutes a violation of an emission limitation (or control requirement) and, therefore, 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))*

- ii. **Except as may otherwise be provided in the terms and conditions for a specific emissions unit, i.e., in Section A.IV of Part III of this Title V permit or, in some cases, in Part II 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 General 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 General Term and Condition.

See B.6 below if no deviations occurred during the quarter.

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

- iii. **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 General Term and Condition A.1.c.ii 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; General Terms and Conditions: A.2, A.3, A.4, A.6.e, A.7, A.12, A.14, A.18, A.19, A.20, and A.22 of Part I of this Title V permit, as well as any deviations from the requirements in Section A.V or A.VI of Part III of this Title V permit, and any monitoring, record keeping, and reporting requirements, which are not reported in accordance with General Term and Condition A.1.c.ii 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 Part II.A 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 General Term and Condition A.1.c.ii 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))*

- iv. Each written report shall be signed by a responsible official certifying that, "based on information and belief formed after reasonable inquiry, the statements and information in the report (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))*
- v. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.  
*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

## 2. **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 General Term and Condition A.1.c.i above.

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

## 3. **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))*

## 4. **Title IV Provisions**

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

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

## 5. **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))*

## 6. **General Requirements**

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement

action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.

- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with A.10 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 upon final issuance of all applicable OAC Chapter 3745-35 operating permits and/or registrations for all subject emissions units located at the facility and:
  - i. 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
  - ii. 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
  - iii. a combination of i. and ii. above.

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))*

**7. Fees**

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78.

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

**8. 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))*

**9. 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 general terms and conditions shall apply to all operating scenarios authorized in this permit.

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

**10. 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))*

**11. 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))*

**12. 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:
  - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.
  - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
  - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

- ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.
- 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:
  - i. 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.
  - ii. 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.
  - iii. 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))*

### 13. 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))*

### 14. 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))*

### 15. 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))*

**16. 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))*

**17. 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.)*

**18. 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))*

**19. 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))*

**20. 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))*

**21. 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)

**22. 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))

**B. State Only Enforceable Section**

**1. Reporting Requirements Related to Monitoring and Record Keeping Requirements**

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.)

**2. Records Retention Requirements**

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.

**3. 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.

**4. 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).

**5. 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.

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

If no 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 General Term and Condition A.1.c.ii; 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.

## Part II - Specific Facility Terms and Conditions

### A. State and Federally Enforceable Section

#### 1. PSD REQUIREMENTS

The source described in this Permit to Install is subject to the applicable provisions of the Prevention of Significant Deterioration (PSD) regulations as promulgated by the United States Environmental Protection Agency 40 CFR 52.21. The authority to apply and enforce the PSD regulations has been delegated to the Ohio Environmental Protection Agency. The terms and conditions of this permit and the requirements of the PSD regulations are also enforceable by the United States Environmental Protection Agency.

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

Appeals will be addressed to:

United States Environmental Protection Agency  
Environmental Appeals Board  
401 M Street, SW (MC-113do)  
Washington, DC 20460

#### 2. Nitrogen Oxides (NOx) Budget Trading Program

OAC Chapter 3745-14

a. Office of Regulatory Information System Facility Code - 2847

b. The following regulated electrical generating units are subject to the applicable requirements specified in OAC Chapter 3745-14: P001, P002, P003, and P004. These units are new regulated electrical generating units. Annual NOx allowance allocations were not established for these new units when OAC Chapter 3745-14 was promulgated. The annual NOx allowance allocations for emissions units P001, P002, P003, and P004 for calendar years 2005 through 2007 will be established in accordance with OAC rule 3745-14-05(C)(4). Pursuant to OAC rule 3745-14-05(B)(2), the annual NOx allowance allocations for emissions units P001, P002, P003, and P004 for calendar years 2008 through 2012 will be established in accordance with OAC rules 3745-14-05(C)(1) and 3745-14-05(C)(2).

c. The emissions units identified in Section A.2.b above are NOx budget units under OAC rule 3745-14-01(C)(1).

[Authority for term: OAC rule 3745-14-01(C)(1)(a)(i)]

d. The NOx authorized account representative shall submit a complete NOx budget permit application in accordance with the deadlines specified in paragraphs (B)(2) and (B)(3) of OAC rule 3745-14-03. The NOx authorized account representative shall also submit, in a timely manner, any supplemental information that the Director determines is necessary in order to review a NOx budget permit application and issue or deny a NOx budget permit.

[Authority for term: OAC rules 3745-14-01(E)(1)(a)(i), 3745-14-01(E)(1)(a)(i), and 3745-14-03(B)(1)]

**A. State and Federally Enforceable Section (continued)**

e. Beginning May 31, 2004, the owners and operators of each NOx budget source and each NOx budget unit at the source shall hold NOx allowances available for compliance deductions under paragraph (E) of OAC rule 3745-14-06, as of the NOx allowance transfer deadline, in the unit's compliance account and the source's overdraft account in an amount not less than the total NOx emissions for the control period from the unit, as determined in accordance with OAC rule 3745-14-08, plus any amount necessary to account for actual utilization under paragraph (C)(5) of OAC rule 3745-14-05 for the control period.

[Authority for term: OAC rules 3745-14-01(E)(3)(a) and 3745-14-03(E)(3)(c)]

f. NOx allowances shall be held in, deducted from, or transferred among NOx allowance tracking system accounts in accordance with OAC rules 3745-14-05, 3745-14-06, 3745-14-07, and 3745-14-09.

[Authority for term: OAC rule 3745-14-01(E)(3)(d)]

g. A NOx allowance shall not be deducted, in order to comply with the requirement under paragraph (E)(3)(a) of OAC rule 3745-14-01, for a control period in a year prior to the year for which the NOx allowance was allocated.

[Authority for term: OAC rule 3745-14-01(E)(3)(e)]

h. Each ton of NOx emitted in excess of the NOx budget emission limitation, as defined in OAC rule 3745-14-01(B)(2)(yy), shall constitute a separate violation of OAC Chapter 3745-14, the Clean Air Act, and applicable Ohio law. The owners and operators of a NOx budget unit that has excess emissions in any control period shall surrender the NOx allowances required for deduction under paragraph (E)(4)(a) of OAC rule 3745-14-06 and pay any fine, penalty, or assessment or comply with any other remedy imposed under paragraph (E)(4)(c) of OAC rule 3745-14-06.

[Authority for term: OAC rules 3745-14-01(E)(3)(b), 3745-14-01(E)(4)(a), and 3745-14-01(E)(4)(b)]

i. When recorded by the Administrator pursuant to OAC rules 3745-14-06 and 3745-14-07, every allocation, transfer, or deduction of a NOx allowance to or from a NOx budget unit's compliance account or the overdraft account of the source where the unit is located is deemed to amend automatically, and become a part of, any NOx budget permit of the NOx budget unit by operation of law without any further review.

[Authority for term: OAC rule 3745-14-01(E)(3)(h)]

j. Except as provided below, the Director shall revise the NOx budget permit, as necessary, in accordance with OAC rule 3745-77-08.

Each NOx budget permit is deemed to incorporate automatically the definitions of terms under paragraph (B) of OAC rule 3745-14-01 and, when recorded by the Administrator, in accordance with OAC rules 3745-14-06 and 3745-14-07, every allocation, transfer, or deduction of a NOx allowance to or from the compliance accounts of the NOx budget units covered by the permit or the overdraft account of the NOx budget source covered by the permit.

[Authority for term: OAC rules 3745-14-03(D)(2) and 3745-14-03(E)(1)]

**A. State and Federally Enforceable Section (continued)**

k. The owner or operator of a NOx budget unit shall comply with the prohibitions under OAC rule 3745-14-08(A)(5).

[Authority for term: OAC rule 3745-14-08(A)(5)]

l. The owners and operators of the NOx budget unit shall keep on site at the source each of the following documents for a period of five years from the date the document is created: (This period may be extended for cause, at any time prior to the end of five years, in writing by the Director or Administrator.)

i. the account certificate of representation for the NOx authorized account representative for the NOx budget unit and all documents that demonstrate the truth of the statements in the account certificate of representation, in accordance with paragraph (D) of OAC rule 3745-14-02, provided that the certificate and documents shall be retained on site at the source beyond such five-year period until such documents are superseded because of the submission of a new account certificate or representation changing the NOx authorized account representative;

ii. all emission monitoring information, in accordance with OAC rule 3745-14-08;

iii. copies of all reports, compliance certifications, and other submissions and all records made or required under the NOx budget trading program; and

iv. copies of all documents used to complete a NOx budget permit application and any other submission under the NOx budget trading program or to demonstrate compliance with the requirements of the NOx budget trading program.

[Authority for term: OAC rules 3745-14-01(E)(5)(a)(i) through (iv)]

m. The permittee shall operate and maintain equipment to continuously monitor and record nitrogen oxides emissions from these emissions units in units of the applicable standard(s). Such continuous monitoring and recording equipment shall comply with the requirements specified in Part III, Section A.III.2 and 40 CFR Part 75.

[Authority for term: OAC rules 3745-14-01(E)(2)(a), 3745-14-01(E)(5)(a)(ii), 3745-14-08(A)(2)(a) through (A)(2)(d), 3745-14-08(B)(1), and 3745-14-08(C)(1)]

n. The permittee shall comply with the monitoring plan requirements of 40 CFR Part 75.62, except that the monitoring plan shall also include all of the information required by Subpart H of 40 CFR Part 75.

[Authority for term: OAC rule 3745-14-08(E)(2)(a)]

o. The NOx authorized account representative of the NOx budget unit shall submit the reports and compliance certifications required under the NOx budget trading program, including those under OAC rules 3745-14-04 and 3745-14-08, to the Director and Administrator.

[Authority for term: OAC rule 3745-14-01(E)(5)(b)]

**A. State and Federally Enforceable Section (continued)**

p. Each submission under the NOx budget trading program shall be submitted, signed, and certified by the NOx authorized account representative for each NOx budget source on behalf of which the submission is made. Each such submission shall include the following certification statement by the NOx authorized account representative:

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

If the NOx authorized account representative for a NOx budget unit subject to an acid rain emission limitation who signed and certified any submission that is made under Subpart F or G of 40 CFR Part 75 and which includes data and information required under OAC rule 3745-14-08 or Subpart H of 40 CFR Part 75 is not the same person as the designated representative or the alternate designated representative for the unit under 40 CFR Part 72, then the submission shall also be signed by the designated representative or the alternate designated representative.

[Authority for term: OAC rules 3745-14-02(A)(5) and 3745-14-08(E)(1)(b)]

q. The NOx authorized account representative shall submit quarterly reports that include all of the data and information required in Subpart H of 40 CFR Part 75 for each NOx budget unit (or group of units using a common stack) and the data and information in Subpart G of 40 CFR Part 75. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30 and October 30 of each year and shall be submitted in the manner specified in Subpart H of 40 CFR Part 75 and 40 CFR Part 75.64.

[Authority for term: OAC rules 3745-14-08(E)(4)(a) and 3745-14-08(E)(4)(c)(i)]

r. The NOx authorized account representative shall submit to the Administrator a compliance certification in support of each quarterly report based on a reasonable inquiry of those persons with primary responsibility for ensuring that all of the unit's emissions are correctly and fully monitored. The compliance certification shall state that:

i. the monitoring data submitted were recorded in accordance with the applicable requirements of OAC rule 3745-14-08 and 40 CFR Part 75, including the quality assurance procedures and specifications; and

ii. for a unit with add-on NOx emission controls and for all hours where data are substituted in accordance with 40 CFR Part 75.34(a)(1), the add-on emission control were operating within the range of parameters listed in the quality assurance program under Appendix B of 40 CFR Part 75 and the substitute values do not systematically underestimate the NOx emissions.

[Authority for term: OAC rule 3745-14-08(E)(4)(d)(i) and (ii)]

s. The NOx authorized account representative for a NOx budget unit shall submit written notice of monitoring system certification and re-certification test dates to the Director and the Administrator in accordance with 40 CFR Part 75.61. The NOx authorized account representative shall submit a certification application to the Administrator, U.S. EPA, Region V Office, and the Director within forty-five days after completing all initial or re-certification tests required under paragraph (B) of OAC rule 3745-14-08, including the information required under Subpart H of 40 CFR Part 75.

[Authority for term: OAC rules 3745-14-08(D) and 3745-14-08(E)(3)]

**A. State and Federally Enforceable Section (continued)**

t. For each control period in which one or more NOx budget units at a source are subject to the NOx budget emission limitation, the NOx authorized account representative of the source shall submit to the Director and the Administrator, by November 30 of that year, a compliance certification report for each source covering all such units.

The NOx authorized account representative shall include the following elements in the compliance certification report, in a format prescribed by the Administrator, concerning each unit at the source and subject to the NOx budget emission limitation for the control period covered by the report:

- i. identification of each NOx budget unit;
- ii. at the NOx authorized account representative's option, the serial numbers of the NOx allowances that are to be deducted from each unit's compliance account under paragraph (E) of OAC rule 3745-14-06 for the control period;
- iii. at the NOx authorized account representative's option, for units sharing a common stack and having NOx emissions that are not monitored separately or apportioned in accordance with OAC rule 3745-14-08, the percentage of allowances that is to be deducted from each unit's compliance account under paragraph (E)(5) of OAC rule 3745-14-06; and
- iv. the compliance certification under paragraph (A)(3) of OAC rule 3745-14-04.

[Authority for term: OAC rules 3745-14-04(A)(1) and 3745-14-04(A)(2)]

u. In the compliance certification report under Section A.2.t.iv above, the NOx authorized account representative shall certify, based upon reasonable inquiry of those persons with the primary responsibility for operating the source and the NOx budget units at the source in compliance with the NOx budget trading program, whether each NOx budget unit for which the compliance certification is submitted was operated during the calendar year covered by the report in compliance with the requirements of the NOx budget trading program applicable to the unit, including all the following:

- i. whether the unit was operated in compliance with the NOx budget emission limitation;
- ii. whether the monitoring plan that governs the unit has been maintained to reflect the actual operation and monitoring of the unit, and contains all information necessary to attribute NOx emissions to the unit, in accordance with OAC rule 3745-14-08;
- iii. whether all the NOx emissions from the unit, or group of units (including the unit) using a common stack, were monitored or accounted for through the missing data procedures and reported in the quarterly monitoring reports, including whether conditional data were reported in the quarterly reports in accordance with OAC rule 3745-14-08, and if conditional data were reported, the permittee shall indicate whether the status of all conditional data has been resolved and all necessary quarterly report submissions have been made; and
- iv. whether the facts that form the basis for certification under OAC rule 3745-14-08 of each monitor at the unit or group of units (including the unit) using a common stack, or for using an excepted monitoring method or alternative monitoring method approved under OAC rule 3745-14-08, if any, have changed.

If a change is required to be reported under Section A.2.u.iv above, specify the nature of the change, the reason for the change, when the change occurred, and how the unit's compliance status was determined subsequent to the change, including what method was used to determine emissions when a change mandated the need for monitor re-certification.

[Authority for term: OAC rule 3745-14-04(A)(3)]

**A. State and Federally Enforceable Section (continued)**

v. The NOx authorized account representative shall submit a complete NOx budget permit renewal application for the NOx budget source covering the NOx budget units at the source in accordance with paragraph (E) of OAC rule 3745-77-08.

[Authority for term: OAC rule 3745-14-03(B)(3)(a)]

w. The emission measurements recorded and reported in accordance with OAC rule 3745-14-08 shall be used to determine compliance by the unit with the NOx budget emission limitation under paragraph (E)(3) of OAC rule 3745-14-01.

[Authority for term: OAC rule 3745-14-01(E)(2)(b)]

x. The permittee shall develop and maintain a written quality assurance/quality control plan for each continuous NOx monitoring system designed to ensure continuous valid and representative readings of NOx emissions in units of the applicable standard. The plan shall follow the requirements of 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NOx monitoring system must be kept on-site and available for inspection during regular office hours.

[Authority for term: OAC rules 3745-14-08(A)(2)(c) and 3745-14-08(A)(2)(d)]

**B. State Only Enforceable Section**

**None**

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** CT4 - Combustion Turbine No. 4 (P001)

**Activity Description:** Natural gas-fired combustion turbine w/ No. 2 oil backup; 1,114.6 MMBtu/hr (80 MW) nominal capacity.

