



Street Address:

State of Ohio Environmental Protection Agency

Mailing Address:

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

Lazarus Gov.  
Center

**RE: PERMIT TO INSTALL  
BUTLER COUNTY  
Application No: 14-4682**

**CERTIFIED MAIL**

**DATE:** May 19, 1999

Duke Energy Madison, LLC  
Robert Schaffeld  
400 Tryon Street Suite 1800  
Charlotte, NC 28202

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
236 East Town Street, Room 300  
Columbus, Ohio 43215

Very truly yours,

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

cc: USEPA  
Lysa Modica Earth Tech

**Hamilton County Dept. of Env Services**



**Permit To Install  
Terms and  
Conditions**

**Issue Date: July 14, 1999  
Effective Date: July 14, 1999**

**PERMIT TO INSTALL 14-4682**

Application Number: 14-4682  
APS Premise Number: 1409000896  
Permit Fee: **\$4,200**  
Name of Facility: Duke Energy Madison, LLC  
Person to Contact: Robert Schaffeld  
Address: 400 Tryon Street Suite 1800  
Charlotte, NC 28202

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**5657 Kennel Road  
Trenton, OHIO 45067**

Description of proposed emissions unit(s):  
**8-80 MW (NOMINAL) SIMPLE CYCLE COMBUSTION TURBINES & FOUR 520,000 FIXED ROOF STORAGE TANKS, 2 EMERGENCY GENERATORS.**

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

\_\_\_\_\_  
Director

## Part I - GENERAL TERMS AND CONDITIONS

### A. State and Federally Enforceable Permit To Install General Terms and Conditions

#### 1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
  - i. The date, place (as defined in the permit), and time of sampling or measurements.
  - ii. The date(s) analyses were performed.
  - iii. The company or entity that performed the analyses.
  - iv. The analytical techniques or methods used.
  - v. The results of such analyses.
  - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
  - i. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
  - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District

Office or local air agency. These quarterly written reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c)(i) and (ii) pertaining to the submission of monitoring reports every six months and OAC rule 3745-77-07(A)(3)(c)(iii) pertaining to the prompt reporting of all deviations except malfunctions, which shall be reported in accordance with OAC rule 3745-15-06. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.) See B.14 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. These semi-annual written reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c)(i) and (ii) pertaining to the reporting of any deviations related to the monitoring, recordkeeping, and reporting requirements. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
- iv. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

## 2. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports submitted pursuant to OAC rule 3745-15-06 shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c)(iii) pertaining to the prompt reporting of deviations caused by malfunctions or upsets.

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

## 3. Risk Management Plans

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

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#### **4. Title IV Provisions**

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

#### **5. Severability Clause**

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

#### **6. General Requirements**

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator

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

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**7. Fees**

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit To Install fees within 30 days after the issuance of this Permit To Install.

**8. Federal and State Enforceability**

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

**9. Compliance Requirements**

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
  - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with 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 appropriate Ohio EPA District Office or local air agency in the following manner and with the following content:
  - i. Compliance certifications shall be submitted on an annual basis unless the applicable requirement specifies more frequent submissions.
  - 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.

## **10. 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

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upset provision contained in any applicable requirement.

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**11. Title V Permit To Operate Application**

Pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit.

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

**1. Compliance Requirements**

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

**2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements**

The permittee shall submit required reports in the following manner:

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

**3. 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.

**4. 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.

#### **5. Scheduled Maintenance/Malfunction Reporting**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction 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).

#### **6. 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.

#### **7. Termination of Permit To Install**

This permit to install shall terminate within eighteen months of the effective date of the permit to install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

#### **8. Construction of New Sources(s)**

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

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

**9. Public Disclosure**

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

**10. Applicability**

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

**11. Best Available Technology**

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

**12. Construction Compliance Certification**

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit To Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

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

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**Parameter Limitations (See Section A of This Permit)**

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

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**C. Permit To Install Summary of Allowable Emissions**

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
PM/PM <sub>10</sub>	61.1
S <sub>02</sub>	124.4
VOC	38.8
NO <sub>x</sub>	733.3
CO	548.7
H <sub>2</sub> S <sub>04</sub>	12.2
Beryllium	0.00084
Arsenic	0.012
Benzene	7.7
Lead	0.15
Mercury	0.0023

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**Duke Energy Madison, LLC**

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## **Part II - FACILITY SPECIFIC TERMS AND CONDITIONS**

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

#### **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 State Environmental Protection Agency  
Environmental Appeals Board  
401 M Street, SW (MC-113do)  
Washington, DC 20460

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

None.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	a dry basis, based on a rolling, 12-month summation of the monthly NO <sub>x</sub> emissions in ppm.
80 Megawatt (Nominal) Simple-Cycle Combustion Turbine #1	40 CFR Part 52.21 and OAC rule 3745-31-11 thru 31-20	OAC rule 3745-17-07  OAC rule 3745-17-11(B)(4)
		40 CFR Part 60 Subpart GG
		OAC rule 3745-18-06(F)
		OAC rule 3745-31-05(A)(3)
	When burning natural gas, the NO <sub>x</sub> emission rate shall not exceed 12 ppm by volume of 15% oxygen on	Synthetic Minor to avoid Emission Offset Rule  40 CFR Part 63-41 thru 6.44**

Emissions Unit ID: P001

\*\* For purposes of this permit and for the Hazardous Air Pollutants (HAPs) emitted from this emissions unit, the best available control technology determination to satisfy the requirements of 40 CFR Part 52.21 is equivalent to the maximum achievable control technology determination used to satisfy the requirements of 40 CFR Part 63.41 thru 63.44. This is documented in the letter dated 1/21/99.