#### A. State and Federally Enforceable Section

##### I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P001 - natural gas and No. 2 fuel oil fired simple cycle stationary combustion turbine No. 4 - Tait CT4, with a nominal production rating of 80 MW and a nominal heat input of 1115.2 mmBtu/hour, with dry low NOx combustion and water injection controls	40 CFR Part 52, Section 52.21 and OAC rule 3745-31-10 through OAC rule 3745-31-20	<p>Particulate/PM10 emissions from this emissions unit shall not exceed 0.013 lb/mmBtu actual heat input when firing natural gas; 0.026 lb/mmBtu actual heat input when firing No. 2 fuel oil, and 46.12 TPY as a rolling, 12-month summation combined from emissions units P001, P002, P003 and P004.</p> <p>Nitrogen oxides (NOx) emissions from this emissions unit shall not exceed 15 ppmv at 15% oxygen on a dry basis at full load, when firing natural gas, based on a one-hour average as determined through data from the NOx continuous emission monitoring system (CEMs); 161 lbs/hr at all operating loads when firing natural gas; 42 ppmv at 15% oxygen on a dry basis at full load, when firing No.2 fuel oil, based on a one-hour average as determined through data from the NOx CEMs; 269 lbs/hr at all operating loads when firing No. 2 fuel oil; and 1373.32 TPY as a rolling, 12-month summation combined from emissions units P001, P002, P003 and P004.</p>

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
		<p>Carbon monoxide (CO) emissions from this emissions unit shall not exceed, during the first 12 months of operation, 25 ppmv at 15% oxygen on a dry basis, when firing natural gas and No. 2 fuel oil, based on a 3-hour test average at full load; after the first 12 months of operation, 20 ppmv at 15% oxygen on a dry basis, when firing natural gas and No. 2 fuel oil, based on a 3-hour test average at full load (also see A.2.g).</p> <p>CO emissions from this emissions unit shall not exceed 301 lbs/hr at all operating loads, excluding start-up and shutdown periods when firing natural gas; 413 lbs/hr during start-up and shutdown periods when firing natural gas; 800 lbs/hr at all operating loads, when firing No. 2 fuel oil; and 724 TPY as a rolling, 12-month summation combined from units P001, P002, P003 and P004, including periods of start-up and shutdown.</p> <p>Sulfur dioxide (SO<sub>2</sub>) emissions from this emissions unit shall not exceed 0.0026 lb/mmBtu actual heat input, when firing natural gas; 0.055 lb/mmBtu actual heat input, when firing No. 2 fuel oil; and 138.6 tons/year as a rolling, 12-month summation combined from units P001, P002, P003 and P004.</p> <p>Sulfuric acid mist emissions from this emissions unit, during oil-firing only, shall not exceed 0.0054 lb/mmBtu, actual heat input and 12.64 TPY as a rolling, 12-month summation combined from units P001, P002, P003 and P004.</p> <p>Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 31.64 TPY as a rolling, 12-month summation combined from units P001, P002, P003 and P004.</p> <p>Formaldehyde emissions from this emissions unit shall not exceed 5.92 TPY as a rolling, 12-month summation combined from units P001, P002, P003 and P004.</p>
	<p>OAC rule 3745-31-05 (C) Synthetic minor to avoid PSD rule requirements</p>	
	<p>OAC rule 3745-31-05 (C) Synthetic minor to avoid MACT rule requirements</p>	

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-31-05(A)(3) PTI 08-04153	VOC emissions from this emissions unit shall not exceed 4 lbs/hr when firing natural gas and 5.5 lbs/hr when firing No. 2 fuel oil.
		Formaldehyde emissions from this emissions unit shall not exceed 0.000713 lb formaldehyde/mmBtu actual heat input.
		The requirements of this rule also include compliance with the requirements of 40 CFR Part 52, Section 52.21 and OAC rules 3745-31-10 through 3745-31-20; OAC rule 3745-31-05 (C); and OAC rule 3745-17-07(A)(1).
	40 CFR Part 75	See Part I, Term A.4.
	OAC rule 3745-17-11(B)(4) OAC rule 3745-18-06(F) 40 CFR Part 60, Subpart GG	The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to 40 CFR Part 52, Sections 52.21 and OAC rules 3745-31-10 through 3745-31-20.
	OAC rules 3745-21-08 (B) and 3745-23-06 (B)	See A.I.2.d. below

**2. Additional Terms and Conditions**

- 2.a** The listed particulate/PM10 emission limitations are more stringent than the requirements of OAC rule 3745-17-11(B)(4). They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".
- 2.b** The listed nitrogen oxides emission limitations are more stringent than the requirements of 40 CFR Part 60, Subpart GG and OAC rule 3745-23-06. They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".
- 2.c** The listed sulfur dioxide emission limitations are more stringent than the requirements of 40 CFR Part 60, Subpart GG and OAC rule 3745-18-06(F). They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".

## **2. Additional Terms and Conditions (continued)**

- 2.d** The permittee has satisfied the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively by committing to comply with the best available technology (BAT) and best available control technology (BACT) requirements established pursuant to this permit to install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally approved SIP for Ohio.

On February 15, 2005, OAC rule 3745-23-06 was rescinded; therefore, it is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally approved SIP for Ohio.

The listed NO<sub>x</sub> and CO emission limitations were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".

- 2.e** The following Best Available Control Technology (BACT) determinations have been made in accordance with the PSD regulations:

Particulate/PM<sub>10</sub> Emissions - The BACT determination is the use of only clean burning fuels, natural gas and No. 2 fuel oil in these combustion turbines, capable of meeting the emission limitations listed in Part III A.I.1.

Nitrogen oxide emissions - The BACT determination is the use of dry low-NO<sub>x</sub> burners (DLNB) when firing natural gas and water injection when firing fuel oil and the ppmv NO<sub>x</sub> levels listed in Part III A.I.1.

Carbon monoxide emissions - The BACT determination is the use of efficient combustion technology inherent to the design of the combustion turbines and the ppmv CO levels listed in Part III A.I.1.

Sulfur dioxide emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as back-up fuel in these combustion turbines and a maximum sulfur content of 0.05 percent by weight of the fuel oil.

Sulfuric acid mist emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as the back-up fuel in these combustion turbines.

- 2.f** "Start-up" shall be defined as the time necessary to bring a turbine on line from a no-load condition to dry low NO<sub>x</sub> combustion mode during natural gas combustion, not to exceed thirty (30) minutes. Shutdown periods shall not exceed thirty (30) minutes.
- 2.g** If the permittee shows that the unit cannot consistently meet the CO ppm limitations, Ohio EPA will consider an application to modify the permit to install.
- 2.h** "Full load" shall be defined as all periods when the hourly average electrical output exceeds 72 MW.
- 2.i** Based on the evaluation of the PM<sub>10</sub> emissions from this emissions unit, it was determined that the PM<sub>10</sub> emissions did not trigger the Prevention of Significant Deterioration (PSD) permitting requirements. Therefore, the regulated pollutant for purposes of this permit is particulate emissions and compliance with the particulate emission limitation shall be determined in accordance with the U.S. EPA approved test methods for particulate emissions.

**2. Additional Terms and Conditions (continued)**

- 2.j** In lieu of monitoring the exhaust stack gas flowrate as required by 40 CFR Part 60, Appendix B - Performance Specification 6, the permittee shall use a certified NOx continuous emissions monitoring system in conjunction with a fuel flow monitor as described in 40 CFR Part 75, and certified CO continuous emissions monitoring system in conjunction with a fuel flow monitor (in a manner similar to that used for NOx) to meet these requirements. The relative accuracy requirements of Performance Specifications 6 shall apply to the NOx and CO continuous emissions monitoring systems.

**II. Operational Restrictions**

- 1.** The maximum annual operating hours for emissions units P001, P002, P003 and P004 combined shall not exceed 10016 \*\* while burning natural gas and 4216 \*\* when burning No. 2 fuel oil, based upon a rolling, 12-month summation of the operating hours.

To ensure enforceability during the first twelve calendar months of operation following startup of any one of the emissions units P001 through P004, the permittee shall not exceed the cumulative operating hours specified in the following table:

Month	Maximum allowable cumulative operating hours while burning No. 2 fuel oil
1	1056
1 - 2	2108
1 - 3	3164
1 - 4	4216
1 - 5	4216
1 - 6	4216
1 - 7	4216
1 - 8	4216
1 - 9	4216
1 - 10	4216
1 - 11	4216
1 - 12	4216

\*\*The permittee may combust 1.2 additional hours of natural gas for every hour fuel oil is not combusted, up to 15020 hours annually of natural gas combustion.

After the first 12 calendar months of operation following the startup of or the initial use of fuel oil in any one of the emissions units P001 through P004, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours.

[Authority for term: PTI 08-04153 and OAC rule 3745-77-07(A)(1)]

- 2.** The sulfur content of the No. 2 fuel oil fired in this emissions unit shall not exceed 0.05%, by weight.

[Authority for term: PTI 08-04153 and OAC rule 3745-77-07(A)(1)]

- 3.** In order to establish federally enforceable limitations upon the potential to emit for CO, the permittee shall utilize the continuous CO monitoring system to demonstrate continuous compliance with the hourly and combined annual emissions limitations established by this permit.

[Authority for term: PTI 08-04153 and OAC rule 3745-77-07(A)(1)]

- 4.** The permittee shall burn only pipeline quality natural gas or number two fuel oil in this emissions unit.

[Authority for term: PTI 08-04153 and OAC rule 3745-77-07(A)(1)]

### III. Monitoring and/or Record Keeping Requirements

#### 1. Statement of Certification - NO<sub>x</sub> Monitoring

- a. The permittee shall operate and maintain equipment to continuously monitor and record NO<sub>x</sub> emissions from this emissions unit in units of applicable standard(s). Such continuous monitoring and recording equipment shall comply with the applicable requirements specified in 40 CFR Part 60 and 40 CFR Part 75.
- b. Each continuous monitoring system consists of all the equipment used to acquire and record data and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.
- c. The permittee shall maintain on-site documentation from the US EPA or the Ohio EPA that the continuous NO<sub>x</sub> monitoring system has been certified in accordance with the applicable requirements specified in 40 CFR Part 60 and Part 75. The letter of certification shall be made available to the Director upon request.
- d. The permittee shall maintain records of the following data obtained by the continuous NO<sub>x</sub> monitoring system: emissions of NO<sub>x</sub> in ppmvd at 15% oxygen at full load on an hourly average basis, emissions of NO<sub>x</sub> in lbs/hr, and results of daily zero/span calibration checks, results of quarterly cylinder gas audits, linearity check, or relative accuracy test audits, and magnitude of manual calibration adjustments.
- e. The permittee shall develop a written quality assurance/quality control plan for the continuous NO<sub>x</sub> monitoring system designed to ensure continuous valid and representative readings of NO<sub>x</sub> emissions in units of the applicable standard(s). The plan shall follow the applicable requirements of 40 CFR Part 60, Appendix F and 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook documenting the activities related to the continuous NO<sub>x</sub> monitoring system must be kept on site and available for inspection during regular office hours.
- f. The permittee may conduct the relative accuracy test audits for the continuous nitrogen oxides monitoring system in accordance with the frequencies required for monitoring systems subject to 40 CFR Part 75, Appendix B; however, the permittee is still required to provide the audit results in units of the applicable standard(s), in accordance with 40 CFR Part 60. Cylinder gas audits may be conducted in accordance with the frequencies specified in 40 CFR Part 75, Appendix B for linearity checks. In addition, linearity checks conducted pursuant to 40 CFR Part 75, Appendix B, may be used in place of quarterly cylinder gas audits, as required in 40 CFR Part 60.
- g. Whenever the monitoring system fails to meet the quality assurance or data validation requirements of 40 CFR Part 75, data shall be substituted using the applicable procedures in Subpart D, Appendix D, or Appendix E of 40 CFR Part 75.

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

#### 2. Statement of Certification - CO Monitoring

- a. The permittee shall operate and maintain equipment to continuously monitor and record CO emissions from this emissions units in units of the applicable standard(s). Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.
- b. Each continuous monitoring system consists of all the equipment used to acquire and record data and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.
- c. The permittee shall maintain on-site documentation from the USEPA or the Ohio EPA that the continuous CO monitoring system has been certified in accordance with 40 CFR Part 60. The letter of certification shall be made available to the Director upon request.

### III. Monitoring and/or Record Keeping Requirements (continued)

d. The permittee shall maintain records of the following data obtained by the continuous CO monitoring system: emissions of CO in lbs/hr, results of daily zero/span calibration checks, results of quarterly cylinder gas audits, or relative accuracy test audits, and magnitude of manual calibration adjustments.

e. The permittee shall develop 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). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook documenting the activities related to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.

f. The permittee may conduct the relative accuracy test audits for the continuous carbon monoxide monitoring system in accordance with the frequencies required for monitoring systems subject to 40 CFR Part 75, Appendix B; however, the permittee is still required to provide the audit results in units of the applicable standard(s), in accordance with 40 CFR Part 60. Cylinder gas audits may be conducted in accordance with the frequencies specified in 40 CFR Part 75, Appendix B for linearity checks. In addition, linearity checks conducted pursuant to 40 CFR Part 75, Appendix B, may be used in place of quarterly cylinder gas audits, as required in 40 CFR Part 60.

[Authority for term: 40 CFR Part 60 and OAC rule 3745-77-07(C)(1)]

3. In accordance with 40 CFR Part 60, Subpart GG, Section 60.334(h)(1), the permittee shall monitor the sulfur content of the fuel being fired in the turbine except as provided in 40 CFR 60.334(h)(3). The frequency of determination of this value shall be in accordance with 40 CFR 60.334(i).

[Authority for term: 40 CFR Part 60 and OAC rule 3745-77-07(C)(1)]

4. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated SO<sub>2</sub> emission rate (in lb/mmBtu).

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

5. Pursuant to 40 CFR 60.334(i)(1) or (3), the permittee shall determine fuel sulfur content in accordance with the requirements of 40 CFR 60.335(b)(10)(i) and 60.335(b)(10)(ii).

[Authority for term: 40 CFR Part 60 and OAC rule 3745-77-07(C)(1)]

6. For each day during which the permittee burns a fuel other than pipeline quality natural gas or number two fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

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

7. The permittee shall maintain monthly records of the following information:

a. The summation of the operating hours for this emissions unit, in hours/month, when burning natural gas and/or when burning No. 2 fuel oil. The summation of the operating hours for emissions units P001, P002, P003 and P004 combined when burning natural gas. The summation of the operating hours for emissions units P001, P002, P003 and P004 combined when burning fuel oil.

b. During the first twelve calendar months of operation following startup of any one of the emissions units P001 through P004, the cumulative operating hours for each calendar month when burning natural gas and/or when burning No. 2 fuel oil for emissions units P001, P002, P003 and P004 combined. Following the first twelve calendar months of operation following startup of any one of the emissions units P001 through P004, the rolling, 12-month summation of the operating hours for this emissions unit, in hours per rolling, 12-month period when burning natural gas and/or when burning No. 2 fuel oil for emissions units P001, P002, P003 and P004 combined.

### III. Monitoring and/or Record Keeping Requirements (continued)

- c. The actual heat input of this emissions unit, in mmBtu/month, when burning natural gas and/or when burning No. 2 fuel oil.
- d. The rolling, 12-month summation of the particulates/PM10, NOx, CO, SO2, sulfuric acid mist, VOC, and formaldehyde emissions, in tons, for emissions units P001, P002, P003 and P004 combined. The monthly emissions shall be added to the total emissions from the previous 11 months to determine the rolling, 12-month summation of emissions.
- e. The permittee shall monitor and record all periods of time when the unit is operated at "full load" conditions, based upon definition of full load in Section A.I.2.h.
- f. The date, time and duration, in minutes of each start-up and shutdown. (The terms start-up and shutdown are defined in Section A.I.2.f.)

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

- 8. If the permittee uses 40 CFR Part 75 Appendix D to comply with the SO2 emissions limit, the permittee shall install, 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 appropriate missing data procedures specified in 40 CFR Part 75.

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

- 9. The permittee shall install, operate and maintain equipment to continuously monitor and record the percent oxygen in the stack serving 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. The monitoring and recording equipment shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

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

### IV. Reporting Requirements

#### 1. Continuous NOx Emissions Monitoring

- a. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting the date, commencement and completion time, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of NOx values in excess of the applicable emission limitations specified in the terms and conditions of this permit.
- b. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting any continuous NOx monitoring system downtime while the emissions unit was on line (date, time, duration, and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.
- c. If there are no excess NOx emissions during the calendar quarter, the permittee shall submit a statement to that effect along with date, time, reason, and corrective action(s) taken for each time period of monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

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

#### **IV. Reporting Requirements (continued)**

##### **2. Continuous CO Emissions Monitoring**

- a. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting the date, commencement and completion time, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of CO values in excess of the applicable hourly emission limitations specified in the terms and conditions of this permit.
- b. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting any continuous CO monitoring system downtime while the emissions unit was on line (date, time, duration, and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.
- c. If there are no CO excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the date, time, reason, and corrective action(s) taken for each time period of monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

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

##### **3. The permittee shall submit quarterly deviation (excursion) reports to the Regional Air Pollution Control Agency that identify any exceedances of the following:**

- a. For the first twelve calendar months of operation following startup of any one of the emissions units P001 through P004, all exceedances of the maximum allowable cumulative operating hours limits while burning natural gas and/or No. 2 fuel oil for emissions units P001, P002, P003 and P004 combined.
- b. Beginning after the first twelve calendar months of operation following startup of any one of the emissions units P001 through P004, the rolling, 12-month operating hours limitations while burning natural gas and/or No. 2 fuel oil for emissions units P001, P002, P003 and P004 combined.
- c. Any exceedances of the rolling, 12-month summation of particulates/PM10, NO<sub>x</sub>, CO, SO<sub>2</sub>, sulfuric acid mist, VOC, or formaldehyde emission limitations, in tons, for emissions units P001, P002, P003 and P004, combined.
- d. Any exceedances of the NO<sub>x</sub> ppmv at 15% oxygen on a dry basis emissions limitations at full load conditions.
- e. The allowable duration for all start-up and shutdown periods.
- f. For fuel oil, any exceedances of the 0.05% by weight sulfur content and the calculated SO<sub>2</sub> emissions rate, in lb/mmBtu.
- g. Any time during which the permittee burns a fuel other than pipeline quality natural gas or number two fuel oil.

These reports shall be submitted in accordance with Section A.1. of the General Terms and Conditions of this permit.

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

#### **IV. Reporting Requirements (continued)**

4. The permittee shall submit quarterly reports which identify each period during which an exemption for ice-fog provided in 40 CFR Part 60.332(f) is in effect. The reports shall include the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time when the air pollution control system was reactivated. These reports shall be postmarked by April 30, July 30, October 30, and January 30 and each report shall cover the previous calendar quarter.

[Authority for term: 40 CFR Part 60 and OAC rule 3745-77-07(C)(1)]

#### **V. Testing Requirements**

1. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation -

0.013 lb (particulate emissions/PM10)/mmBtu actual heat input, when firing natural gas

0.026 lb particulate emissions/PM10)/mmBtu actual heat input, when firing No. 2 fuel oil

Applicable Compliance Method -

If required, compliance shall be based upon stack testing in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A and, 40 CFR Part 51, Appendix M, Method 201 or 201A and 202, as specified in A.V.2.

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

b. Emission Limitation -

46.12 tons/year particulate emissions/PM10 as a rolling, 12-month summation combined from emissions units P001, P002, P003 and P004

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined through a summation of the particulate emissions/PM10 from the burning of natural gas and No. 2 fuel oil as follows:

i. The monthly particulate emissions/PM10 from the burning of natural gas shall be determined by multiplying the average emissions in lb particulate/PM10 emissions/mmBtu while burning natural gas derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning natural gas, and dividing by 2,000 lbs/ton.

ii. The monthly particulate emissions/PM10 from the burning of No. 2 fuel oil shall be determined by multiplying the average emissions in lb particulate/PM10 emissions/mmBtu while burning No. 2 fuel oil derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.

iii. The combined rolling, 12-month summation of the particulate emissions/PM10 for emissions units P001, P002, P003 and P004 shall be the sum of (i) and (ii) above for each emissions unit for the rolling, 12-month period.

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

**V. Testing Requirements (continued)**

c. Emission Limitations -

15 ppmvd NO<sub>x</sub> at 15% oxygen, at full load, while burning natural gas, based on a 1-hour average as determined through data from the NO<sub>x</sub> CEMs

42 ppmvd NO<sub>x</sub> at 15% oxygen, at full load, while burning No. 2 fuel oil, based on a 1-hour average as determined through data from the NO<sub>x</sub> CEMs

161 lbs/hour nitrogen oxides at all operating loads, while burning natural gas

269 lbs/hour nitrogen oxides, at all operating loads, while burning No. 2 fuel oil

Applicable Compliance Method -

Initial compliance with the allowable outlet concentration, and the lbs/hour NO<sub>x</sub> emission limitations shall be demonstrated by the performance testing as specified in A.V.2. and continual compliance shall be demonstrated by the use of the CEM specified in A.III.1. and the applicable 40 CFR Part 60 and 75 requirements. Emissions calculated using the 40 CFR Part 75 bias adjustment factor or using missing data procedures due to monitor downtime shall not be used to determine compliance with the hourly emission limitation.

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

d. Emission Limitation -

1373.32 tons/year NO<sub>x</sub> as a rolling, 12-month summation combined from emissions units P001, P002, P003 and P004

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7. and shall be determined through the use of CEMs as specified in A.III.1. The monthly NO<sub>x</sub> emissions shall be added to the total NO<sub>x</sub> emissions from the previous eleven months to determine the rolling, 12-month summation of NO<sub>x</sub> emissions.

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

e. Emission Limitations -

During the first 12 months of operation, 25 ppmvd CO at 15% oxygen as a 3-hr test average at full load, when firing natural gas and No. 2 fuel oil; after the first 12 months of operation, 20 ppmvd CO at 15% oxygen as a 3-hr test average at full load, when firing natural gas and No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10, as specified in A.V.2.

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

**V. Testing Requirements (continued)**

f. Emission Limitations -

413 lbs CO/hour during start-up and shutdown periods, while burning natural gas

301 lbs CO/hour at all operating loads, excluding start-up and shutdown periods, while burning natural gas

800 lbs CO/hour at all operating loads, while burning No. 2 fuel oil

Applicable Compliance Method -

Compliance with the hourly emission limitations shall be based upon the data from the continuous CO emissions monitoring system requirement and the monitoring/record keeping as specified in A.III.2. Except for the start-up and shutdown emissions limit, compliance shall also be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10, as specified in A.V.2.

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

g. Emission Limitation -

724 tons/year CO, as a rolling, 12-month summation combined from units P001, P002, P003 and P004, including periods of start-up and shutdown

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7. and shall be determined through the use of CEMs as specified in A.III.2. The monthly CO emissions shall be added to the total CO emissions from the previous eleven months to determine the rolling, 12-month summation of CO emissions.

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

h. Emission Limitation -

0.0026 lb SO<sub>2</sub>/mmBtu actual heat input, while burning natural gas

0.055 lb SO<sub>2</sub>/mmBtu actual heat input, while burning No. 2 fuel oil

Applicable Compliance Method -

When firing natural gas, compliance with this limitation will be assumed due to the negligible percent sulfur, by weight, in the fuel. If required, the permittee shall perform or require the supplier to perform an analysis of the natural gas for sulfur content, in accordance with the appropriate ASTM method or an equivalent method as approved by the Director, in order to demonstrate compliance with this emission limitation using the appropriate equation specified in AP-42 Table 3.1-2a (4/00). When firing number two fuel oil, compliance shall be based upon the fuel analysis and record keeping requirements specified in A.II.2. and A.III.4. and the use of the equations specified in OAC rule 3745-18-04(F).

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

**V. Testing Requirements (continued)**

i. Emission Limitation -

138.6 tons/year SO<sub>2</sub> as a rolling, 12-month summation combined from units P001, P002, P003 and P004

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7. and shall be determined through a summation of the SO<sub>2</sub> emissions from the burning of natural gas and No. 2 fuel oil as follows:

i. The monthly SO<sub>2</sub> emissions from the burning of natural gas shall be determined by multiplying the USEPA default value for pipeline quality natural gas (0.0006 lb SO<sub>2</sub>/mmBtu) by the actual heat input of this emissions unit for the month while burning natural gas, and dividing by 2,000 lbs/ton.

ii. The monthly SO<sub>2</sub> emissions from the burning of No. 2 fuel oil shall be determined by multiplying the average calculated SO<sub>2</sub> emission rate (determined as an arithmetic average of the calculated SO<sub>2</sub> emission rates for the shipments received each month in A.III.4. (lb/mmBtu)) by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.

iii. The combined rolling, 12-month summation of the SO<sub>2</sub> emissions for emissions units P001, P002, P003 and P004 shall be the sum of (i) and (ii) above for each emissions unit for the rolling, 12-month period.

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

j. Emission Limitation -

0.0054 lb sulfuric acid mist/mmBtu actual heat input

Applicable Compliance Method -

Compliance shall be based upon stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 8 as specified in A.V.2.

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

k. Emission Limitation -

12.64 tons/year sulfuric acid mist, as a rolling, 12-month summation combined from units P001, P002, P003 and P004

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7. and shall be determined by multiplying the average emissions in lb sulfuric acid mist/mmBtu derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton. The monthly sulfuric acid mist emissions for each emissions units P001, P002, P003 and P004 shall be summed and added to the total sulfuric acid mist emissions from the previous eleven months to determine the combined rolling, 12-month summation of sulfuric acid mist emissions for emissions units P001, P002, P003 and P004.

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

**V. Testing Requirements (continued)**

I. Emission Limitation -

4 lbs/hour VOC, while burning natural gas

5.5 lbs/hour VOC, while burning No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be based upon stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 18, 25, or 25A, as specified in A.V.2.

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

m. Emission Limitation -

31.64 tons/year VOC, as a rolling, 12-month summation combined from units P001, P002, P003 and P004

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7. and shall be determined through a summation of the VOC emissions from the burning of natural gas and No. 2 fuel oil as follows:

i. The monthly VOC emissions from the burning of natural gas shall be determined by multiplying the average emissions in lb VOC/hour while burning natural gas derived from the stack test conducted in accordance with A.V.2. by the operating hours for the month while burning natural gas, and dividing by 2,000 lbs/ton.

ii. The monthly VOC emissions from the burning of No. 2 fuel oil shall be determined by multiplying the average emissions in lb VOC/hour while burning No. 2 fuel oil derived from the stack test conducted in accordance with A.V.2. by the operating hours for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.

iii. The combined rolling, 12-month summation of the VOC emissions for emissions units P001, P002, P003 and P004 shall be the sum of (i) and (ii) above for each emissions unit for the rolling, 12-month period.

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

n. Emission Limitation -

0.000713 lb formaldehyde/mmBtu actual heat input

Applicable Compliance Method -

When firing natural gas, compliance shall be based upon stack testing in accordance with USEPA Method SW846, as specified in A.V.2. When firing No. 2 fuel oil, compliance shall be based upon the AP-42 Table 3.1-4 (4/00) emission factor of 0.00028 lb formaldehyde/mmBtu.

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

**V. Testing Requirements (continued)**

o. Emission Limitation -

5.92 tons/year formaldehyde, as a rolling, 12-month summation combined from units P001, P002, P003 and P004

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7. and shall be determined through a summation of the formaldehyde emissions from the burning of natural gas and No. 2 fuel oil as follows:

i. The monthly formaldehyde emissions from the burning of natural gas shall be determined by multiplying the average emissions in lb formaldehyde/mmBtu while burning natural gas derived from the stack test by the actual heat input of this emissions unit for the month while burning natural gas, divided by 2,000 lbs/ton.

ii. The monthly formaldehyde emissions from the burning of No.2 fuel oil shall be determined by multiplying the AP-42 Table 3.1-4 (4/00) of 0.00028 lb formaldehyde/mmBtu while burning No. 2 fuel oil by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil , divided by 2,000 lbs/ton.

iii. The combined rolling, 12-month summation of the formaldehyde emissions for emissions units P001, P002, P003 and P004 shall be the sum of (i) and (ii) above for each emissions unit for the rolling, 12-month period.

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

p. Emission Limitation -

20% opacity, as a six-minute average

Applicable Compliance Method -

Compliance shall be determined through visible emission observations performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in USEPA Reference Method 9.

[Authority for term: OAC rules 3745-17-03(B)(1) and 3745-77-07(C)(1)]

q. Emission Limitation -

0.05% sulfur, by weight, of the No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be based upon fuel oil sampling as specified in A.III.3, A.III.4, and A.III.5.

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

r. Emission Limitation -

10,016 hours of operation, as a rolling, 12-month summation while burning natural gas

4,216 hours of operation, as a rolling, 12-month summation while burning No. 2 fuel oil

1.2 hours of operation of natural gas may be added for every hour No. 2 fuel oil is not burned, with total natural gas operation not to exceed 15,020 hours as a rolling, 12-month summation.

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7.

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

## V. Testing Requirements (continued)

2. Upon initial use of fuel oil, the permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emission testing shall be conducted within 60 days after initiating fuel oil firing in this emissions unit.
  - b. The emission testing shall be conducted to demonstrate compliance with the particulates/PM10, NOx, CO, VOC, and sulfuric acid mist emission rates.
  - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for particulates/PM10, Methods 1 through 5 of 40 CFR Part 60, Appendix A and 40 CFR Part 51, Appendix M, Method 201 or 201A and 202; for NOx, Methods 1 through 4 and 7 or 7E of 40 CFR Part 60, Appendix A; for CO, Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A; for VOC, Methods 1 through 4 and 18, 25, or 25A of 40 CFR Part 60, Appendix A; for formaldehyde, Method SW846; for sulfuric acid mist, Methods 1 through 4 and 8 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from RAPCA.

\*\* the permittee has requested that if the average emission rate (lbs/hour) derived from the stack test conducted in accordance with this terms is less than the permit VOC allowable listed in term A.I.1., it may apply for an air permit to install modification to increase the hours of operation. The permittee realizes that this modification might trigger the requirement to secure either an administrative or a new air permit to install.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Regional Air Pollution Control Agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Regional Air Pollution Control Agency's refusal to accept the results of the emission test(s).

Personnel from the Regional Air Pollution Control Agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Regional Air Pollution Control Agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Regional Air Pollution Control Agency.

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

## VI. Miscellaneous Requirements

**None**

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P001 - natural gas and No. 2 fuel oil fired simple cycle stationary combustion turbine No. 4 - Tait CT4, with a nominal production rating of 80 MW and a nominal heat input of 1115.2 mmBtu/hour, with dry low NOx combustion and water injection controls	None	None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

- The permit to install for this emissions unit (P001) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the ISCST3 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: formaldehyde

TLV (mg/m3): 0.37

Maximum Hourly Emission Rate (lbs/hr): 1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1.6971

MAGLC (ug/m3): 8.81

### III. Monitoring and/or Record Keeping Requirements (continued)

Pollutant: beryllium

TLV (mg/m<sup>3</sup>): 0.002

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 0.0008

MAGLC (ug/m<sup>3</sup>): 0.05

Pollutant: arsenic

TLV (mg/m<sup>3</sup>): 0.01

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 0.0123

MAGLC (ug/m<sup>3</sup>): 0.24

Pollutant: benzene

TLV (mg/m<sup>3</sup>): 1.60

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 0.2142

MAGLC (ug/m<sup>3</sup>): 38.10

Pollutant: sulfuric acid mist

TLV (mg/m<sup>3</sup>): 1.00

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 13.56

MAGLC (ug/m<sup>3</sup>): 23.81

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

- a. changes in the composition of the materials used, or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

### **III. Monitoring and/or Record Keeping Requirements (continued)**

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

[Authority for term: PTI 08-04153 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
  - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
  - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
  - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

[Authority for term: PTI 08-04153 and OAC rule 3745-77-07(C)(1)]

### **IV. Reporting Requirements**

**None**

### **V. Testing Requirements**

**None**

### **VI. Miscellaneous Requirements**

**None**

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** CT5 - Combustion Turbine No. 5 (P002)

**Activity Description:** Natural gas-fired combustion turbine w/ No. 2 oil backup; 1,114.6 MMBtu/hr (80 MW) nominal capacity.

#### A. State and Federally Enforceable Section

##### I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P002 - natural gas and No. 2 fuel oil fired simple cycle stationary combustion turbine No. 5 - Tait CT5, with a nominal production rating of 80 MW and a nominal heat input of 1115.2 mmBtu/hour, with dry low NOx combustion and water injection controls	40 CFR Part 52, Section 52.21 and OAC rule 3745-31-10 through OAC rule 3745-31-20	<p>Particulate/PM10 emissions from this emissions unit shall not exceed 0.013 lb/mmBtu actual heat input when firing natural gas; 0.026 lb/mmBtu actual heat input when firing No. 2 fuel oil, and 46.12 TPY as a rolling, 12-month summation combined from emissions units P001, P002, P003 and P004.</p> <p>Nitrogen oxides (NOx) emissions from this emissions unit shall not exceed 15 ppmv at 15% oxygen on a dry basis at full load, when firing natural gas, based on a one-hour average as determined through data from the NOx continuous emission monitoring system (CEMs); 161 lbs/hr at all operating loads when firing natural gas; 42 ppmv at 15% oxygen on a dry basis at full load, when firing No.2 fuel oil, based on a one-hour average as determined through data from the NOx CEMs; 269 lbs/hr at all operating loads when firing No. 2 fuel oil; and 1373.32 TPY as a rolling, 12-month summation combined from emissions units P001, P002, P003 and P004.</p>

**Operations, Property,  
and/or Equipment**

**Applicable Rules/  
Requirements**

**Applicable Emissions  
Limitations/Control  
Measures**

Carbon monoxide (CO) emissions from this emissions unit shall not exceed, during the first 12 months of operation, 25 ppmv at 15% oxygen on a dry basis, when firing natural gas and No. 2 fuel oil, based on a 3-hour test average at full load; after the first 12 months of operation, 20 ppmv at 15% oxygen on a dry basis, when firing natural gas and No. 2 fuel oil, based on a 3-hour test average at full load (also see A.2.g).

CO emissions from this emissions unit shall not exceed 301 lbs/hr at all operating loads, excluding start-up and shutdown periods when firing natural gas; 413 lbs/hr during start-up and shutdown periods when firing natural gas; 800 lbs/hr at all operating loads, when firing No. 2 fuel oil; and 724 TPY as a rolling, 12-month summation combined from units P001, P002, P003 and P004, including periods of start-up and shutdown.

Sulfur dioxide (SO<sub>2</sub>) emissions from this emissions unit shall not exceed 0.0026 lb/mmBtu actual heat input, when firing natural gas; 0.055 lb/mmBtu actual heat input, when firing No. 2 fuel oil; and 138.6 tons/year as a rolling, 12-month summation combined from units P001, P002, P003 and P004.

Sulfuric acid mist emissions from this emissions unit, during oil-firing only, shall not exceed 0.0054 lb/mmBtu, actual heat input and 12.64 TPY as a rolling, 12-month summation combined from units P001, P002, P003 and P004.

Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 31.64 TPY as a rolling, 12-month summation combined from units P001, P002, P003 and P004.

Formaldehyde emissions from this emissions unit shall not exceed 5.92 TPY as a rolling, 12-month summation combined from units P001, P002, P003 and P004.

OAC rule 3745-31-05 (C)  
Synthetic minor to avoid PSD rule requirements

OAC rule 3745-31-05 (C)  
Synthetic minor to avoid MACT rule requirements

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-31-05(A)(3) PTI 08-04153	VOC emissions from this emissions unit shall not exceed 4 lbs/hr when firing natural gas and 5.5 lbs/hr when firing No. 2 fuel oil.
		Formaldehyde emissions from this emissions unit shall not exceed 0.000713 lb formaldehyde/mmBtu actual heat input.
		The requirements of this rule also include compliance with the requirements of 40 CFR Part 52, Section 52.21 and OAC rules 3745-31-10 through 3745-31-20; OAC rule 3745-31-05 (C); and OAC rule 3745-17-07(A)(1).
	40 CFR Part 75	See Part I, Term A.4.
	OAC rule 3745-17-11(B)(4) OAC rule 3745-18-06(F) 40 CFR Part 60, Subpart GG	The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to 40 CFR Part 52, Sections 52.21 and OAC rules 3745-31-10 through 3745-31-20.
	OAC rules 3745-21-08 (B) and 3745-23-06 (B)	See A.I.2.d. below

**2. Additional Terms and Conditions**

- 2.a** The listed particulate/PM10 emission limitations are more stringent than the requirements of OAC rule 3745-17-11(B)(4). They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".
- 2.b** The listed nitrogen oxides emission limitations are more stringent than the requirements of 40 CFR Part 60, Subpart GG and OAC rule 3745-23-06. They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".
- 2.c** The listed sulfur dioxide emission limitations are more stringent than the requirements of 40 CFR Part 60, Subpart GG and OAC rule 3745-18-06(F). They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".

## **2. Additional Terms and Conditions (continued)**

- 2.d** The permittee has satisfied the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively by committing to comply with the best available technology (BAT) and best available control technology (BACT) requirements established pursuant to this permit to install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally approved SIP for Ohio.

On February 15, 2005, OAC rule 3745-23-06 was rescinded; therefore, it is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally approved SIP for Ohio.

The listed NOx and CO emission limitations were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".

- 2.e** The following Best Available Control Technology (BACT) determinations have been made in accordance with the PSD regulations:

Particulate/PM10 Emissions - The BACT determination is the use of only clean burning fuels, natural gas and No. 2 fuel oil in these combustion turbines, capable of meeting the emission limitations listed in Part III A.I.1.

Nitrogen oxide emissions - The BACT determination is the use of dry low-NOx burners (DLNB) when firing natural gas and water injection when firing fuel oil and the ppmv NOx levels listed in Part III A.I.1.

Carbon monoxide emissions - The BACT determination is the use of efficient combustion technology inherent to the design of the combustion turbines and the ppmv CO levels listed in Part III A.I.1.