Applicable Emissions  
 Limitations/Control  
Measures

- 60.5 TPY PM/PM<sub>10</sub>\*
- 120.8 TPY SO<sub>2</sub>\*
- 733.3 TPY NO<sub>x</sub>\*
- 541.0 TPY CO\*
- 12.2 TPY H<sub>2</sub>SO<sub>4</sub> mist\*
- 0.00084 TPY Beryllium\*
- 0.012 TPY Arsenic\*
- 7.7 TPY Benzene\*
- 0.008 lb PM/PM<sub>10</sub>/MMBtu
- 58.0 lbs SO<sub>2</sub>/hour
- 196.0 lbs NO<sub>x</sub>/hour
- 54.0 lbs CO/hour
- 6.0 lbs H<sub>2</sub>SO<sub>4</sub> mist/hour
  
- 15 ppm NO<sub>x</sub> by volume at 15 % oxygen on a dry basis when firing natural gas, based on a once hour average as determined in term A.V.I.
  
- 42 ppm NO<sub>x</sub> by volume at 15 % oxygen on a dry basis when firing diesel fuel, based on a one hour average as determined in term A.V.I.
  
- 0.05 % sulfur
- 0.0456 lbs SO<sub>2</sub>/MMBtu
  
- See term A.I.2.a
  
- Less stringent than 40 CFR Part 52.21
  
- Less Stringent than 40 CFR Part 52.21

Less Stringent than 40 CFR Part 52.21

- 10.0 lbs VOC/hour
- 0.15 TPY Lead
- 0.0023 TPY Mercury

For PM/PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, H<sub>2</sub>SO<sub>4</sub> mist, Beryllium, Arsenic, and Benzene, best available technology is equivalent to best available control technology.

36.4 TPY VOC\*

\* Emissions unit P001-P008, combined, based on a rolling, 12-month summation.

**2. Additional Terms and Conditions**

- 2.a** Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule when combusting diesel fuel.
  
- 2.b** Compliance with OAC rule 3745-31-15, 40 CFR Part 52.21, and OAC rule 3745-31-05 shall be demonstrated by the use of dry low NO<sub>x</sub> combustors with a 15 ppm NO<sub>x</sub> emission limit when combusting natural gas, the use of water injection with a 42 ppm NO<sub>x</sub> emission limit when combusting diesel fuel and limited natural gas and diesel fuel usage.

- 2.c** The hourly emission limitation(s) outlined in term B.I.1. are based upon the emissions unit's Potential to Emit (PTE). Therefore, no hourly records are required to demonstrate compliance with these limits.
- 2.d** Visible particulate emissions from any stack shall not exceed 10 percent opacity, as a six-minute average when combusting natural gas.
- 2.e** The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.

## II. Operational Restrictions

1. The maximum annual natural gas usage rate for emissions units P001-P008 shall not exceed  $2.03 \times 10^{10}$  cubic feet per year, based upon a rolling, 12-month summation of the natural gas usage rate.

To ensure enforceability during the first 12 calendar months of operation following issuance of this permit, the permittee shall not exceed the natural gas usage rates specified in the following table:

<u>Month</u>	<u>Maximum Allowable Natural Gas Usage (MM cubic feet per year)</u>
1	5856.875
1-2	11,908.978
1-3	17,961.082
1-4	20,336.370
1-5	20,336.370
1-6	20,336.370
1-7	20,336.370
1-8	20,336.370
1-9	20,336.370
1-10	20,336.370
1-11	20,336.370
1-12	20,336.370

After the first 12 calendar months of operation following issuance of this permit, compliance with

the annual natural gas usage rate limitation shall be based upon a rolling, 12-month summation of the usage rates.

2. The maximum annual diesel fuel usage rate for emissions units P001-P008 shall not exceed  $3.40 \times 10^7$  gallons per year, based upon a rolling, 12-month summation of the diesel fuel usage rate.

Emissions Unit ID: P001

To ensure enforceability during the first 12 calendar months of operation following issuance of this permit, the permittee shall not exceed the diesel fuel usage rates specified in the following table:

<u>Month</u>	<u>Maximum Allowable Diesel Fuel Usage (MM gallons per year)</u>
1	0
1-2	0
1-3	0
1-4	0
1-5	13.616
1-6	27.231
1-7	34.039
1-8	34.039
1-9	34.039
1-10	34.039
1-11	34.039
1-12	34.039

After the first 12 calendar months of operation following issuance of this permit, compliance with the annual diesel fuel usage rate limitation shall be based upon a rolling, 12-month summation of the usage rates.

3. The combination of natural gas and diesel fuel usage for emissions units P001 - P008 shall not exceed the following emissions limits based upon a rolling, 12-month summation of the emissions:

60.5 TPY PM/PM<sub>10</sub>, 120.8 TPY SO<sub>2</sub>, 733.3 TPY NO<sub>x</sub>, 541.0 TPY CO, 36.4 TPY VOC and 12.2 TPY H<sub>2</sub>SO<sub>4</sub> mist.

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

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of PM/PM<sub>10</sub> (Tons)</u>
1	14.5
1-2	29.4
1-3	44.3

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1-4	50.2
1-5	58.3
1-6	60.5
1-7	60.5
1-8	60.5
1-9	60.5
1-10	60.5
1-11	60.5
1-12	60.5

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of SO<sub>2</sub> (Tons)</u>
1	1.7
1-2	3.5
1-3	5.3
1-4	6.0
1-5	51.2
1-6	97.6
1-7	120.8
1-8	120.8
1-9	120.8
1-10	120.8
1-11	120.8
1-12	120.8

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of NO<sub>x</sub> (Tons)</u>
1	153.6
1-2	280.6
1-3	407.5
1-4	427.0
1-5	498.1
1-6	654.9
1-7	733.3
1-8	733.3
1-9	733.3

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1-10	733.3
1-11	733.3
1-12	733.3

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<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of CO (Tons)</u>
1	155.8
1-2	316.8
1-3	477.8
1-4	541.0
1-5	541.0
1-6	541.0
1-7	541.0
1-8	541.0
1-9	541.0
1-10	541.0
1-11	541.0
1-12	541.0

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of VOC (Tons)</u>
1	5.8
1-2	11.8
1-3	17.7
1-4	20.1
1-5	24.2
1-6	32.3
1-7	36.4
1-8	36.4
1-9	36.4
1-10	36.4
1-11	36.4
1-12	36.4

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of H<sub>2</sub>SO<sub>4</sub> (Tons)</u>
1	0.1
1-2	0.2

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1-3	0.3
1-4	0.3
1-5	5.0
1-6	9.8
1-7	12.2
1-8	12.2
1-9	12.2
1-10	12.2
1-11	12.2
1-12	12.2

After the first 12 calendar months of operation following issuance of this permit, compliance with the annual emission limitation for PM/PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> shall be based upon a rolling, 12-month summation of the monthly emissions.

4. The quality of diesel fuel burned in this emissions unit shall have a combination of heat and sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 0.0456 lb SO<sub>2</sub>/MMBtu of actual heat input.

Compliance with the above mentioned specification shall be determined by using analytical results provided by the permittee or oil supplier for each shipment of oil.

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with the following ASTM methods: ASTM method D4294, ASTM method D240, or ASTM method 6010 for sulfur content; and ASTM method D240 for heat content. The newest or most recent revisions to the applicable test method shall be used for these analyses. Alternative, equivalent methods may be used upon written approval by the appropriate Ohio EPA District Office or local air agency.

### III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information for emissions unit P001 - P008:
  - a. The natural gas usage rate for each month.
  - b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the natural gas usage rates.

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

2. The permittee shall maintain monthly records of the following information for emissions unit P001 - P008:
  - a. The diesel fuel usage rate for each month.
  - b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the diesel fuel usage rates.

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

3. The permittee shall maintain monthly records of the following information for emissions unit P001 - P008:
  - a. The PM/PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emissions for each month. The NO<sub>x</sub> emissions shall be maintained in tons when firing natural gas and diesel fuel and ppm when firing natural gas.
  - b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the PM/PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emissions.

Also, during the first 12 calendar months of operation following issuance of this permit, the permittee shall record the cumulative PM/PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emissions for each calendar month.

4. Certification

Prior to the installation of the continuous NO<sub>x</sub> monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 6 for approval by the Ohio EPA, Central Office.

Within 60 days of the startup of this emissions unit, the permittee shall conduct certification tests of such equipment pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6, and/or 40 CFR Part 75. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate

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Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous NO<sub>x</sub> monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6 and/or 40 CFR Part 75.

5. The permittee shall operate and maintain existing equipment to continuously monitor and record NO<sub>x</sub> from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 and/or 40 CFR Part 75.

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The permittee shall maintain records of all data obtained by the continuous NO<sub>x</sub> monitoring system including, but not limited to, parts per million NO<sub>x</sub> on an instantaneous (one-minute) basis, emissions of NO<sub>x</sub> in units of the applicable standard in the appropriate averaging period (hourly), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

6. Within 180 days of the effective date of this permit, 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. The plan shall follow the requirements of 40 CFR Part 60, Appendix F and/or 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NO<sub>x</sub> monitoring system must be kept on site and available for inspection during regular office hours.

7. Certification

Prior to the installation of the continuous CO monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 4 and 6 for approval by the Ohio EPA, Central Office.

Within 60 days of the effective date of this permit, the permittee shall conduct certification tests of the continuous CO monitoring system pursuant to ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 4 and 6. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous CO monitoring system shall be granted upon determination by the Ohio EPA Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 4 and 6.

8. The permittee shall operate and maintain equipment to continuously monitor and record CO from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 .

The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to, parts per million CO on an instantaneous (one minute) basis, emissions of CO in units of the applicable standard in the appropriate averaging period (hourly), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

9. Within 180 days of the effective date of this permit, 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. The plan shall follow the requirements of 40

CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.

10. The permittee shall monitor the sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of the monitoring shall be determined as follows:
  - a. If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.
  - b. If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom fuel schedules for the determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Ohio EPA, Central Office before they can be used.
  - c. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received and the permittee's or oil supplier's analyses for sulfur content and heat content.