Sulfur dioxide emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as back-up fuel in these combustion turbines and a maximum sulfur content of 0.05 percent by weight of the fuel oil.

Sulfuric acid mist emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as the back-up fuel in these combustion turbines.

- 2.f** "Start-up" shall be defined as the time necessary to bring a turbine on line from a no-load condition to dry low NOx combustion mode during natural gas combustion, not to exceed thirty (30) minutes. Shutdown periods shall not exceed thirty (30) minutes.
- 2.g** If the permittee shows that the unit cannot consistently meet the CO ppm limitations, Ohio EPA will consider an application to modify the permit to install.
- 2.h** "Full load" shall be defined as all periods when the hourly average electrical output exceeds 72 MW.
- 2.i** Based on the evaluation of the PM10 emissions from this emissions unit, it was determined that the PM10 emissions did not trigger the Prevention of Significant Deterioration (PSD) permitting requirements. Therefore, the regulated pollutant for purposes of this permit is particulate emissions and compliance with the particulate emission limitation shall be determined in accordance with the U.S. EPA approved test methods for particulate emissions.

**2. Additional Terms and Conditions (continued)**

- 2.j** In lieu of monitoring the exhaust stack gas flowrate as required by 40 CFR Part 60, Appendix B - Performance Specification 6, the permittee shall use a certified NOx continuous emissions monitoring system in conjunction with a fuel flow monitor as described in 40 CFR Part 75, and certified CO continuous emissions monitoring system in conjunction with a fuel flow monitor (in a manner similar to that used for NOx) to meet these requirements. The relative accuracy requirements of Performance Specifications 6 shall apply to the NOx and CO continuous emissions monitoring systems.

**II. Operational Restrictions**

- 1.** The maximum annual operating hours for emissions units P001, P002, P003 and P004 combined shall not exceed 10016 \*\* while burning natural gas and 4216 \*\* when burning No. 2 fuel oil, based upon a rolling, 12-month summation of the operating hours.

To ensure enforceability during the first twelve calendar months of operation following startup of any one of the emissions units P001 through P004, the permittee shall not exceed the cumulative operating hours specified in the following table:

Month	Maximum allowable cumulative operating hours while burning No. 2 fuel oil
1	1056
1 - 2	2108
1 - 3	3164
1 - 4	4216
1 - 5	4216
1 - 6	4216
1 - 7	4216
1 - 8	4216
1 - 9	4216
1 - 10	4216
1 - 11	4216
1 - 12	4216

\*\*The permittee may combust 1.2 additional hours of natural gas for every hour fuel oil is not combusted, up to 15020 hours annually of natural gas combustion.

After the first 12 calendar months of operation following the startup of or the initial use of fuel oil in any one of the emissions units P001 through P004, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours.

[Authority for term: PTI 08-04153 and OAC rule 3745-77-07(A)(1)]

- 2.** The sulfur content of the No. 2 fuel oil fired in this emissions unit shall not exceed 0.05%, by weight.

[Authority for term: PTI 08-04153 and OAC rule 3745-77-07(A)(1)]

- 3.** In order to establish federally enforceable limitations upon the potential to emit for CO, the permittee shall utilize the continuous CO monitoring system to demonstrate continuous compliance with the hourly and combined annual emissions limitations established by this permit.

[Authority for term: PTI 08-04153 and OAC rule 3745-77-07(A)(1)]

- 4.** The permittee shall burn only pipeline quality natural gas or number two fuel oil in this emissions unit.

[Authority for term: PTI 08-04153 and OAC rule 3745-77-07(A)(1)]

### III. Monitoring and/or Record Keeping Requirements

#### 1. Statement of Certification - NOx Monitoring

- a. The permittee shall operate and maintain equipment to continuously monitor and record NOx emissions from this emissions unit in units of applicable standard(s). Such continuous monitoring and recording equipment shall comply with the applicable requirements specified in 40 CFR Part 60 and 40 CFR Part 75.
- b. Each continuous monitoring system consists of all the equipment used to acquire and record data and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.
- c. The permittee shall maintain on-site documentation from the US EPA or the Ohio EPA that the continuous NOx monitoring system has been certified in accordance with the applicable requirements specified in 40 CFR Part 60 and Part 75. The letter of certification shall be made available to the Director upon request.
- d. The permittee shall maintain records of the following data obtained by the continuous NOx monitoring system: emissions of NOx in ppmvd at 15% oxygen at full load on an hourly average basis, emissions of NOx in lbs/hr, and results of daily zero/span calibration checks, results of quarterly cylinder gas audits, linearity check, or relative accuracy test audits, and magnitude of manual calibration adjustments.
- e. The permittee shall develop a written quality assurance/quality control plan for the continuous NOx monitoring system designed to ensure continuous valid and representative readings of NOx emissions in units of the applicable standard(s). The plan shall follow the applicable requirements of 40 CFR Part 60, Appendix F and 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook documenting the activities related to the continuous NOx monitoring system must be kept on site and available for inspection during regular office hours.
- f. The permittee may conduct the relative accuracy test audits for the continuous nitrogen oxides monitoring system in accordance with the frequencies required for monitoring systems subject to 40 CFR Part 75, Appendix B; however, the permittee is still required to provide the audit results in units of the applicable standard(s), in accordance with 40 CFR Part 60. Cylinder gas audits may be conducted in accordance with the frequencies specified in 40 CFR Part 75, Appendix B for linearity checks. In addition, linearity checks conducted pursuant to 40 CFR Part 75, Appendix B, may be used in place of quarterly cylinder gas audits, as required in 40 CFR Part 60.
- g. Whenever the monitoring system fails to meet the quality assurance or data validation requirements of 40 CFR Part 75, data shall be substituted using the applicable procedures in Subpart D, Appendix D, or Appendix E of 40 CFR Part 75.

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

#### 2. Statement of Certification - CO Monitoring

- a. The permittee shall operate and maintain equipment to continuously monitor and record CO emissions from this emissions units in units of the applicable standard(s). Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.
- b. Each continuous monitoring system consists of all the equipment used to acquire and record data and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.
- c. The permittee shall maintain on-site documentation from the USEPA or the Ohio EPA that the continuous CO monitoring system has been certified in accordance with 40 CFR Part 60. The letter of certification shall be made available to the Director upon request.

### III. Monitoring and/or Record Keeping Requirements (continued)

d. The permittee shall maintain records of the following data obtained by the continuous CO monitoring system: emissions of CO in lbs/hr, results of daily zero/span calibration checks, results of quarterly cylinder gas audits, or relative accuracy test audits, and magnitude of manual calibration adjustments.

e. The permittee shall develop 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). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook documenting the activities related to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.

f. The permittee may conduct the relative accuracy test audits for the continuous carbon monoxide monitoring system in accordance with the frequencies required for monitoring systems subject to 40 CFR Part 75, Appendix B; however, the permittee is still required to provide the audit results in units of the applicable standard(s), in accordance with 40 CFR Part 60. Cylinder gas audits may be conducted in accordance with the frequencies specified in 40 CFR Part 75, Appendix B for linearity checks. In addition, linearity checks conducted pursuant to 40 CFR Part 75, Appendix B, may be used in place of quarterly cylinder gas audits, as required in 40 CFR Part 60.

[Authority for term: 40 CFR Part 60 and OAC rule 3745-77-07(C)(1)]

3. In accordance with 40 CFR Part 60, Subpart GG, Section 60.334(h)(1), the permittee shall monitor the sulfur content of the fuel being fired in the turbine except as provided in 40 CFR 60.334(h)(3). The frequency of determination of this value shall be in accordance with 40 CFR 60.334(i).

[Authority for term: 40 CFR Part 60 and OAC rule 3745-77-07(C)(1)]

4. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated SO<sub>2</sub> emission rate (in lb/mmBtu).

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

5. Pursuant to 40 CFR 60.334(i)(1) or (3), the permittee shall determine fuel sulfur content in accordance with the requirements of 40 CFR 60.335(b)(10)(i) and 60.335(b)(10)(ii).

[Authority for term: 40 CFR Part 60 and OAC rule 3745-77-07(C)(1)]

6. For each day during which the permittee burns a fuel other than pipeline quality natural gas or number two fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

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

7. The permittee shall maintain monthly records of the following information:

- a. The summation of the operating hours for this emissions unit, in hours/month, when burning natural gas and/or when burning No. 2 fuel oil. The summation of the operating hours for emissions units P001, P002, P003 and P004 combined when burning natural gas. The summation of the operating hours for emissions units P001, P002, P003 and P004 combined when burning fuel oil.

- b. During the first twelve calendar months of operation following startup of any one of the emissions units P001 through P004, the cumulative operating hours for each calendar month when burning natural gas and/or when burning No. 2 fuel oil for emissions units P001, P002, P003 and P004 combined. Following the first twelve calendar months of operation following startup of any one of the emissions units P001 through P004, the rolling, 12-month summation of the operating hours for this emissions unit, in hours per rolling, 12-month period when burning natural gas and/or when burning No. 2 fuel oil for emissions units P001, P002, P003 and P004 combined.

### III. Monitoring and/or Record Keeping Requirements (continued)

- c. The actual heat input of this emissions unit, in mmBtu/month, when burning natural gas and/or when burning No. 2 fuel oil.
- d. The rolling, 12-month summation of the particulates/PM10, NO<sub>x</sub>, CO, SO<sub>2</sub>, sulfuric acid mist, VOC, and formaldehyde emissions, in tons, for emissions units P001, P002, P003 and P004 combined. The monthly emissions shall be added to the total emissions from the previous 11 months to determine the rolling, 12-month summation of emissions.
- e. The permittee shall monitor and record all periods of time when the unit is operated at "full load" conditions, based upon definition of full load in Section A.I.2.h.
- f. The date, time and duration, in minutes of each start-up and shutdown. (The terms start-up and shutdown are defined in Section A.I.2.f.)

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

- 8. If the permittee uses 40 CFR Part 75 Appendix D to comply with the SO<sub>2</sub> emissions limit, the permittee shall install, 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 appropriate missing data procedures specified in 40 CFR Part 75.

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

- 9. The permittee shall install, operate and maintain equipment to continuously monitor and record the percent oxygen in the stack serving 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. The monitoring and recording equipment shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

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

### IV. Reporting Requirements

#### 1. Continuous NO<sub>x</sub> Emissions Monitoring

- a. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting the date, commencement and completion time, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of NO<sub>x</sub> values in excess of the applicable emission limitations specified in the terms and conditions of this permit.
- b. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting any continuous NO<sub>x</sub> monitoring system downtime while the emissions unit was on line (date, time, duration, and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.
- c. If there are no excess NO<sub>x</sub> emissions during the calendar quarter, the permittee shall submit a statement to that effect along with date, time, reason, and corrective action(s) taken for each time period of monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

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

#### **IV. Reporting Requirements (continued)**

##### **2. Continuous CO Emissions Monitoring**

- a. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting the date, commencement and completion time, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of CO values in excess of the applicable hourly emission limitations specified in the terms and conditions of this permit.
- b. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting any continuous CO monitoring system downtime while the emissions unit was on line (date, time, duration, and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.
- c. If there are no CO excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the date, time, reason, and corrective action(s) taken for each time period of monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

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

##### **3. The permittee shall submit quarterly deviation (excursion) reports to the Regional Air Pollution Control Agency that identify any exceedances of the following:**

- a. For the first twelve calendar months of operation following startup of any one of the emissions units P001 through P004, all exceedances of the maximum allowable cumulative operating hours limits while burning natural gas and/or No. 2 fuel oil for emissions units P001, P002, P003 and P004 combined.
- b. Beginning after the first twelve calendar months of operation following startup of any one of the emissions units P001 through P004, the rolling, 12-month operating hours limitations while burning natural gas and/or No. 2 fuel oil for emissions units P001, P002, P003 and P004 combined.
- c. Any exceedances of the rolling, 12-month summation of particulates/PM10, NO<sub>x</sub>, CO, SO<sub>2</sub>, sulfuric acid mist, VOC, or formaldehyde emission limitations, in tons, for emissions units P001, P002, P003 and P004, combined.
- d. Any exceedances of the NO<sub>x</sub> ppmv at 15% oxygen on a dry basis emissions limitations at full load conditions.
- e. The allowable duration for all start-up and shutdown periods.
- f. For fuel oil, any exceedances of the 0.05% by weight sulfur content and the calculated SO<sub>2</sub> emissions rate, in lb/mmBtu.
- g. Any time during which the permittee burns a fuel other than pipeline quality natural gas or number two fuel oil.

These reports shall be submitted in accordance with Section A.1. of the General Terms and Conditions of this permit.

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

#### **IV. Reporting Requirements (continued)**

4. The permittee shall submit quarterly reports which identify each period during which an exemption for ice-fog provided in 40 CFR Part 60.332(f) is in effect. The reports shall include the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time when the air pollution control system was reactivated. These reports shall be postmarked by April 30, July 30, October 30, and January 30 and each report shall cover the previous calendar quarter.

[Authority for term: 40 CFR Part 60 and OAC rule 3745-77-07(C)(1)]

#### **V. Testing Requirements**

1. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation -

0.013 lb (particulate emissions/PM10)/mmBtu actual heat input, when firing natural gas

0.026 lb particulate emissions/PM10)/mmBtu actual heat input, when firing No. 2 fuel oil

Applicable Compliance Method -

If required, compliance shall be based upon stack testing in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A and, 40 CFR Part 51, Appendix M, Method 201 or 201A and 202, as specified in A.V.2.

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

b. Emission Limitation -

46.12 tons/year particulate emissions/PM10 as a rolling, 12-month summation combined from emissions units P001, P002, P003 and P004

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined through a summation of the particulate emissions/PM10 from the burning of natural gas and No. 2 fuel oil as follows:

i. The monthly particulate emissions/PM10 from the burning of natural gas shall be determined by multiplying the average emissions in lb particulate/PM10 emissions/mmBtu while burning natural gas derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning natural gas, and dividing by 2,000 lbs/ton.

ii. The monthly particulate emissions/PM10 from the burning of No. 2 fuel oil shall be determined by multiplying the average emissions in lb particulate/PM10 emissions/mmBtu while burning No. 2 fuel oil derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.

iii. The combined rolling, 12-month summation of the particulate emissions/PM10 for emissions units P001, P002, P003 and P004 shall be the sum of (i) and (ii) above for each emissions unit for the rolling, 12-month period.

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

**V. Testing Requirements (continued)**

c. Emission Limitations -

15 ppmvd NO<sub>x</sub> at 15% oxygen, at full load, while burning natural gas, based on a 1-hour average as determined through data from the NO<sub>x</sub> CEMs

42 ppmvd NO<sub>x</sub> at 15% oxygen, at full load, while burning No. 2 fuel oil, based on a 1-hour average as determined through data from the NO<sub>x</sub> CEMs

161 lbs/hour nitrogen oxides at all operating loads, while burning natural gas

269 lbs/hour nitrogen oxides, at all operating loads, while burning No. 2 fuel oil

Applicable Compliance Method -

Initial compliance with the allowable outlet concentration, and the lbs/hour NO<sub>x</sub> emission limitations shall be demonstrated by the performance testing as specified in A.V.2. and continual compliance shall be demonstrated by the use of the CEM specified in A.III.1. and the applicable 40 CFR Part 60 and 75 requirements. Emissions calculated using the 40 CFR Part 75 bias adjustment factor or using missing data procedures due to monitor downtime shall not be used to determine compliance with the hourly emission limitation.

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

d. Emission Limitation -

1373.32 tons/year NO<sub>x</sub> as a rolling, 12-month summation combined from emissions units P001, P002, P003 and P004

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7. and shall be determined through the use of CEMs as specified in A.III.1. The monthly NO<sub>x</sub> emissions shall be added to the total NO<sub>x</sub> emissions from the previous eleven months to determine the rolling, 12-month summation of NO<sub>x</sub> emissions.

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

e. Emission Limitations -

During the first 12 months of operation, 25 ppmvd CO at 15% oxygen as a 3-hr test average at full load, when firing natural gas and No. 2 fuel oil; after the first 12 months of operation, 20 ppmvd CO at 15% oxygen as a 3-hr test average at full load, when firing natural gas and No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10, as specified in A.V.2.

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

**V. Testing Requirements (continued)**

f. Emission Limitations -

413 lbs CO/hour during start-up and shutdown periods, while burning natural gas

301 lbs CO/hour at all operating loads, excluding start-up and shutdown periods, while burning natural gas

800 lbs CO/hour at all operating loads, while burning No. 2 fuel oil

Applicable Compliance Method -

Compliance with the hourly emission limitations shall be based upon the data from the continuous CO emissions monitoring system requirement and the monitoring/record keeping as specified in A.III.2. Except for the start-up and shutdown emissions limit, compliance shall also be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10, as specified in A.V.2.

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

g. Emission Limitation -

724 tons/year CO, as a rolling, 12-month summation combined from units P001, P002, P003 and P004, including periods of start-up and shutdown

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7. and shall be determined through the use of CEMs as specified in A.III.2. The monthly CO emissions shall be added to the total CO emissions from the previous eleven months to determine the rolling, 12-month summation of CO emissions.

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

h. Emission Limitation -

0.0026 lb SO<sub>2</sub>/mmBtu actual heat input, while burning natural gas

0.055 lb SO<sub>2</sub>/mmBtu actual heat input, while burning No. 2 fuel oil

Applicable Compliance Method -

When firing natural gas, compliance with this limitation will be assumed due to the negligible percent sulfur, by weight, in the fuel. If required, the permittee shall perform or require the supplier to perform an analysis of the natural gas for sulfur content, in accordance with the appropriate ASTM method or an equivalent method as approved by the Director, in order to demonstrate compliance with this emission limitation using the appropriate equation specified in AP-42 Table 3.1-2a (4/00). When firing number two fuel oil, compliance shall be based upon the fuel analysis and record keeping requirements specified in A.II.2. and A.III.4. and the use of the equations specified in OAC rule 3745-18-04(F).