#### **IV. Reporting Requirements**

1. The permittee shall submit deviation reports that identify all exceedances of the rolling, 12-month natural gas and diesel fuel usage limitations, and the PM/PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emission limitations and, for the first twelve calendar months of operation following issuance of this permit, all exceedances of the maximum allowable cumulative natural gas and diesel fuel usage limitations and the PM/PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emission limitations.
2. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, 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 limits specified in 40 CFR Part 76 or any limitations specified in the terms and conditions of this permit or variance. These reports shall also contain the total NO<sub>x</sub> emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to

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the appropriate Ohio EPA District Office or local air 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.

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

3. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any) of all instances of CO values in excess of any applicable limitation(s) specified in OAC Chapter 3745-21, 40 CFR Part 60, or any limitation(s) specified in the terms and conditions of this permit, in units of the standard. These reports shall also contain the total CO emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting 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.

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

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4. The permittee shall also submit annual reports which specify the total PM/PM10, VOC, SO2 and H2SO4 emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 30 of each year.

5. The permittee shall submit, on a quarterly basis, copies of the permittee's or oil supplier's analyses for each shipment of oil (diesel fuel) which is received for burning in this emissions unit. The permittee's or oil supplier's analyses shall document the sulfur content (percent) and heat content (Btu/gallon) for each shipment of oil. The following information shall also be included with the copies of the permittee's or oil supplier's analyses:
  - a. the total quantity of oil received in each shipment (gallons);
  - b. the weighted\* average sulfur content (percent by weight) for the oil received during each calendar month;
  - c. the weighted\* average heat content (Btu/gallon) of the oil received during each calendar month; and,
  - d. the weighted\* average SO<sub>2</sub> emission rate (lbs/MMBtu of actual heat input) of the oil combusted during each calendar month (the SO<sub>2</sub> emission rate shall be calculated as specified in OAC 3745-18-04(F)).

\* In proportion to the quantity of oil received in each shipment during each calendar month.
6. Pursuant to the NSPS, the source owner/operator is hereby advised of the requirements to report the following at the appropriate times:
  - a. construction date (no later than 30 days after such date);
  - b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
  - c. actual start-up date (within 15 days after such date); and,
  - d. date of performance testing (if requiredm at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency  
DAPC - Permit Management Unit  
P.O. Box 1049  
Columbus, OH 43216-1049

and

Department of Environmental Services  
250 William Howard Taft Road  
Cincinnati, OH 45219

These quarterly reports shall be submitted by February 15, May 15, August 15, and November 15 of each year and shall cover the oil shipments received during the previous calendar quarters.

## V. Testing Requirements

### 1. Emission testing requirements

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted within 60 days after achieving the maximum production rate but no later than 180 days after initial startup of the emissions unit.
- b. The emission testing shall be conducted to demonstrate compliance with the NO<sub>x</sub>, CO and VOC emissions limits.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for NO<sub>x</sub>, Method 7E of 40 CFR Part 60, Appendix A, for CO Method 10 of 40 CFR Part 60, Appendix A and for VOC Method 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services shall be permitted to

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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 Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

2. Compliance with the PM/PM10 emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.
3. Compliance with SO<sub>2</sub> emission limit shall be demonstrated by the manufacturer's guaranteed emissions data and the sulfur analyses of the fuels combusted (see term A.III.10).
4. Compliance with the NO<sub>x</sub> and CO emission limits shall be demonstrated by the monitoring in terms A.III.4 - A.III.9
5. Compliance with the H<sub>2</sub>SO<sub>4</sub> emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.
6. Compliance with the Beryllium and Arsenic limits shall be demonstrated by the use of AP-42 Table 3.1-4.
7. Compliance with the Benzene limit shall be demonstrated by the use of AP-42 Table 3.2-3 and Table 3.4-3.
8. Compliance with the visible emission limitation in term A.I.2.a. and A.I.2.d. shall be determined by Method 9, 40 CFR Part 60 Appendix A.
9. Compliance with the VOC limits shall be demonstrated by the use of AP-42 Table 3.1-2 and table 3.4-1.
10. Compliance with the natural gas and diesel fuel usage limits shall be demonstrated by the recordkeeping in term A.III.1 and A.III.2.
11. Compliance with the Lead and Mercury limits shall be demonstrated by the use of AP-42 Table 3.1-4.

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**VI. Miscellaneous Requirements**

None.

**B. State Only Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
80 Megawatt (Nominal) Simple-Cycle Combustion Turbine #1	OAC rule 3745-31-28	0.008 lb PM/PM10/MMBtu 58.0 lbs SO2/hour 196.0 lbs NOx/hour 54.0 lbs CO/hour 6.0 lbs H2SO4 mist/hour  The requirements of this rule were satisfied based on a letter dated 1/21/99.

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

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**V. Testing Requirements**

None.

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**VI. Miscellaneous Requirements**

None



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40 CFR Part 63-41 thru  
6.44\*\*

\*\* For purposes of this permit and for the Hazardous Air Pollutants (HAPs) emitted from this emissions unit, the best available control technology determination to satisfy the requirements of 40 CFR Part 52.21 is equivalent to the maximum achievable control technology determination used to satisfy the requirements of 40 CFR Part 63.41 thru 63.44. This is documented in the letter dated 1/21/99.

Applicable Emissions  
Limitations/Control Measures

60.5 TPY PM/PM10\*  
120.8 TPY SO2\*  
733.3 TPY NOx\*  
541.0 TPY CO\*  
12.2 TPY H2SO4 mist\*  
0.00084 TPY Beryllium\*  
0.012 TPY Arsenic\*  
7.7 TPY Benzene\*  
0.008 lb PM/PM10/MMBtu  
58.0 lbs SO2/hour  
196.0 lbs NOx/hour  
54.0 lbs CO/hour  
6.0 lbs H2SO4 mist/hour

15 ppm NOx by volume at  
15 % oxygen on a dry basis when  
firing natural gas, based on a one  
hour average as determined in  
term A.V.I.

42 ppm NOx by volume at  
15 % oxygen on a dry basis when  
firing diesel fuel, based on a  
one hour average as determined  
in term A.V.I.

0.05 % sulfur  
0.0456 lbs SO2/MMBtu

See term A.I.2.a

Less stringent than 40 CFR Part  
52.21.

Less Stringent than 40 CFR Part  
52.21

Less Stringent than 40 CFR Part

52.21

10.0 lbs VOC/hour  
0.15 TPY Lead  
0.0023 TPY Mercury

For PM/PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, H<sub>2</sub>SO<sub>4</sub>  
mist, Beryllium, Arsenic, and  
Benzene, best available technology is  
equivalent to best available control  
technology.

36.4 TPY VOC\*

\* Emissions unit P001-P008,  
combined, based on a rolling,  
12-month summation.

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**2. Additional Terms and Conditions**

- 2.a** Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule when combusting diesel fuel.
- 2.b** Compliance with OAC rule 3745-31-15, 40 CFR Part 52.21, and OAC rule 3745-31-05 shall be demonstrated by the use of dry low NOx combustors with a 15 ppm NOX emission limit when combusting natural gas, the use of water injection with a 42 ppm NOX emission limit when combusting diesel fuel and limited natural gas and diesel fuel usage.
- 2.c** The hourly emission limitation(s) outlined in term B.I.1. are based upon the emissions unit's Potential to Emit (PTE). Therefore, no hourly records are required to demonstrate compliance with these limits.
- 2.d** Visible particulate emissions from any stack shall not exceed 10 percent opacity, as a six-minute average when combusting natural gas.
- 2.e** The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.

**II. Operational Restrictions**

1. The maximum annual natural gas usage rate for emissions units P001-P008 shall not exceed  $2.03 \times 10^{10}$  cubic feet per year, based upon a rolling, 12-month summation of the natural gas usage rate.

To ensure enforceability during the first 12 calendar months of operation following issuance of this permit, the permittee shall not exceed the natural gas usage rates specified in the following table:

<u>Month</u>	<u>Maximum Allowable Natural Gas Usage (MM cubic feet per year)</u>
1	5856.875
1-2	11,908.978
1-3	17,961.082

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1-4	20,336.370
1-5	20,336.370
1-6	20,336.370
1-7	20,336.370

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1-8	20,336.370
1-9	20,336.370
1-10	20,336.370
1-11	20,336.370
1-12	20,336.370

After the first 12 calendar months of operation following issuance of this permit, compliance with the annual natural gas usage rate limitation shall be based upon a rolling, 12-month summation of the usage rates.

- The maximum annual diesel fuel usage rate for emissions units P001-P008 shall not exceed  $3.40 \times 10^7$  gallons per year, based upon a rolling, 12-month summation of the diesel fuel usage rate.

To ensure enforceability during the first 12 calendar months of operation following issuance of this permit, the permittee shall not exceed the diesel fuel usage rates specified in the following table:

<u>Month</u>	<u>Maximum Allowable Diesel Fuel Usage (MM gallons per year)</u>
1	0
1-2	0
1-3	0
1-4	0
1-5	13.616
1-6	27.231
1-7	34.039
1-8	34.039
1-9	34.039
1-10	34.039
1-11	34.039
1-12	34.039

After the first 12 calendar months of operation following issuance of this permit, compliance with the annual diesel fuel usage rate limitation shall be based upon a rolling, 12-month summation of the usage rates.

- The combination of natural gas and diesel fuel usage for emissions units P001 - P008 shall not exceed the following emissions limits based upon a rolling, 12-month summation of the emissions:

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60.5 TPY PM/PM10, 120.8 TPY SO<sub>2</sub>, 733.3 TPY NO<sub>x</sub>, 541.0 TPY CO, 36.4 TPY VOC and 12.2 TPY H<sub>2</sub>SO<sub>4</sub> mist.

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

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of PM/PM10 (Tons)</u>
1	14.5
1-2	29.4
1-3	44.3
1-4	50.2
1-5	58.3
1-6	60.5
1-7	60.5
1-8	60.5
1-9	60.5
1-10	60.5
1-11	60.5
1-12	60.5

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of SO2 (Tons)</u>
1	1.7
1-2	3.5
1-3	5.3
1-4	6.0
1-5	51.2
1-6	97.6
1-7	120.8
1-8	120.8
1-9	120.8
1-10	120.8
1-11	120.8
1-12	120.8

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of NOx (Tons)</u>
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1	153.6
1-2	280.6
1-3	407.5
1-4	427.0
1-5	498.1
1-6	654.9
1-7	733.3
1-8	733.3
1-9	733.3
1-10	733.3
1-11	733.3
1-12	733.3

	<u>Maximum Allowable</u>
	<u>Cumulative Emissions</u>
<u>Month(s)</u>	<u>of CO (Tons)</u>

1	155.8
1-2	316.8
1-3	477.8
1-4	541.0
1-5	541.0
1-6	541.0
1-7	541.0
1-8	541.0
1-9	541.0
1-10	541.0
1-11	541.0
1-12	541.0