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

## V. Testing Requirements (continued)

i. Emission Limitation -

138.6 tons/year SO<sub>2</sub> as a rolling, 12-month summation combined from units P001, P002, P003 and P004

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7. and shall be determined through a summation of the SO<sub>2</sub> emissions from the burning of natural gas and No. 2 fuel oil as follows:

i. The monthly SO<sub>2</sub> emissions from the burning of natural gas shall be determined by multiplying the USEPA default value for pipeline quality natural gas (0.0006 lb SO<sub>2</sub>/mmBtu) by the actual heat input of this emissions unit for the month while burning natural gas, and dividing by 2,000 lbs/ton.

ii. The monthly SO<sub>2</sub> emissions from the burning of No. 2 fuel oil shall be determined by multiplying the average calculated SO<sub>2</sub> emission rate (determined as an arithmetic average of the calculated SO<sub>2</sub> emission rates for the shipments received each month in A.III.4. (lb/mmBtu)) by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.

iii. The combined rolling, 12-month summation of the SO<sub>2</sub> emissions for emissions units P001, P002, P003 and P004 shall be the sum of (i) and (ii) above for each emissions unit for the rolling, 12-month period.

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

j. Emission Limitation -

0.0054 lb sulfuric acid mist/mmBtu actual heat input

Applicable Compliance Method -

Compliance shall be based upon stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 8 as specified in A.V.2.

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

k. Emission Limitation -

12.64 tons/year sulfuric acid mist, as a rolling, 12-month summation combined from units P001, P002, P003 and P004

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7. and shall be determined by multiplying the average emissions in lb sulfuric acid mist/mmBtu derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton. The monthly sulfuric acid mist emissions for each emissions units P001, P002, P003 and P004 shall be summed and added to the total sulfuric acid mist emissions from the previous eleven months to determine the combined rolling, 12-month summation of sulfuric acid mist emissions for emissions units P001, P002, P003 and P004.

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

**V. Testing Requirements (continued)**

**l. Emission Limitation -**

4 lbs/hour VOC, while burning natural gas

5.5 lbs/hour VOC, while burning No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be based upon stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 18, 25, or 25A, as specified in A.V.2.

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

**m. Emission Limitation -**

31.64 tons/year VOC, as a rolling, 12-month summation combined from units P001, P002, P003 and P004

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7. and shall be determined through a summation of the VOC emissions from the burning of natural gas and No. 2 fuel oil as follows:

- i. The monthly VOC emissions from the burning of natural gas shall be determined by multiplying the average emissions in lb VOC/hour while burning natural gas derived from the stack test conducted in accordance with A.V.2. by the operating hours for the month while burning natural gas, and dividing by 2,000 lbs/ton.
- ii. The monthly VOC emissions from the burning of No. 2 fuel oil shall be determined by multiplying the average emissions in lb VOC/hour while burning No. 2 fuel oil derived from the stack test conducted in accordance with A.V.2. by the operating hours for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.
- iii. The combined rolling, 12-month summation of the VOC emissions for emissions units P001, P002, P003 and P004 shall be the sum of (i) and (ii) above for each emissions unit for the rolling, 12-month period.

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

**n. Emission Limitation -**

0.000713 lb formaldehyde/mmBtu actual heat input

Applicable Compliance Method -

When firing natural gas, compliance shall be based upon stack testing in accordance with USEPA Method SW846, as specified in A.V.2. When firing No. 2 fuel oil, compliance shall be based upon the AP-42 Table 3.1-4 (4/00) emission factor of 0.00028 lb formaldehyde/mmBtu.

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

**V. Testing Requirements (continued)**

o. Emission Limitation -

5.92 tons/year formaldehyde, as a rolling, 12-month summation combined from units P001, P002, P003 and P004

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7. and shall be determined through a summation of the formaldehyde emissions from the burning of natural gas and No. 2 fuel oil as follows:

i. The monthly formaldehyde emissions from the burning of natural gas shall be determined by multiplying the average emissions in lb formaldehyde/mmBtu while burning natural gas derived from the stack test by the actual heat input of this emissions unit for the month while burning natural gas, divided by 2,000 lbs/ton.

ii. The monthly formaldehyde emissions from the burning of No.2 fuel oil shall be determined by multiplying the AP-42 Table 3.1-4 (4/00) of 0.00028 lb formaldehyde/mmBtu while burning No. 2 fuel oil by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil , divided by 2,000 lbs/ton.

iii. The combined rolling, 12-month summation of the formaldehyde emissions for emissions units P001, P002, P003 and P004 shall be the sum of (i) and (ii) above for each emissions unit for the rolling, 12-month period.

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

p. Emission Limitation -

20% opacity, as a six-minute average

Applicable Compliance Method -

Compliance shall be determined through visible emission observations performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in USEPA Reference Method 9.

[Authority for term: OAC rules 3745-17-03(B)(1) and 3745-77-07(C)(1)]

q. Emission Limitation -

0.05% sulfur, by weight, of the No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be based upon fuel oil sampling as specified in A.III.3, A.III.4, and A.III.5.

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

r. Emission Limitation -

10,016 hours of operation, as a rolling, 12-month summation while burning natural gas

4,216 hours of operation, as a rolling, 12-month summation while burning No. 2 fuel oil

1.2 hours of operation of natural gas may be added for every hour No. 2 fuel oil is not burned, with total natural gas operation not to exceed 15,020 hours as a rolling, 12-month summation.

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7.

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

## V. Testing Requirements (continued)

2. Upon initial use of fuel oil, the permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emission testing shall be conducted within 60 days after initiating fuel oil firing in this emissions unit.
  - b. The emission testing shall be conducted to demonstrate compliance with the particulates/PM10, NOx, CO, VOC, and sulfuric acid mist emission rates.
  - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for particulates/PM10, Methods 1 through 5 of 40 CFR Part 60, Appendix A and 40 CFR Part 51, Appendix M, Method 201 or 201A and 202; for NOx, Methods 1 through 4 and 7 or 7E of 40 CFR Part 60, Appendix A; for CO, Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A; for VOC, Methods 1 through 4 and 18, 25, or 25A of 40 CFR Part 60, Appendix A; for formaldehyde, Method SW846; for sulfuric acid mist, Methods 1 through 4 and 8 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from RAPCA.

\*\* the permittee has requested that if the average emission rate (lbs/hour) derived from the stack test conducted in accordance with this terms is less than the permit VOC allowable listed in term A.I.1., it may apply for an air permit to install modification to increase the hours of operation. The permittee realizes that this modification might trigger the requirement to secure either an administrative or a new air permit to install.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Regional Air Pollution Control Agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Regional Air Pollution Control Agency's refusal to accept the results of the emission test(s).

Personnel from the Regional Air Pollution Control Agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Regional Air Pollution Control Agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Regional Air Pollution Control Agency.

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

## VI. Miscellaneous Requirements

**None**

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P002 - natural gas and No. 2 fuel oil fired simple cycle stationary combustion turbine No. 5 - Tait CT5, with a nominal production rating of 80 MW and a nominal heat input of 1115.2 mmBtu/hour, with dry low NOx combustion and water injection controls	None	None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

- The permit to install for this emissions unit (P002) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the ISCST3 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: formaldehyde

TLV (mg/m3): 0.37

Maximum Hourly Emission Rate (lbs/hr): 1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1.6971

MAGLC (ug/m3): 8.81

### III. Monitoring and/or Record Keeping Requirements (continued)

Pollutant: beryllium

TLV (mg/m<sup>3</sup>): 0.002

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 0.0008

MAGLC (ug/m<sup>3</sup>): 0.05

Pollutant: arsenic

TLV (mg/m<sup>3</sup>): 0.01

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 0.0123

MAGLC (ug/m<sup>3</sup>): 0.24

Pollutant: benzene

TLV (mg/m<sup>3</sup>): 1.60

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 0.2142

MAGLC (ug/m<sup>3</sup>): 38.10

Pollutant: sulfuric acid mist

TLV (mg/m<sup>3</sup>): 1.00

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 13.56

MAGLC (ug/m<sup>3</sup>): 23.81

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

- a. changes in the composition of the materials used, or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

### **III. Monitoring and/or Record Keeping Requirements (continued)**

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

[Authority for term: PTI 08-04153 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
  - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
  - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
  - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

[Authority for term: PTI 08-04153 and OAC rule 3745-77-07(C)(1)]

### **IV. Reporting Requirements**

**None**

### **V. Testing Requirements**

**None**

### **VI. Miscellaneous Requirements**

**None**

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** CT6 - Combustion Turbine No. 6 (P003)

**Activity Description:** Natural gas-fired combustion turbine w/ No. 2 oil backup; 1,114.6 MMBtu/hr (80 MW) nominal capacity.

#### A. State and Federally Enforceable Section

##### I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P003 - natural gas and No. 2 fuel oil fired simple cycle stationary combustion turbine No. 6 - Tait CT6, with a nominal production rating of 80 MW and a nominal heat input of 1115.2 mmBtu/hour, with dry low NOx combustion and water injection controls	40 CFR Part 52, Section 52.21 and OAC rule 3745-31-10 through OAC rule 3745-31-20	<p>Particulate/PM10 emissions from this emissions unit shall not exceed 0.013 lb/mmBtu actual heat input when firing natural gas; 0.026 lb/mmBtu actual heat input when firing No. 2 fuel oil, and 46.12 TPY as a rolling, 12-month summation combined from emissions units P001, P002, P003 and P004.</p> <p>Nitrogen oxides (NOx) emissions from this emissions unit shall not exceed 15 ppmv at 15% oxygen on a dry basis at full load, when firing natural gas, based on a one-hour average as determined through data from the NOx continuous emission monitoring system (CEMs); 161 lbs/hr at all operating loads when firing natural gas; 42 ppmv at 15% oxygen on a dry basis at full load, when firing No.2 fuel oil, based on a one-hour average as determined through data from the NOx CEMs; 269 lbs/hr at all operating loads when firing No. 2 fuel oil; and 1373.32 TPY as a rolling, 12-month summation combined from emissions units P001, P002, P003 and P004.</p>

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
		<p>Carbon monoxide (CO) emissions from this emissions unit shall not exceed, during the first 12 months of operation, 25 ppmv at 15% oxygen on a dry basis, when firing natural gas and No. 2 fuel oil, based on a 3-hour test average at full load; after the first 12 months of operation, 20 ppmv at 15% oxygen on a dry basis, when firing natural gas and No. 2 fuel oil, based on a 3-hour test average at full load (also see A.2.g).</p> <p>CO emissions from this emissions unit shall not exceed 301 lbs/hr at all operating loads, excluding start-up and shutdown periods when firing natural gas; 413 lbs/hr during start-up and shutdown periods when firing natural gas; 800 lbs/hr at all operating loads, when firing No. 2 fuel oil; and 724 TPY as a rolling, 12-month summation combined from units P001, P002, P003 and P004, including periods of start-up and shutdown.</p> <p>Sulfur dioxide (SO<sub>2</sub>) emissions from this emissions unit shall not exceed 0.0026 lb/mmBtu actual heat input, when firing natural gas; 0.055 lb/mmBtu actual heat input, when firing No. 2 fuel oil; and 138.6 tons/year as a rolling, 12-month summation combined from units P001, P002, P003 and P004.</p> <p>Sulfuric acid mist emissions from this emissions unit, during oil-firing only, shall not exceed 0.0054 lb/mmBtu, actual heat input and 12.64 TPY as a rolling, 12-month summation combined from units P001, P002, P003 and P004.</p> <p>Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 31.64 TPY as a rolling, 12-month summation combined from units P001, P002, P003 and P004.</p> <p>Formaldehyde emissions from this emissions unit shall not exceed 5.92 TPY as a rolling, 12-month summation combined from units P001, P002, P003 and P004.</p>
	<p>OAC rule 3745-31-05 (C) Synthetic minor to avoid PSD rule requirements</p>	
	<p>OAC rule 3745-31-05 (C) Synthetic minor to avoid MACT rule requirements</p>	

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-31-05(A)(3) PTI 08-04153	VOC emissions from this emissions unit shall not exceed 4 lbs/hr when firing natural gas and 5.5 lbs/hr when firing No. 2 fuel oil.
		Formaldehyde emissions from this emissions unit shall not exceed 0.000713 lb formaldehyde/mmBtu actual heat input.
		The requirements of this rule also include compliance with the requirements of 40 CFR Part 52, Section 52.21 and OAC rules 3745-31-10 through 3745-31-20; OAC rule 3745-31-05 (C); and OAC rule 3745-17-07(A)(1).
	40 CFR Part 75	See Part I, Term A.4.
	OAC rule 3745-17-11(B)(4) OAC rule 3745-18-06(F) 40 CFR Part 60, Subpart GG	The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to 40 CFR Part 52, Sections 52.21 and OAC rules 3745-31-10 through 3745-31-20.
	OAC rules 3745-21-08 (B) and 3745-23-06 (B)	See A.I.2.d. below

**2. Additional Terms and Conditions**

- 2.a** The listed particulate/PM10 emission limitations are more stringent than the requirements of OAC rule 3745-17-11(B)(4). They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".
- 2.b** The listed nitrogen oxides emission limitations are more stringent than the requirements of 40 CFR Part 60, Subpart GG and OAC rule 3745-23-06. They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".
- 2.c** The listed sulfur dioxide emission limitations are more stringent than the requirements of 40 CFR Part 60, Subpart GG and OAC rule 3745-18-06(F). They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".

## **2. Additional Terms and Conditions (continued)**

- 2.d** The permittee has satisfied the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively by committing to comply with the best available technology (BAT) and best available control technology (BACT) requirements established pursuant to this permit to install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally approved SIP for Ohio.

On February 15, 2005, OAC rule 3745-23-06 was rescinded; therefore, it is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally approved SIP for Ohio.

The listed NO<sub>x</sub> and CO emission limitations were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".

- 2.e** The following Best Available Control Technology (BACT) determinations have been made in accordance with the PSD regulations:

Particulate/PM<sub>10</sub> Emissions - The BACT determination is the use of only clean burning fuels, natural gas and No. 2 fuel oil in these combustion turbines, capable of meeting the emission limitations listed in Part III A.I.1.

Nitrogen oxide emissions - The BACT determination is the use of dry low-NO<sub>x</sub> burners (DLNB) when firing natural gas and water injection when firing fuel oil and the ppmv NO<sub>x</sub> levels listed in Part III A.I.1.

Carbon monoxide emissions - The BACT determination is the use of efficient combustion technology inherent to the design of the combustion turbines and the ppmv CO levels listed in Part III A.I.1.

Sulfur dioxide emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as back-up fuel in these combustion turbines and a maximum sulfur content of 0.05 percent by weight of the fuel oil.

Sulfuric acid mist emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as the back-up fuel in these combustion turbines.

- 2.f** "Start-up" shall be defined as the time necessary to bring a turbine on line from a no-load condition to dry low NO<sub>x</sub> combustion mode during natural gas combustion, not to exceed thirty (30) minutes. Shutdown periods shall not exceed thirty (30) minutes.
- 2.g** If the permittee shows that the unit cannot consistently meet the CO ppm limitations, Ohio EPA will consider an application to modify the permit to install.
- 2.h** "Full load" shall be defined as all periods when the hourly average electrical output exceeds 72 MW.
- 2.i** Based on the evaluation of the PM<sub>10</sub> emissions from this emissions unit, it was determined that the PM<sub>10</sub> emissions did not trigger the Prevention of Significant Deterioration (PSD) permitting requirements. Therefore, the regulated pollutant for purposes of this permit is particulate emissions and compliance with the particulate emission limitation shall be determined in accordance with the U.S. EPA approved test methods for particulate emissions.

**2. Additional Terms and Conditions (continued)**

- 2.j** In lieu of monitoring the exhaust stack gas flowrate as required by 40 CFR Part 60, Appendix B - Performance Specification 6, the permittee shall use a certified NOx continuous emissions monitoring system in conjunction with a fuel flow monitor as described in 40 CFR Part 75, and certified CO continuous emissions monitoring system in conjunction with a fuel flow monitor (in a manner similar to that used for NOx) to meet these requirements. The relative accuracy requirements of Performance Specifications 6 shall apply to the NOx and CO continuous emissions monitoring systems.

**II. Operational Restrictions**

- 1.** The maximum annual operating hours for emissions units P001, P002, P003 and P004 combined shall not exceed 10016 \*\* while burning natural gas and 4216 \*\* when burning No. 2 fuel oil, based upon a rolling, 12-month summation of the operating hours.

To ensure enforceability during the first twelve calendar months of operation following startup of any one of the emissions units P001 through P004, the permittee shall not exceed the cumulative operating hours specified in the following table:

Month	Maximum allowable cumulative operating hours while burning No. 2 fuel oil
1	1056
1 - 2	2108
1 - 3	3164
1 - 4	4216
1 - 5	4216
1 - 6	4216
1 - 7	4216
1 - 8	4216
1 - 9	4216
1 - 10	4216
1 - 11	4216
1 - 12	4216

\*\*The permittee may combust 1.2 additional hours of natural gas for every hour fuel oil is not combusted, up to 15020 hours annually of natural gas combustion.

After the first 12 calendar months of operation following the startup of or the initial use of fuel oil in any one of the emissions units P001 through P004, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours.

[Authority for term: PTI 08-04153 and OAC rule 3745-77-07(A)(1)]

- 2.** The sulfur content of the No. 2 fuel oil fired in this emissions unit shall not exceed 0.05%, by weight.

[Authority for term: PTI 08-04153 and OAC rule 3745-77-07(A)(1)]

- 3.** In order to establish federally enforceable limitations upon the potential to emit for CO, the permittee shall utilize the continuous CO monitoring system to demonstrate continuous compliance with the hourly and combined annual emissions limitations established by this permit.

[Authority for term: PTI 08-04153 and OAC rule 3745-77-07(A)(1)]

- 4.** The permittee shall burn only pipeline quality natural gas or number two fuel oil in this emissions unit.