	<u>Maximum Allowable</u>
	<u>Cumulative Emissions</u>
<u>Month(s)</u>	<u>of VOC (Tons)</u>

1	5.8
1-2	11.8
1-3	17.7
1-4	20.1
1-5	24.2

1-6	32.3
1-7	36.4
1-8	36.4
1-9	36.4
1-10	36.4
1-11	36.4
1-12	36.4

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<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of H<sub>2</sub>SO<sub>4</sub> (Tons)</u>
1	0.1
1-2	0.2
1-3	0.3
1-4	0.3
1-5	5.0
1-6	9.8
1-7	12.2
1-8	12.2
1-9	12.2
1-10	12.2
1-11	12.2
1-12	12.2

After the first 12 calendar months of operation following issuance of this permit, compliance with the annual emission limitation for PM/PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> shall be based upon a rolling, 12-month summation of the monthly emissions.

- The quality of diesel fuel burned in this emissions unit shall have a combination of heat and sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 0.0456 lb SO<sub>2</sub>/MMBtu of actual heat input.

Compliance with the above mentioned specification shall be determined by using analytical results provided by the permittee or oil supplier for each shipment of oil.

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with the following ASTM methods: ASTM method D4294, ASTM method D240, or ASTM method 6010 for sulfur content; and ASTM method D240 for heat content. The newest or most recent revisions to the applicable test method shall be used for these analyses. Alternative, equivalent methods may be used upon written approval by the appropriate Ohio EPA District Office or local air agency.

### **III. Monitoring and/or Recordkeeping Requirements**

- The permittee shall maintain monthly records of the following information for emissions unit P001 - P008:

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- a. The natural gas usage rate for each month.
- b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the natural gas usage rates.

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

2. The permittee shall maintain monthly records of the following information for emissions unit P001 - P008:

- a. The diesel fuel usage rate for each month.
- b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the diesel fuel usage rates.

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

3. The permittee shall maintain monthly records of the following information for emissions unit P001 - P008:

- a. The PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emissions for each month. The NO<sub>x</sub> emissions shall be maintained in tons when firing natural gas and diesel fuel and ppm when firing natural gas.
- b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emissions.

Also, during the first 12 calendar months of operation following issuance of this permit, the permittee shall record the cumulative PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, (in ppm and TPY) CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emissions for each calendar month.

4. Certification

Prior to the installation of the continuous NO<sub>x</sub> monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 6 for approval by the Ohio EPA, Central Office.

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Within 60 days of the startup of this emissions unit, the permittee shall conduct certification tests of such equipment pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6, and/or 40 CFR Part 75. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous NO<sub>x</sub> monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6 and/or 40 CFR Part 75.

5. The permittee shall operate and maintain existing equipment to continuously monitor and record NO<sub>x</sub> from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 and/or 40 CFR Part 75.

The permittee shall maintain records of all data obtained by the continuous NO<sub>x</sub> monitoring system including, but not limited to, parts per million NO<sub>x</sub> on an instantaneous (one-minute) basis, emissions of NO<sub>x</sub> in units of the applicable standard in the appropriate averaging period (hourly), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

6. Within 180 days of the effective date of this permit, 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. The plan shall follow the requirements of 40 CFR Part 60, Appendix F and/or 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NO<sub>x</sub> monitoring system must be kept on site and available for inspection during regular office hours.
7. Certification

Prior to the installation of the continuous CO monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 4 and 6 for approval by the Ohio EPA, Central Office.

Within 60 days of the effective date of this permit, the permittee shall conduct certification tests of

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the continuous CO monitoring system pursuant to ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 4 and 6. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous CO monitoring system shall be granted upon determination by the Ohio EPA Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 4 and 6.

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8. The permittee shall operate and maintain equipment to continuously monitor and record CO from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 .

The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to, parts per million CO on an instantaneous (one minute) basis, emissions of CO in units of the applicable standard in the appropriate averaging period (hourly), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

9. Within 180 days of the effective date of this permit, 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. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.
10. The permittee shall monitor the sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of the monitoring shall be determined as follows:
  - a. If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.
  - b. If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom fuel schedules for the determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Ohio EPA, Central Office before they can be used.
  - c. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received and the permittee's or oil supplier's analyses for sulfur content and heat content.

#### **IV. Reporting Requirements**

1. The permittee shall submit deviation reports that identify all exceedances of the rolling, 12-month natural gas and diesel fuel usage limitations, and the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emission limitations and, for the first twelve calendar months of operation following issuance of this permit, all exceedances of the maximum allowable cumulative natural gas and diesel fuel usage limitations and the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emission

limitations.

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2. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, 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 limits specified in 40 CFR Part 76 or any limitations specified in the terms and conditions of this permit or variance. These reports shall also contain the total NO<sub>x</sub> emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting 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.

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

3. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any) of all instances of CO values in excess of any applicable limitation(s) specified in OAC Chapter 3745-21, 40 CFR Part 60, or any limitation(s) specified in the terms and conditions of this permit, in units of the standard. These reports shall also contain the total CO emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting 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

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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.

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

4. The permittee shall also submit annual reports which specify the total PM/PM10, VOC, SO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub> emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 30 of each year.
5. The permittee shall submit, on a quarterly basis, copies of the permittee's or oil supplier's analyses for each shipment of oil (diesel fuel) which is received for burning in this emissions unit. The permittee's or oil supplier's analyses shall document the sulfur content (percent) and heat content (Btu/gallon) for each shipment of oil. The following information shall also be included with the copies of the permittee's or oil supplier's analyses:
  - a. the total quantity of oil received in each shipment (gallons);
  - b. the weighted\* average sulfur content (percent by weight) for the oil received during each calendar month;
  - c. the weighted\* average heat content (Btu/gallon) of the oil received during each calendar month; and,
  - d. the weighted\* average SO<sub>2</sub> emission rate (lbs/MMBtu of actual heat input) of the oil combusted during each calendar month (the SO<sub>2</sub> emission rate shall be calculated as specified in OAC 3745-18-04(F)).

\*In proportion to the quantity of oil received in each shipment during each calendar month.

These quarterly reports shall be submitted by February 15, May 15, August 15, and

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November 15 of each year and shall cover the oil shipments received during the previous calendar quarters.

6. Pursuant to the NSPS, the source owner/operator is hereby advised of the requirements to report the following at the appropriate times:

- f. construction date (no later than 30 days after such date);
- g. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
- h. actual start-up date (within 15 days after such date); and,
- i. date of performance testing (if required at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency  
DAPC - Permit Management Unit  
P.O. Box 1049  
Columbus, OH 43216-1049

and

Department of Environmental Services  
250 William Howard Taft Road  
Cincinnati, OH 45219

## V. Testing Requirements

### 1. Emission testing requirements

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted within 60 days after achieving the maximum production rate but no later than 180 days after initial startup of the emissions unit.
- b. The emission testing shall be conducted to demonstrate compliance with the NO<sub>x</sub>, CO and VOC emissions limits.
- c. The following test method(s) shall be employed to demonstrate compliance with the

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allowable mass emission rate(s): for NO<sub>x</sub>, Method 7E of 40 CFR Part 60, Appendix A, for CO Method 10 of 40 CFR Part 60, Appendix A and for VOC Method 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

2. Compliance with the PM/PM<sub>10</sub> emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.
3. Compliance with SO<sub>2</sub> emission limit shall be demonstrated by the manufacturer's guaranteed emissions data and the sulfur analyses of the fuels combusted (see term A.III.10).
4. Compliance with the NO<sub>x</sub> and CO emission limits shall be demonstrated by the monitoring in terms A.III.4 - A.III.9
5. Compliance with the H<sub>2</sub>SO<sub>4</sub> emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.

6. Compliance with the Beryllium and Arsenic limits shall be demonstrated by the use of AP-42 Table 3.1-4.
7. Compliance with the Benzene limit shall be demonstrated by the use of AP-42 Table 3.2-3 and Table 3.4-3.
8. Compliance with the visible emission limitation in term A.I.2.a. and A.I.2.d. shall be determined by Method 9, 40 CFR Part 60 Appendix A.
9. Compliance with the VOC limits shall be demonstrated by the use of AP-42 Table 3.1-2 and table 3.4-1.
10. Compliance with the natural gas and diesel fuel usage limits shall be demonstrated by the recordkeeping in term A.III.1 and A.III.2.
11. Compliance with the Lead and Mercury limits shall be demonstrated by the use of AP-42 Table 3.1-4.

## VI. Miscellaneous Requirements

None.

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**B. State Only Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules Requirements</u>	<u>Applicable Emissions Limitations/ Control Measures</u>
80 Megawatt (Nominal) Simple-Cycle Combustion Turbine #2	OAC rule 3745-31-28	The requirements of this rule were satisfied based on a letter dated 1/21/99.

2. **Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

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None.

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) Continued]****A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

Operations, Property, and/or <u>Equipment</u>	<u>Applicable Rules/Requirements</u>	ppm by volume of 15% oxygen on a dry basis, based on a rolling, 12-month summation of the monthly NO <sub>x</sub> emissions in ppm.
80 Megawatt (Nominal) Simple-Cycle Combustion Turbine #3	40 CFR Part 52.21 and OAC rule 3745-31-11 thru 31-20	OAC rule 3745-17-07
		OAC rule 3745-17-11(B)(4)
		40 CFR Part 60 Subpart GG
		OAC rule 3745-18-06(F)
		OAC rule 3745-31-05(A)(3)
	When burning natural gas, the NO <sub>x</sub> emission rate shall not exceed 12	Synthetic Minor to avoid Emission Offset Rule

40 CFR Part 63-41 thru 6.44\*\*

\*\* For purposes of this permit and for the Hazardous Air Pollutants (HAPs) emitted from this emissions unit, the best available control technology determination to satisfy the requirements of 40 CFR Part 52.21 is equivalent to the maximum achievable control technology determination used to satisfy the requirements of 40 CFR Part 63.41 thru 63.44. This is documented in the letter dated 1/21/99.

Applicable Emissions Limitations/Control Measures

60.5 TPY PM/PM10\*  
 120.8 TPY SO2\*  
 733.3 TPY NOx\*  
 541.0 TPY CO\*  
 12.2 TPY H2SO4 mist\*  
 0.00084 TPY Beryllium\*  
 0.012 TPY Arsenic\*  
 7.7 TPY Benzene\*  
 0.008 lb PM/PM10/MMBtu  
 58.0 lbs SO2/hour  
 196.0 lbs NOx/hour  
 54.0 lbs CO/hour  
 6.0 lbs H2SO4 mist/hour

15 ppm NOx by volume at 15 % oxygen on a dry basis when firing natural gas, based on a one hour average as determined in term A.V.I.