[Authority for term: PTI 08-04153 and OAC rule 3745-77-07(A)(1)]

### III. Monitoring and/or Record Keeping Requirements

#### 1. Statement of Certification - NOx Monitoring

- a. The permittee shall operate and maintain equipment to continuously monitor and record NOx emissions from this emissions unit in units of applicable standard(s). Such continuous monitoring and recording equipment shall comply with the applicable requirements specified in 40 CFR Part 60 and 40 CFR Part 75.
- b. Each continuous monitoring system consists of all the equipment used to acquire and record data and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.
- c. The permittee shall maintain on-site documentation from the US EPA or the Ohio EPA that the continuous NOx monitoring system has been certified in accordance with the applicable requirements specified in 40 CFR Part 60 and Part 75. The letter of certification shall be made available to the Director upon request.
- d. The permittee shall maintain records of the following data obtained by the continuous NOx monitoring system: emissions of NOx in ppmvd at 15% oxygen at full load on an hourly average basis, emissions of NOx in lbs/hr, and results of daily zero/span calibration checks, results of quarterly cylinder gas audits, linearity check, or relative accuracy test audits, and magnitude of manual calibration adjustments.
- e. The permittee shall develop a written quality assurance/quality control plan for the continuous NOx monitoring system designed to ensure continuous valid and representative readings of NOx emissions in units of the applicable standard(s). The plan shall follow the applicable requirements of 40 CFR Part 60, Appendix F and 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook documenting the activities related to the continuous NOx monitoring system must be kept on site and available for inspection during regular office hours.
- f. The permittee may conduct the relative accuracy test audits for the continuous nitrogen oxides monitoring system in accordance with the frequencies required for monitoring systems subject to 40 CFR Part 75, Appendix B; however, the permittee is still required to provide the audit results in units of the applicable standard(s), in accordance with 40 CFR Part 60. Cylinder gas audits may be conducted in accordance with the frequencies specified in 40 CFR Part 75, Appendix B for linearity checks. In addition, linearity checks conducted pursuant to 40 CFR Part 75, Appendix B, may be used in place of quarterly cylinder gas audits, as required in 40 CFR Part 60.
- g. Whenever the monitoring system fails to meet the quality assurance or data validation requirements of 40 CFR Part 75, data shall be substituted using the applicable procedures in Subpart D, Appendix D, or Appendix E of 40 CFR Part 75.

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

#### 2. Statement of Certification - CO Monitoring

- a. The permittee shall operate and maintain equipment to continuously monitor and record CO emissions from this emissions units in units of the applicable standard(s). Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.
- b. Each continuous monitoring system consists of all the equipment used to acquire and record data and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.
- c. The permittee shall maintain on-site documentation from the USEPA or the Ohio EPA that the continuous CO monitoring system has been certified in accordance with 40 CFR Part 60. The letter of certification shall be made available to the Director upon request.

### III. Monitoring and/or Record Keeping Requirements (continued)

d. The permittee shall maintain records of the following data obtained by the continuous CO monitoring system: emissions of CO in lbs/hr, results of daily zero/span calibration checks, results of quarterly cylinder gas audits, or relative accuracy test audits, and magnitude of manual calibration adjustments.

e. The permittee shall develop 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). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook documenting the activities related to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.

f. The permittee may conduct the relative accuracy test audits for the continuous carbon monoxide monitoring system in accordance with the frequencies required for monitoring systems subject to 40 CFR Part 75, Appendix B; however, the permittee is still required to provide the audit results in units of the applicable standard(s), in accordance with 40 CFR Part 60. Cylinder gas audits may be conducted in accordance with the frequencies specified in 40 CFR Part 75, Appendix B for linearity checks. In addition, linearity checks conducted pursuant to 40 CFR Part 75, Appendix B, may be used in place of quarterly cylinder gas audits, as required in 40 CFR Part 60.

[Authority for term: 40 CFR Part 60 and OAC rule 3745-77-07(C)(1)]

3. In accordance with 40 CFR Part 60, Subpart GG, Section 60.334(h)(1), the permittee shall monitor the sulfur content of the fuel being fired in the turbine except as provided in 40 CFR 60.334(h)(3). The frequency of determination of this value shall be in accordance with 40 CFR 60.334(i).

[Authority for term: 40 CFR Part 60 and OAC rule 3745-77-07(C)(1)]

4. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated SO<sub>2</sub> emission rate (in lb/mmBtu).

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

5. Pursuant to 40 CFR 60.334(i)(1) or (3), the permittee shall determine fuel sulfur content in accordance with the requirements of 40 CFR 60.335(b)(10)(i) and 60.335(b)(10)(ii).

[Authority for term: 40 CFR Part 60 and OAC rule 3745-77-07(C)(1)]

6. For each day during which the permittee burns a fuel other than pipeline quality natural gas or number two fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

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

7. The permittee shall maintain monthly records of the following information:

a. The summation of the operating hours for this emissions unit, in hours/month, when burning natural gas and/or when burning No. 2 fuel oil. The summation of the operating hours for emissions units P001, P002, P003 and P004 combined when burning natural gas. The summation of the operating hours for emissions units P001, P002, P003 and P004 combined when burning fuel oil.

b. During the first twelve calendar months of operation following startup of any one of the emissions units P001 through P004, the cumulative operating hours for each calendar month when burning natural gas and/or when burning No. 2 fuel oil for emissions units P001, P002, P003 and P004 combined. Following the first twelve calendar months of operation following startup of any one of the emissions units P001 through P004, the rolling, 12-month summation of the operating hours for this emissions unit, in hours per rolling, 12-month period when burning natural gas and/or when burning No. 2 fuel oil for emissions units P001, P002, P003 and P004 combined.

### III. Monitoring and/or Record Keeping Requirements (continued)

- c. The actual heat input of this emissions unit, in mmBtu/month, when burning natural gas and/or when burning No. 2 fuel oil.
- d. The rolling, 12-month summation of the particulates/PM10, NOx, CO, SO2, sulfuric acid mist, VOC, and formaldehyde emissions, in tons, for emissions units P001, P002, P003 and P004 combined. The monthly emissions shall be added to the total emissions from the previous 11 months to determine the rolling, 12-month summation of emissions.
- e. The permittee shall monitor and record all periods of time when the unit is operated at "full load" conditions, based upon definition of full load in Section A.I.2.h.
- f. The date, time and duration, in minutes of each start-up and shutdown. (The terms start-up and shutdown are defined in Section A.I.2.f.)

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

- 8. If the permittee uses 40 CFR Part 75 Appendix D to comply with the SO2 emissions limit, the permittee shall install, 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 appropriate missing data procedures specified in 40 CFR Part 75.

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

- 9. The permittee shall install, operate and maintain equipment to continuously monitor and record the percent oxygen in the stack serving 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. The monitoring and recording equipment shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

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

### IV. Reporting Requirements

#### 1. Continuous NOx Emissions Monitoring

- a. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting the date, commencement and completion time, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of NOx values in excess of the applicable emission limitations specified in the terms and conditions of this permit.
- b. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting any continuous NOx monitoring system downtime while the emissions unit was on line (date, time, duration, and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.
- c. If there are no excess NOx emissions during the calendar quarter, the permittee shall submit a statement to that effect along with date, time, reason, and corrective action(s) taken for each time period of monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

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

#### IV. Reporting Requirements (continued)

##### 2. Continuous CO Emissions Monitoring

- a. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting the date, commencement and completion time, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of CO values in excess of the applicable hourly emission limitations specified in the terms and conditions of this permit.
- b. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting any continuous CO monitoring system downtime while the emissions unit was on line (date, time, duration, and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.
- c. If there are no CO excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the date, time, reason, and corrective action(s) taken for each time period of monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

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

##### 3. The permittee shall submit quarterly deviation (excursion) reports to the Regional Air Pollution Control Agency that identify any exceedances of the following:

- a. For the first twelve calendar months of operation following startup of any one of the emissions units P001 through P004, all exceedances of the maximum allowable cumulative operating hours limits while burning natural gas and/or No. 2 fuel oil for emissions units P001, P002, P003 and P004 combined.
- b. Beginning after the first twelve calendar months of operation following startup of any one of the emissions units P001 through P004, the rolling, 12-month operating hours limitations while burning natural gas and/or No. 2 fuel oil for emissions units P001, P002, P003 and P004 combined.
- c. Any exceedances of the rolling, 12-month summation of particulates/PM10, NO<sub>x</sub>, CO, SO<sub>2</sub>, sulfuric acid mist, VOC, or formaldehyde emission limitations, in tons, for emissions units P001, P002, P003 and P004, combined.
- d. Any exceedances of the NO<sub>x</sub> ppmv at 15% oxygen on a dry basis emissions limitations at full load conditions.
- e. The allowable duration for all start-up and shutdown periods.
- f. For fuel oil, any exceedances of the 0.05% by weight sulfur content and the calculated SO<sub>2</sub> emissions rate, in lb/mmBtu.
- g. Any time during which the permittee burns a fuel other than pipeline quality natural gas or number two fuel oil.

These reports shall be submitted in accordance with Section A.1. of the General Terms and Conditions of this permit.

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

#### **IV. Reporting Requirements (continued)**

4. The permittee shall submit quarterly reports which identify each period during which an exemption for ice-fog provided in 40 CFR Part 60.332(f) is in effect. The reports shall include the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time when the air pollution control system was reactivated. These reports shall be postmarked by April 30, July 30, October 30, and January 30 and each report shall cover the previous calendar quarter.

[Authority for term: 40 CFR Part 60 and OAC rule 3745-77-07(C)(1)]

#### **V. Testing Requirements**

1. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation -

0.013 lb (particulate emissions/PM10)/mmBtu actual heat input, when firing natural gas

0.026 lb particulate emissions/PM10)/mmBtu actual heat input, when firing No. 2 fuel oil

Applicable Compliance Method -

If required, compliance shall be based upon stack testing in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A and, 40 CFR Part 51, Appendix M, Method 201 or 201A and 202, as specified in A.V.2.

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

b. Emission Limitation -

46.12 tons/year particulate emissions/PM10 as a rolling, 12-month summation combined from emissions units P001, P002, P003 and P004

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined through a summation of the particulate emissions/PM10 from the burning of natural gas and No. 2 fuel oil as follows:

i. The monthly particulate emissions/PM10 from the burning of natural gas shall be determined by multiplying the average emissions in lb particulate/PM10 emissions/mmBtu while burning natural gas derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning natural gas, and dividing by 2,000 lbs/ton.

ii. The monthly particulate emissions/PM10 from the burning of No. 2 fuel oil shall be determined by multiplying the average emissions in lb particulate/PM10 emissions/mmBtu while burning No. 2 fuel oil derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.

iii. The combined rolling, 12-month summation of the particulate emissions/PM10 for emissions units P001, P002, P003 and P004 shall be the sum of (i) and (ii) above for each emissions unit for the rolling, 12-month period.

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

**V. Testing Requirements (continued)**

c. Emission Limitations -

15 ppmvd NO<sub>x</sub> at 15% oxygen, at full load, while burning natural gas, based on a 1-hour average as determined through data from the NO<sub>x</sub> CEMs

42 ppmvd NO<sub>x</sub> at 15% oxygen, at full load, while burning No. 2 fuel oil, based on a 1-hour average as determined through data from the NO<sub>x</sub> CEMs

161 lbs/hour nitrogen oxides at all operating loads, while burning natural gas

269 lbs/hour nitrogen oxides, at all operating loads, while burning No. 2 fuel oil

Applicable Compliance Method -

Initial compliance with the allowable outlet concentration, and the lbs/hour NO<sub>x</sub> emission limitations shall be demonstrated by the performance testing as specified in A.V.2. and continual compliance shall be demonstrated by the use of the CEM specified in A.III.1. and the applicable 40 CFR Part 60 and 75 requirements. Emissions calculated using the 40 CFR Part 75 bias adjustment factor or using missing data procedures due to monitor downtime shall not be used to determine compliance with the hourly emission limitation.

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

d. Emission Limitation -

1373.32 tons/year NO<sub>x</sub> as a rolling, 12-month summation combined from emissions units P001, P002, P003 and P004

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7. and shall be determined through the use of CEMs as specified in A.III.1. The monthly NO<sub>x</sub> emissions shall be added to the total NO<sub>x</sub> emissions from the previous eleven months to determine the rolling, 12-month summation of NO<sub>x</sub> emissions.

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

e. Emission Limitations -

During the first 12 months of operation, 25 ppmvd CO at 15% oxygen as a 3-hr test average at full load, when firing natural gas and No. 2 fuel oil; after the first 12 months of operation, 20 ppmvd CO at 15% oxygen as a 3-hr test average at full load, when firing natural gas and No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10, as specified in A.V.2.

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

**V. Testing Requirements (continued)**

f. Emission Limitations -

413 lbs CO/hour during start-up and shutdown periods, while burning natural gas

301 lbs CO/hour at all operating loads, excluding start-up and shutdown periods, while burning natural gas

800 lbs CO/hour at all operating loads, while burning No. 2 fuel oil

Applicable Compliance Method -

Compliance with the hourly emission limitations shall be based upon the data from the continuous CO emissions monitoring system requirement and the monitoring/record keeping as specified in A.III.2. Except for the start-up and shutdown emissions limit, compliance shall also be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10, as specified in A.V.2.

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

g. Emission Limitation -

724 tons/year CO, as a rolling, 12-month summation combined from units P001, P002, P003 and P004, including periods of start-up and shutdown

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7. and shall be determined through the use of CEMs as specified in A.III.2. The monthly CO emissions shall be added to the total CO emissions from the previous eleven months to determine the rolling, 12-month summation of CO emissions.

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

h. Emission Limitation -

0.0026 lb SO<sub>2</sub>/mmBtu actual heat input, while burning natural gas

0.055 lb SO<sub>2</sub>/mmBtu actual heat input, while burning No. 2 fuel oil

Applicable Compliance Method -

When firing natural gas, compliance with this limitation will be assumed due to the negligible percent sulfur, by weight, in the fuel. If required, the permittee shall perform or require the supplier to perform an analysis of the natural gas for sulfur content, in accordance with the appropriate ASTM method or an equivalent method as approved by the Director, in order to demonstrate compliance with this emission limitation using the appropriate equation specified in AP-42 Table 3.1-2a (4/00). When firing number two fuel oil, compliance shall be based upon the fuel analysis and record keeping requirements specified in A.II.2. and A.III.4. and the use of the equations specified in OAC rule 3745-18-04(F).

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

**V. Testing Requirements (continued)**

i. Emission Limitation -

138.6 tons/year SO<sub>2</sub> as a rolling, 12-month summation combined from units P001, P002, P003 and P004

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7. and shall be determined through a summation of the SO<sub>2</sub> emissions from the burning of natural gas and No. 2 fuel oil as follows:

i. The monthly SO<sub>2</sub> emissions from the burning of natural gas shall be determined by multiplying the USEPA default value for pipeline quality natural gas (0.0006 lb SO<sub>2</sub>/mmBtu) by the actual heat input of this emissions unit for the month while burning natural gas, and dividing by 2,000 lbs/ton.

ii. The monthly SO<sub>2</sub> emissions from the burning of No. 2 fuel oil shall be determined by multiplying the average calculated SO<sub>2</sub> emission rate (determined as an arithmetic average of the calculated SO<sub>2</sub> emission rates for the shipments received each month in A.III.4. (lb/mmBtu)) by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.

iii. The combined rolling, 12-month summation of the SO<sub>2</sub> emissions for emissions units P001, P002, P003 and P004 shall be the sum of (i) and (ii) above for each emissions unit for the rolling, 12-month period.

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

j. Emission Limitation -

0.0054 lb sulfuric acid mist/mmBtu actual heat input

Applicable Compliance Method -

Compliance shall be based upon stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 8 as specified in A.V.2.

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

k. Emission Limitation -

12.64 tons/year sulfuric acid mist, as a rolling, 12-month summation combined from units P001, P002, P003 and P004

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7. and shall be determined by multiplying the average emissions in lb sulfuric acid mist/mmBtu derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton. The monthly sulfuric acid mist emissions for each emissions units P001, P002, P003 and P004 shall be summed and added to the total sulfuric acid mist emissions from the previous eleven months to determine the combined rolling, 12-month summation of sulfuric acid mist emissions for emissions units P001, P002, P003 and P004.

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

**V. Testing Requirements (continued)**

I. Emission Limitation -

4 lbs/hour VOC, while burning natural gas

5.5 lbs/hour VOC, while burning No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be based upon stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 18, 25, or 25A, as specified in A.V.2.

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

m. Emission Limitation -

31.64 tons/year VOC, as a rolling, 12-month summation combined from units P001, P002, P003 and P004

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7. and shall be determined through a summation of the VOC emissions from the burning of natural gas and No. 2 fuel oil as follows:

- i. The monthly VOC emissions from the burning of natural gas shall be determined by multiplying the average emissions in lb VOC/hour while burning natural gas derived from the stack test conducted in accordance with A.V.2. by the operating hours for the month while burning natural gas, and dividing by 2,000 lbs/ton.
- ii. The monthly VOC emissions from the burning of No. 2 fuel oil shall be determined by multiplying the average emissions in lb VOC/hour while burning No. 2 fuel oil derived from the stack test conducted in accordance with A.V.2. by the operating hours for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.
- iii. The combined rolling, 12-month summation of the VOC emissions for emissions units P001, P002, P003 and P004 shall be the sum of (i) and (ii) above for each emissions unit for the rolling, 12-month period.

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

n. Emission Limitation -

0.000713 lb formaldehyde/mmBtu actual heat input

Applicable Compliance Method -

When firing natural gas, compliance shall be based upon stack testing in accordance with USEPA Method SW846, as specified in A.V.2. When firing No. 2 fuel oil, compliance shall be based upon the AP-42 Table 3.1-4 (4/00) emission factor of 0.00028 lb formaldehyde/mmBtu.

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

**V. Testing Requirements (continued)**

o. Emission Limitation -

5.92 tons/year formaldehyde, as a rolling, 12-month summation combined from units P001, P002, P003 and P004

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7. and shall be determined through a summation of the formaldehyde emissions from the burning of natural gas and No. 2 fuel oil as follows:

i. The monthly formaldehyde emissions from the burning of natural gas shall be determined by multiplying the average emissions in lb formaldehyde/mmBtu while burning natural gas derived from the stack test by the actual heat input of this emissions unit for the month while burning natural gas, divided by 2,000 lbs/ton.

ii. The monthly formaldehyde emissions from the burning of No.2 fuel oil shall be determined by multiplying the AP-42 Table 3.1-4 (4/00) of 0.00028 lb formaldehyde/mmBtu while burning No. 2 fuel oil by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil , divided by 2,000 lbs/ton.

iii. The combined rolling, 12-month summation of the formaldehyde emissions for emissions units P001, P002, P003 and P004 shall be the sum of (i) and (ii) above for each emissions unit for the rolling, 12-month period.

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

p. Emission Limitation -

20% opacity, as a six-minute average

Applicable Compliance Method -

Compliance shall be determined through visible emission observations performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in USEPA Reference Method 9.

[Authority for term: OAC rules 3745-17-03(B)(1) and 3745-77-07(C)(1)]

q. Emission Limitation -

0.05% sulfur, by weight, of the No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be based upon fuel oil sampling as specified in A.III.3, A.III.4, and A.III.5.

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

r. Emission Limitation -

10,016 hours of operation, as a rolling, 12-month summation while burning natural gas

4,216 hours of operation, as a rolling, 12-month summation while burning No. 2 fuel oil

1.2 hours of operation of natural gas may be added for every hour No. 2 fuel oil is not burned, with total natural gas operation not to exceed 15,020 hours as a rolling, 12-month summation.

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7.

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

## V. Testing Requirements (continued)

2. Upon initial use of fuel oil, the permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emission testing shall be conducted within 60 days after initiating fuel oil firing in this emissions unit.
  - b. The emission testing shall be conducted to demonstrate compliance with the particulates/PM10, NOx, CO, VOC, and sulfuric acid mist emission rates.
  - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for particulates/PM10, Methods 1 through 5 of 40 CFR Part 60, Appendix A and 40 CFR Part 51, Appendix M, Method 201 or 201A and 202; for NOx, Methods 1 through 4 and 7 or 7E of 40 CFR Part 60, Appendix A; for CO, Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A; for VOC, Methods 1 through 4 and 18, 25, or 25A of 40 CFR Part 60, Appendix A; for formaldehyde, Method SW846; for sulfuric acid mist, Methods 1 through 4 and 8 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from RAPCA.

\*\* the permittee has requested that if the average emission rate (lbs/hour) derived from the stack test conducted in accordance with this terms is less than the permit VOC allowable listed in term A.I.1., it may apply for an air permit to install modification to increase the hours of operation. The permittee realizes that this modification might trigger the requirement to secure either an administrative or a new air permit to install.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Regional Air Pollution Control Agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Regional Air Pollution Control Agency's refusal to accept the results of the emission test(s).

Personnel from the Regional Air Pollution Control Agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Regional Air Pollution Control Agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Regional Air Pollution Control Agency.

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

## VI. Miscellaneous Requirements

**None**

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P003 - natural gas and No. 2 fuel oil fired simple cycle stationary combustion turbine No. 6 - Tait CT6, with a nominal production rating of 80 MW and a nominal heat input of 1115.2 mmBtu/hour, with dry low NOx combustion and water injection controls	None	None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

- The permit to install for this emissions unit (P003) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the ISCST3 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: formaldehyde

TLV (mg/m3): 0.37

Maximum Hourly Emission Rate (lbs/hr): 1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1.6971

MAGLC (ug/m3): 8.81

### III. Monitoring and/or Record Keeping Requirements (continued)

Pollutant: beryllium

TLV (mg/m<sup>3</sup>): 0.002

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 0.0008

MAGLC (ug/m<sup>3</sup>): 0.05

Pollutant: arsenic

TLV (mg/m<sup>3</sup>): 0.01

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 0.0123

MAGLC (ug/m<sup>3</sup>): 0.24

Pollutant: benzene

TLV (mg/m<sup>3</sup>): 1.60

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 0.2142

MAGLC (ug/m<sup>3</sup>): 38.10

Pollutant: sulfuric acid mist

TLV (mg/m<sup>3</sup>): 1.00

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 13.56

MAGLC (ug/m<sup>3</sup>): 23.81

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

- a. changes in the composition of the materials used, or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

### **III. Monitoring and/or Record Keeping Requirements (continued)**

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

[Authority for term: PTI 08-04153 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
  - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
  - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
  - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

[Authority for term: PTI 08-04153 and OAC rule 3745-77-07(C)(1)]

### **IV. Reporting Requirements**

**None**

### **V. Testing Requirements**

**None**

### **VI. Miscellaneous Requirements**

**None**

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** CT7 - Combustion Turbine No. 7 (P004)

**Activity Description:** Natural gas-fired combustion turbine w/ No. 2 oil backup; 1,114.6 MMBtu/hr (80 MW) nominal capacity.

#### A. State and Federally Enforceable Section

##### I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P004 - natural gas and No. 2 fuel oil fired simple cycle stationary combustion turbine No. 7 - Tait CT7, with a nominal production rating of 80 MW and a nominal heat input of 1115.2 mmBtu/hour, with dry low NOx combustion and water injection controls	40 CFR Part 52, Section 52.21 and OAC rule 3745-31-10 through OAC rule 3745-31-20	<p>Particulate/PM10 emissions from this emissions unit shall not exceed 0.013 lb/mmBtu actual heat input when firing natural gas; 0.026 lb/mmBtu actual heat input when firing No. 2 fuel oil, and 46.12 TPY as a rolling, 12-month summation combined from emissions units P001, P002, P003 and P004.</p> <p>Nitrogen oxides (NOx) emissions from this emissions unit shall not exceed 15 ppmv at 15% oxygen on a dry basis at full load, when firing natural gas, based on a one-hour average as determined through data from the NOx continuous emission monitoring system (CEMs); 161 lbs/hr at all operating loads when firing natural gas; 42 ppmv at 15% oxygen on a dry basis at full load, when firing No.2 fuel oil, based on a one-hour average as determined through data from the NOx CEMs; 269 lbs/hr at all operating loads when firing No. 2 fuel oil; and 1373.32 TPY as a rolling, 12-month summation combined from emissions units P001, P002, P003 and P004.</p>

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
		<p>Carbon monoxide (CO) emissions from this emissions unit shall not exceed, during the first 12 months of operation, 25 ppmv at 15% oxygen on a dry basis, when firing natural gas and No. 2 fuel oil, based on a 3-hour test average at full load; after the first 12 months of operation, 20 ppmv at 15% oxygen on a dry basis, when firing natural gas and No. 2 fuel oil, based on a 3-hour test average at full load (also see A.2.g).</p> <p>CO emissions from this emissions unit shall not exceed 301 lbs/hr at all operating loads, excluding start-up and shutdown periods when firing natural gas; 413 lbs/hr during start-up and shutdown periods when firing natural gas; 800 lbs/hr at all operating loads, when firing No. 2 fuel oil; and 724 TPY as a rolling, 12-month summation combined from units P001, P002, P003 and P004, including periods of start-up and shutdown.</p> <p>Sulfur dioxide (SO<sub>2</sub>) emissions from this emissions unit shall not exceed 0.0026 lb/mmBtu actual heat input, when firing natural gas; 0.055 lb/mmBtu actual heat input, when firing No. 2 fuel oil; and 138.6 tons/year as a rolling, 12-month summation combined from units P001, P002, P003 and P004.</p> <p>Sulfuric acid mist emissions from this emissions unit, during oil-firing only, shall not exceed 0.0054 lb/mmBtu, actual heat input and 12.64 TPY as a rolling, 12-month summation combined from units P001, P002, P003 and P004.</p> <p>Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 31.64 TPY as a rolling, 12-month summation combined from units P001, P002, P003 and P004.</p> <p>Formaldehyde emissions from this emissions unit shall not exceed 5.92 TPY as a rolling, 12-month summation combined from units P001, P002, P003 and P004.</p>
	<p>OAC rule 3745-31-05 (C) Synthetic minor to avoid PSD rule requirements</p>	
	<p>OAC rule 3745-31-05 (C) Synthetic minor to avoid MACT rule requirements</p>	

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-31-05(A)(3) PTI 08-04153	VOC emissions from this emissions unit shall not exceed 4 lbs/hr when firing natural gas and 5.5 lbs/hr when firing No. 2 fuel oil.
		Formaldehyde emissions from this emissions unit shall not exceed 0.000713 lb formaldehyde/mmBtu actual heat input.
		The requirements of this rule also include compliance with the requirements of 40 CFR Part 52, Section 52.21 and OAC rules 3745-31-10 through 3745-31-20; OAC rule 3745-31-05 (C); and OAC rule 3745-17-07(A)(1).
	40 CFR Part 75	See Part I, Term A.4.
	OAC rule 3745-17-11(B)(4) OAC rule 3745-18-06(F) 40 CFR Part 60, Subpart GG	The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to 40 CFR Part 52, Sections 52.21 and OAC rules 3745-31-10 through 3745-31-20.
	OAC rules 3745-21-08 (B) and 3745-23-06 (B)	See A.I.2.d. below

**2. Additional Terms and Conditions**

- 2.a** The listed particulate/PM10 emission limitations are more stringent than the requirements of OAC rule 3745-17-11(B)(4). They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".
- 2.b** The listed nitrogen oxides emission limitations are more stringent than the requirements of 40 CFR Part 60, Subpart GG and OAC rule 3745-23-06. They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".
- 2.c** The listed sulfur dioxide emission limitations are more stringent than the requirements of 40 CFR Part 60, Subpart GG and OAC rule 3745-18-06(F). They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".

## **2. Additional Terms and Conditions (continued)**

- 2.d** The permittee has satisfied the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively by committing to comply with the best available technology (BAT) and best available control technology (BACT) requirements established pursuant to this permit to install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally approved SIP for Ohio.

On February 15, 2005, OAC rule 3745-23-06 was rescinded; therefore, it is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally approved SIP for Ohio.

The listed NOx and CO emission limitations were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".

- 2.e** The following Best Available Control Technology (BACT) determinations have been made in accordance with the PSD regulations:

Particulate/PM10 Emissions - The BACT determination is the use of only clean burning fuels, natural gas and No. 2 fuel oil in these combustion turbines, capable of meeting the emission limitations listed in Part III A.I.1.

Nitrogen oxide emissions - The BACT determination is the use of dry low-NOx burners (DLNB) when firing natural gas and water injection when firing fuel oil and the ppmv NOx levels listed in Part III A.I.1.

Carbon monoxide emissions - The BACT determination is the use of efficient combustion technology inherent to the design of the combustion turbines and the ppmv CO levels listed in Part III A.I.1.

Sulfur dioxide emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as back-up fuel in these combustion turbines and a maximum sulfur content of 0.05 percent by weight of the fuel oil.

Sulfuric acid mist emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as the back-up fuel in these combustion turbines.

- 2.f** "Start-up" shall be defined as the time necessary to bring a turbine on line from a no-load condition to dry low NOx combustion mode during natural gas combustion, not to exceed thirty (30) minutes. Shutdown periods shall not exceed thirty (30) minutes.
- 2.g** If the permittee shows that the unit cannot consistently meet the CO ppm limitations, Ohio EPA will consider an application to modify the permit to install.
- 2.h** "Full load" shall be defined as all periods when the hourly average electrical output exceeds 72 MW.
- 2.i** Based on the evaluation of the PM10 emissions from this emissions unit, it was determined that the PM10 emissions did not trigger the Prevention of Significant Deterioration (PSD) permitting requirements. Therefore, the regulated pollutant for purposes of this permit is particulate emissions and compliance with the particulate emission limitation shall be determined in accordance with the U.S. EPA approved test methods for particulate emissions.

**2. Additional Terms and Conditions (continued)**

- 2.j** In lieu of monitoring the exhaust stack gas flowrate as required by 40 CFR Part 60, Appendix B - Performance Specification 6, the permittee shall use a certified NOx continuous emissions monitoring system in conjunction with a fuel flow monitor as described in 40 CFR Part 75, and certified CO continuous emissions monitoring system in conjunction with a fuel flow monitor (in a manner similar to that used for NOx) to meet these requirements. The relative accuracy requirements of Performance Specifications 6 shall apply to the NOx and CO continuous emissions monitoring systems.

**II. Operational Restrictions**

- 1.** The maximum annual operating hours for emissions units P001, P002, P003 and P004 combined shall not exceed 10016 \*\* while burning natural gas and 4216 \*\* when burning No. 2 fuel oil, based upon a rolling, 12-month summation of the operating hours.

To ensure enforceability during the first twelve calendar months of operation following startup of any one of the emissions units P001 through P004, the permittee shall not exceed the cumulative operating hours specified in the following table:

Month	Maximum allowable cumulative operating hours while burning No. 2 fuel oil
1	1056
1 - 2	2108
1 - 3	3164
1 - 4	4216
1 - 5	4216
1 - 6	4216
1 - 7	4216
1 - 8	4216
1 - 9	4216
1 - 10	4216
1 - 11	4216
1 - 12	4216

\*\*The permittee may combust 1.2 additional hours of natural gas for every hour fuel oil is not combusted, up to 15020 hours annually of natural gas combustion.

After the first 12 calendar months of operation following the startup of or the initial use of fuel oil in any one of the emissions units P001 through P004, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours.

[Authority for term: PTI 08-04153 and OAC rule 3745-77-07(A)(1)]

- 2.** The sulfur content of the No. 2 fuel oil fired in this emissions unit shall not exceed 0.05%, by weight.

[Authority for term: PTI 08-04153 and OAC rule 3745-77-07(A)(1)]

- 3.** In order to establish federally enforceable limitations upon the potential to emit for CO, the permittee shall utilize the continuous CO monitoring system to demonstrate continuous compliance with the hourly and combined annual emissions limitations established by this permit.

[Authority for term: PTI 08-04153 and OAC rule 3745-77-07(A)(1)]

- 4.** The permittee shall burn only pipeline quality natural gas or number two fuel oil in this emissions unit.

[Authority for term: PTI 08-04153 and OAC rule 3745-77-07(A)(1)]

### III. Monitoring and/or Record Keeping Requirements

#### 1. Statement of Certification - NOx Monitoring

- a. The permittee shall operate and maintain equipment to continuously monitor and record NOx emissions from this emissions unit in units of applicable standard(s). Such continuous monitoring and recording equipment shall comply with the applicable requirements specified in 40 CFR Part 60 and 40 CFR Part 75.
- b. Each continuous monitoring system consists of all the equipment used to acquire and record data and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.
- c. The permittee shall maintain on-site documentation from the US EPA or the Ohio EPA that the continuous NOx monitoring system has been certified in accordance with the applicable requirements specified in 40 CFR Part 60 and Part 75. The letter of certification shall be made available to the Director upon request.
- d. The permittee shall maintain records of the following data obtained by the continuous NOx monitoring system: emissions of NOx in ppmvd at 15% oxygen at full load on an hourly average basis, emissions of NOx in lbs/hr, and results of daily zero/span calibration checks, results of quarterly cylinder gas audits, linearity check, or relative accuracy test audits, and magnitude of manual calibration adjustments.
- e. The permittee shall develop a written quality assurance/quality control plan for the continuous NOx monitoring system designed to ensure continuous valid and representative readings of NOx emissions in units of the applicable standard(s). The plan shall follow the applicable requirements of 40 CFR Part 60, Appendix F and 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook documenting the activities related to the continuous NOx monitoring system must be kept on site and available for inspection during regular office hours.
- f. The permittee may conduct the relative accuracy test audits for the continuous nitrogen oxides monitoring system in accordance with the frequencies required for monitoring systems subject to 40 CFR Part 75, Appendix B; however, the permittee is still required to provide the audit results in units of the applicable standard(s), in accordance with 40 CFR Part 60. Cylinder gas audits may be conducted in accordance with the frequencies specified in 40 CFR Part 75, Appendix B for linearity checks. In addition, linearity checks conducted pursuant to 40 CFR Part 75, Appendix B, may be used in place of quarterly cylinder gas audits, as required in 40 CFR Part 60.
- g. Whenever the monitoring system fails to meet the quality assurance or data validation requirements of 40 CFR Part 75, data shall be substituted using the applicable procedures in Subpart D, Appendix D, or Appendix E of 40 CFR Part 75.

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

#### 2. Statement of Certification - CO Monitoring

- a. The permittee shall operate and maintain equipment to continuously monitor and record CO emissions from this emissions units in units of the applicable standard(s). Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.
- b. Each continuous monitoring system consists of all the equipment used to acquire and record data and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.
- c. The permittee shall maintain on-site documentation from the USEPA or the Ohio EPA that the continuous CO monitoring system has been certified in accordance with 40 CFR Part 60. The letter of certification shall be made available to the Director upon request.

### III. Monitoring and/or Record Keeping Requirements (continued)

d. The permittee shall maintain records of the following data obtained by the continuous CO monitoring system: emissions of CO in lbs/hr, results of daily zero/span calibration checks, results of quarterly cylinder gas audits, or relative accuracy test audits, and magnitude of manual calibration adjustments.

e. The permittee shall develop 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). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook documenting the activities related to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.

f. The permittee may conduct the relative accuracy test audits for the continuous carbon monoxide monitoring system in accordance with the frequencies required for monitoring systems subject to 40 CFR Part 75, Appendix B; however, the permittee is still required to provide the audit results in units of the applicable standard(s), in accordance with 40 CFR Part 60. Cylinder gas audits may be conducted in accordance with the frequencies specified in 40 CFR Part 75, Appendix B for linearity checks. In addition, linearity checks conducted pursuant to 40 CFR Part 75, Appendix B, may be used in place of quarterly cylinder gas audits, as required in 40 CFR Part 60.

[Authority for term: 40 CFR Part 60 and OAC rule 3745-77-07(C)(1)]

3. In accordance with 40 CFR Part 60, Subpart GG, Section 60.334(h)(1), the permittee shall monitor the sulfur content of the fuel being fired in the turbine except as provided in 40 CFR 60.334(h)(3). The frequency of determination of this value shall be in accordance with 40 CFR 60.334(i).

[Authority for term: 40 CFR Part 60 and OAC rule 3745-77-07(C)(1)]

4. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated SO<sub>2</sub> emission rate (in lb/mmBtu).

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

5. Pursuant to 40 CFR 60.334(i)(1) or (3), the permittee shall determine fuel sulfur content in accordance with the requirements of 40 CFR 60.335(b)(10)(i) and 60.335(b)(10)(ii).

[Authority for term: 40 CFR Part 60 and OAC rule 3745-77-07(C)(1)]

6. For each day during which the permittee burns a fuel other than pipeline quality natural gas or number two fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

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

7. The permittee shall maintain monthly records of the following information:

a. The summation of the operating hours for this emissions unit, in hours/month, when burning natural gas and/or when burning No. 2 fuel oil. The summation of the operating hours for emissions units P001, P002, P003 and P004 combined when burning natural gas. The summation of the operating hours for emissions units P001, P002, P003 and P004 combined when burning fuel oil.

b. During the first twelve calendar months of operation following startup of any one of the emissions units P001 through P004, the cumulative operating hours for each calendar month when burning natural gas and/or when burning No. 2 fuel oil for emissions units P001, P002, P003 and P004 combined. Following the first twelve calendar months of operation following startup of any one of the emissions units P001 through P004, the rolling, 12-month summation of the operating hours for this emissions unit, in hours per rolling, 12-month period when burning natural gas and/or when burning No. 2 fuel oil for emissions units P001, P002, P003 and P004 combined.

### III. Monitoring and/or Record Keeping Requirements (continued)

- c. The actual heat input of this emissions unit, in mmBtu/month, when burning natural gas and/or when burning No. 2 fuel oil.
- d. The rolling, 12-month summation of the particulates/PM10, NOx, CO, SO2, sulfuric acid mist, VOC, and formaldehyde emissions, in tons, for emissions units P001, P002, P003 and P004 combined. The monthly emissions shall be added to the total emissions from the previous 11 months to determine the rolling, 12-month summation of emissions.
- e. The permittee shall monitor and record all periods of time when the unit is operated at "full load" conditions, based upon definition of full load in Section A.I.2.h.
- f. The date, time and duration, in minutes of each start-up and shutdown. (The terms start-up and shutdown are defined in Section A.I.2.f.)

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

8. If the permittee uses 40 CFR Part 75 Appendix D to comply with the SO2 emissions limit, the permittee shall install, 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 appropriate missing data procedures specified in 40 CFR Part 75.

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

9. The permittee shall install, operate and maintain equipment to continuously monitor and record the percent oxygen in the stack serving 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. The monitoring and recording equipment shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

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

### IV. Reporting Requirements

#### 1. Continuous NOx Emissions Monitoring

- a. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting the date, commencement and completion time, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of NOx values in excess of the applicable emission limitations specified in the terms and conditions of this permit.
- b. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting any continuous NOx monitoring system downtime while the emissions unit was on line (date, time, duration, and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.
- c. If there are no excess NOx emissions during the calendar quarter, the permittee shall submit a statement to that effect along with date, time, reason, and corrective action(s) taken for each time period of monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

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

#### **IV. Reporting Requirements (continued)**

##### **2. Continuous CO Emissions Monitoring**

- a. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting the date, commencement and completion time, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of CO values in excess of the applicable hourly emission limitations specified in the terms and conditions of this permit.
- b. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting any continuous CO monitoring system downtime while the emissions unit was on line (date, time, duration, and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.
- c. If there are no CO excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the date, time, reason, and corrective action(s) taken for each time period of monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

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

##### **3. The permittee shall submit quarterly deviation (excursion) reports to the Regional Air Pollution Control Agency that identify any exceedances of the following:**

- a. For the first twelve calendar months of operation following startup of any one of the emissions units P001 through P004, all exceedances of the maximum allowable cumulative operating hours limits while burning natural gas and/or No. 2 fuel oil for emissions units P001, P002, P003 and P004 combined.
- b. Beginning after the first twelve calendar months of operation following startup of any one of the emissions units P001 through P004, the rolling, 12-month operating hours limitations while burning natural gas and/or No. 2 fuel oil for emissions units P001, P002, P003 and P004 combined.
- c. Any exceedances of the rolling, 12-month summation of particulates/PM10, NO<sub>x</sub>, CO, SO<sub>2</sub>, sulfuric acid mist, VOC, or formaldehyde emission limitations, in tons, for emissions units P001, P002, P003 and P004, combined.
- d. Any exceedances of the NO<sub>x</sub> ppmv at 15% oxygen on a dry basis emissions limitations at full load conditions.
- e. The allowable duration for all start-up and shutdown periods.
- f. For fuel oil, any exceedances of the 0.05% by weight sulfur content and the calculated SO<sub>2</sub> emissions rate, in lb/mmBtu.
- g. Any time during which the permittee burns a fuel other than pipeline quality natural gas or number two fuel oil.

These reports shall be submitted in accordance with Section A.1. of the General Terms and Conditions of this permit.

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

#### **IV. Reporting Requirements (continued)**

4. The permittee shall submit quarterly reports which identify each period during which an exemption for ice-fog provided in 40 CFR Part 60.332(f) is in effect. The reports shall include the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time when the air pollution control system was reactivated. These reports shall be postmarked by April 30, July 30, October 30, and January 30 and each report shall cover the previous calendar quarter.

[Authority for term: 40 CFR Part 60 and OAC rule 3745-77-07(C)(1)]

#### **V. Testing Requirements**

1. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation -

0.013 lb (particulate emissions/PM10)/mmBtu actual heat input, when firing natural gas

0.026 lb particulate emissions/PM10)/mmBtu actual heat input, when firing No. 2 fuel oil

Applicable Compliance Method -

If required, compliance shall be based upon stack testing in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A and, 40 CFR Part 51, Appendix M, Method 201 or 201A and 202, as specified in A.V.2.

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

b. Emission Limitation -

46.12 tons/year particulate emissions/PM10 as a rolling, 12-month summation combined from emissions units P001, P002, P003 and P004

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined through a summation of the particulate emissions/PM10 from the burning of natural gas and No. 2 fuel oil as follows:

i. The monthly particulate emissions/PM10 from the burning of natural gas shall be determined by multiplying the average emissions in lb particulate/PM10 emissions/mmBtu while burning natural gas derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning natural gas, and dividing by 2,000 lbs/ton.

ii. The monthly particulate emissions/PM10 from the burning of No. 2 fuel oil shall be determined by multiplying the average emissions in lb particulate/PM10 emissions/mmBtu while burning No. 2 fuel oil derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.

iii. The combined rolling, 12-month summation of the particulate emissions/PM10 for emissions units P001, P002, P003 and P004 shall be the sum of (i) and (ii) above for each emissions unit for the rolling, 12-month period.

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

**V. Testing Requirements (continued)**

c. Emission Limitations -

15 ppmvd NO<sub>x</sub> at 15% oxygen, at full load, while burning natural gas, based on a 1-hour average as determined through data from the NO<sub>x</sub> CEMs

42 ppmvd NO<sub>x</sub> at 15% oxygen, at full load, while burning No. 2 fuel oil, based on a 1-hour average as determined through data from the NO<sub>x</sub> CEMs

161 lbs/hour nitrogen oxides at all operating loads, while burning natural gas

269 lbs/hour nitrogen oxides, at all operating loads, while burning No. 2 fuel oil

Applicable Compliance Method -

Initial compliance with the allowable outlet concentration, and the lbs/hour NO<sub>x</sub> emission limitations shall be demonstrated by the performance testing as specified in A.V.2. and continual compliance shall be demonstrated by the use of the CEM specified in A.III.1. and the applicable 40 CFR Part 60 and 75 requirements. Emissions calculated using the 40 CFR Part 75 bias adjustment factor or using missing data procedures due to monitor downtime shall not be used to determine compliance with the hourly emission limitation.

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

d. Emission Limitation -

1373.32 tons/year NO<sub>x</sub> as a rolling, 12-month summation combined from emissions units P001, P002, P003 and P004

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7. and shall be determined through the use of CEMs as specified in A.III.1. The monthly NO<sub>x</sub> emissions shall be added to the total NO<sub>x</sub> emissions from the previous eleven months to determine the rolling, 12-month summation of NO<sub>x</sub> emissions.

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

e. Emission Limitations -

During the first 12 months of operation, 25 ppmvd CO at 15% oxygen as a 3-hr test average at full load, when firing natural gas and No. 2 fuel oil; after the first 12 months of operation, 20 ppmvd CO at 15% oxygen as a 3-hr test average at full load, when firing natural gas and No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10, as specified in A.V.2.

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

**V. Testing Requirements (continued)**

f. Emission Limitations -

413 lbs CO/hour during start-up and shutdown periods, while burning natural gas

301 lbs CO/hour at all operating loads, excluding start-up and shutdown periods, while burning natural gas

800 lbs CO/hour at all operating loads, while burning No. 2 fuel oil

Applicable Compliance Method -

Compliance with the hourly emission limitations shall be based upon the data from the continuous CO emissions monitoring system requirement and the monitoring/record keeping as specified in A.III.2. Except for the start-up and shutdown emissions limit, compliance shall also be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10, as specified in A.V.2.

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

g. Emission Limitation -

724 tons/year CO, as a rolling, 12-month summation combined from units P001, P002, P003 and P004, including periods of start-up and shutdown

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7. and shall be determined through the use of CEMs as specified in A.III.2. The monthly CO emissions shall be added to the total CO emissions from the previous eleven months to determine the rolling, 12-month summation of CO emissions.

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

h. Emission Limitation -

0.0026 lb SO<sub>2</sub>/mmBtu actual heat input, while burning natural gas

0.055 lb SO<sub>2</sub>/mmBtu actual heat input, while burning No. 2 fuel oil

Applicable Compliance Method -

When firing natural gas, compliance with this limitation will be assumed due to the negligible percent sulfur, by weight, in the fuel. If required, the permittee shall perform or require the supplier to perform an analysis of the natural gas for sulfur content, in accordance with the appropriate ASTM method or an equivalent method as approved by the Director, in order to demonstrate compliance with this emission limitation using the appropriate equation specified in AP-42 Table 3.1-2a (4/00). When firing number two fuel oil, compliance shall be based upon the fuel analysis and record keeping requirements specified in A.II.2. and A.III.4. and the use of the equations specified in OAC rule 3745-18-04(F).

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

**V. Testing Requirements (continued)**

i. Emission Limitation -

138.6 tons/year SO<sub>2</sub> as a rolling, 12-month summation combined from units P001, P002, P003 and P004

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7. and shall be determined through a summation of the SO<sub>2</sub> emissions from the burning of natural gas and No. 2 fuel oil as follows:

i. The monthly SO<sub>2</sub> emissions from the burning of natural gas shall be determined by multiplying the USEPA default value for pipeline quality natural gas (0.0006 lb SO<sub>2</sub>/mmBtu) by the actual heat input of this emissions unit for the month while burning natural gas, and dividing by 2,000 lbs/ton.

ii. The monthly SO<sub>2</sub> emissions from the burning of No. 2 fuel oil shall be determined by multiplying the average calculated SO<sub>2</sub> emission rate (determined as an arithmetic average of the calculated SO<sub>2</sub> emission rates for the shipments received each month in A.III.4. (lb/mmBtu)) by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.

iii. The combined rolling, 12-month summation of the SO<sub>2</sub> emissions for emissions units P001, P002, P003 and P004 shall be the sum of (i) and (ii) above for each emissions unit for the rolling, 12-month period.

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

j. Emission Limitation -

0.0054 lb sulfuric acid mist/mmBtu actual heat input

Applicable Compliance Method -

Compliance shall be based upon stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 8 as specified in A.V.2.

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

k. Emission Limitation -

12.64 tons/year sulfuric acid mist, as a rolling, 12-month summation combined from units P001, P002, P003 and P004

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7. and shall be determined by multiplying the average emissions in lb sulfuric acid mist/mmBtu derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton. The monthly sulfuric acid mist emissions for each emissions units P001, P002, P003 and P004 shall be summed and added to the total sulfuric acid mist emissions from the previous eleven months to determine the combined rolling, 12-month summation of sulfuric acid mist emissions for emissions units P001, P002, P003 and P004.

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

**V. Testing Requirements (continued)**

I. Emission Limitation -

4 lbs/hour VOC, while burning natural gas

5.5 lbs/hour VOC, while burning No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be based upon stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 18, 25, or 25A, as specified in A.V.2.

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

m. Emission Limitation -

31.64 tons/year VOC, as a rolling, 12-month summation combined from units P001, P002, P003 and P004

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7. and shall be determined through a summation of the VOC emissions from the burning of natural gas and No. 2 fuel oil as follows:

i. The monthly VOC emissions from the burning of natural gas shall be determined by multiplying the average emissions in lb VOC/hour while burning natural gas derived from the stack test conducted in accordance with A.V.2. by the operating hours for the month while burning natural gas, and dividing by 2,000 lbs/ton.

ii. The monthly VOC emissions from the burning of No. 2 fuel oil shall be determined by multiplying the average emissions in lb VOC/hour while burning No. 2 fuel oil derived from the stack test conducted in accordance with A.V.2. by the operating hours for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.

iii. The combined rolling, 12-month summation of the VOC emissions for emissions units P001, P002, P003 and P004 shall be the sum of (i) and (ii) above for each emissions unit for the rolling, 12-month period.

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

n. Emission Limitation -

0.000713 lb formaldehyde/mmBtu actual heat input

Applicable Compliance Method -

When firing natural gas, compliance shall be based upon stack testing in accordance with USEPA Method SW846, as specified in A.V.2. When firing No. 2 fuel oil, compliance shall be based upon the AP-42 Table 3.1-4 (4/00) emission factor of 0.00028 lb formaldehyde/mmBtu.

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

**V. Testing Requirements (continued)**

o. Emission Limitation -

5.92 tons/year formaldehyde, as a rolling, 12-month summation combined from units P001, P002, P003 and P004

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7. and shall be determined through a summation of the formaldehyde emissions from the burning of natural gas and No. 2 fuel oil as follows:

i. The monthly formaldehyde emissions from the burning of natural gas shall be determined by multiplying the average emissions in lb formaldehyde/mmBtu while burning natural gas derived from the stack test by the actual heat input of this emissions unit for the month while burning natural gas, divided by 2,000 lbs/ton.

ii. The monthly formaldehyde emissions from the burning of No.2 fuel oil shall be determined by multiplying the AP-42 Table 3.1-4 (4/00) of 0.00028 lb formaldehyde/mmBtu while burning No. 2 fuel oil by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil , divided by 2,000 lbs/ton.

iii. The combined rolling, 12-month summation of the formaldehyde emissions for emissions units P001, P002, P003 and P004 shall be the sum of (i) and (ii) above for each emissions unit for the rolling, 12-month period.

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

p. Emission Limitation -

20% opacity, as a six-minute average

Applicable Compliance Method -

Compliance shall be determined through visible emission observations performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in USEPA Reference Method 9.

[Authority for term: OAC rules 3745-17-03(B)(1) and 3745-77-07(C)(1)]

q. Emission Limitation -

0.05% sulfur, by weight, of the No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be based upon fuel oil sampling as specified in A.III.3, A.III.4, and A.III.5.

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

r. Emission Limitation -

10,016 hours of operation, as a rolling, 12-month summation while burning natural gas

4,216 hours of operation, as a rolling, 12-month summation while burning No. 2 fuel oil

1.2 hours of operation of natural gas may be added for every hour No. 2 fuel oil is not burned, with total natural gas operation not to exceed 15,020 hours as a rolling, 12-month summation.

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.7.

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

## V. Testing Requirements (continued)

2. Upon initial use of fuel oil, the permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emission testing shall be conducted within 60 days after initiating fuel oil firing in this emissions unit.
  - b. The emission testing shall be conducted to demonstrate compliance with the particulates/PM10, NOx, CO, VOC, and sulfuric acid mist emission rates.
  - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for particulates/PM10, Methods 1 through 5 of 40 CFR Part 60, Appendix A and 40 CFR Part 51, Appendix M, Method 201 or 201A and 202; for NOx, Methods 1 through 4 and 7 or 7E of 40 CFR Part 60, Appendix A; for CO, Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A; for VOC, Methods 1 through 4 and 18, 25, or 25A of 40 CFR Part 60, Appendix A; for formaldehyde, Method SW846; for sulfuric acid mist, Methods 1 through 4 and 8 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from RAPCA.

\*\* the permittee has requested that if the average emission rate (lbs/hour) derived from the stack test conducted in accordance with this terms is less than the permit VOC allowable listed in term A.I.1., it may apply for an air permit to install modification to increase the hours of operation. The permittee realizes that this modification might trigger the requirement to secure either an administrative or a new air permit to install.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Regional Air Pollution Control Agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Regional Air Pollution Control Agency's refusal to accept the results of the emission test(s).

Personnel from the Regional Air Pollution Control Agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Regional Air Pollution Control Agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Regional Air Pollution Control Agency.

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

## VI. Miscellaneous Requirements

**None**

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P004 - natural gas and No. 2 fuel oil fired simple cycle stationary combustion turbine No. 7 - Tait CT7, with a nominal production rating of 80 MW and a nominal heat input of 1115.2 mmBtu/hour, with dry low NOx combustion and water injection controls	None	None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

- The permit to install for this emissions unit (P004) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the ISCST3 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: formaldehyde

TLV (mg/m3): 0.37

Maximum Hourly Emission Rate (lbs/hr): 1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1.6971

MAGLC (ug/m3): 8.81

### III. Monitoring and/or Record Keeping Requirements (continued)

Pollutant: beryllium

TLV (mg/m<sup>3</sup>): 0.002

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 0.0008

MAGLC (ug/m<sup>3</sup>): 0.05

Pollutant: arsenic

TLV (mg/m<sup>3</sup>): 0.01

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 0.0123

MAGLC (ug/m<sup>3</sup>): 0.24

Pollutant: benzene

TLV (mg/m<sup>3</sup>): 1.60

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 0.2142

MAGLC (ug/m<sup>3</sup>): 38.10

Pollutant: sulfuric acid mist

TLV (mg/m<sup>3</sup>): 1.00

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 13.56

MAGLC (ug/m<sup>3</sup>): 23.81

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

- a. changes in the composition of the materials used, or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

### **III. Monitoring and/or Record Keeping Requirements (continued)**

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

[Authority for term: PTI 08-04153 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
  - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
  - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
  - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

[Authority for term: PTI 08-04153 and OAC rule 3745-77-07(C)(1)]

### **IV. Reporting Requirements**

**None**

### **V. Testing Requirements**

**None**

### **VI. Miscellaneous Requirements**

**None**

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