42 ppm NOx by volume at 15 % oxygen on a dry basis when firing diesel fuel, based on a one hour average as determined in term A.V.I.

0.05 % sulfur  
 0.0456 lbs SO2/MMBtu

See term A.I.2.a

Less stringent than 40 CFR Part 52.21

Less Stringent than 40 CFR Part 52.21

Less Stringent than 40 CFR Part 52.21

10.0 lbs VOC/hour  
 0.15 TPY Lead  
 0.0023 TPY Mercury

For PM/PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, H<sub>2</sub>SO<sub>4</sub> mist, Beryllium, Arsenic, and Benzene, best available technology is equivalent to best available control technology.

36.4 TPY VOC\*

\* Emissions unit P001-P008, combined, based on a rolling, 12-month summation.

**2. Additional Terms and Conditions**

- 2.a** Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule when combusting diesel fuel.

- 2.b** Compliance with OAC rule 3745-31-15, 40 CFR Part 52.21 and OAC rule 3745-31-05 shall be demonstrated by the use of dry low NOx combustors with a 15 ppm NOX emission limit when combusting natural gas, the use of water injection with a 42 ppm NOX emission limit when combusting diesel fuel and limited natural gas and diesel fuel usage.
- 2.c** The hourly emission limitation(s) outlined in term B.I.1. are based upon the emissions unit's Potential to Emit (PTE). Therefore, no hourly records are required to demonstrate compliance with these limits.
- 2.d** Visible particulate emissions from any stack shall not exceed 10 percent opacity, as a six-minute average when combusting natural gas.
- 2.e** The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.

**II. Operational Restrictions**

- 1. The maximum annual natural gas usage rate for emissions units P001-P008 shall not exceed 2.03 x 10<sup>10</sup> cubic feet per year, based upon a rolling, 12-month summation of the natural gas usage rate.

To ensure enforceability during the first 12 calendar months of operation following issuance of this permit, the permittee shall not exceed the natural gas usage rates specified in the following table:

<u>Month</u>	<u>Maximum Allowable Natural Gas Usage (MM cubic feet per year)</u>
1	5856.875
1-2	11,908.978
1-3	17,961.082
1-4	20,336.370
1-5	20,336.370
1-6	20,336.370
1-7	20,336.370
1-8	20,336.370

1-9	20,336.370
1-10	20,336.370
1-11	20,336.370
1-12	20,336.370

After the first 12 calendar months of operation following issuance of this permit, compliance with the annual natural gas usage rate limitation shall be based upon a rolling, 12-month summation of the usage rates.

2. The maximum annual diesel fuel usage rate for emissions units P001-P008 shall not exceed  $3.40 \times 10^7$  gallons per year, based upon a rolling, 12-month summation of the diesel fuel usage rate.

To ensure enforceability during the first 12 calendar months of operation following issuance of this permit, the permittee shall not exceed the diesel fuel usage rates specified in the following table:

<u>Months</u>	<u>Maximum Allowable Diesel Fuel Usage (MM gallons per year)</u>
1	0
1-2	0
1-3	0
1-4	0
1-5	13.616
1-6	27.231
1-7	34.039
1-8	34.039
1-9	34.039
1-10	34.039
1-11	34.039
1-12	34.039

After the first 12 calendar months of operation following issuance of this permit, compliance with the annual diesel fuel usage rate limitation shall be based upon a rolling, 12-month summation of the usage rates.

3. The combination of natural gas and diesel fuel usage for emissions units P001 - P008 shall not exceed the following emissions limits based upon a rolling, 12-month summation of the emissions:

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60.5 TPY PM/PM10, 120.8 TPY SO<sub>2</sub>, 733.3 TPY NO<sub>x</sub>, 541.0 TPY CO, 36.4 TPY VOC and 12.2 TPY H<sub>2</sub>SO<sub>4</sub> mist.

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

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of PM/PM10 (Tons)</u>
1	14.5
1-2	29.4
1-3	44.3
1-4	50.2
1-5	58.3
1-6	60.5
1-7	60.5
1-8	60.5
1-9	60.5
1-10	60.5
1-11	60.5
1-12	60.5

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of SO<sub>2</sub> (Tons)</u>
1	1.7
1-2	3.5
1-3	5.3
1-4	6.0
1-5	51.2
1-6	97.6
1-7	120.8
1-8	120.8
1-9	120.8
1-10	120.8
1-11	120.8
1-12	120.8

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of NOx (Tons)</u>
1	153.6
1-2	280.6
1-3	407.5
1-4	427.0
1-5	498.1
1-6	654.9
1-7	733.3
1-8	733.3
1-9	733.3
1-10	733.3
1-11	733.3
1-12	733.3

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of CO (Tons)</u>
1	155.8
1-2	316.8
1-3	477.8
1-4	541.0
1-5	541.0
1-6	541.0
1-7	541.0
1-8	541.0
1-9	541.0
1-10	541.0
1-11	541.0
1-12	541.0

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of VOC (Tons)</u>
1	5.8
1-2	11.8
1-3	17.7
1-4	20.1
1-5	24.2
1-6	32.3
1-7	36.4
1-8	36.4
1-9	36.4
1-10	36.4
1-11	36.4
1-12	36.4

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of H2SO4 (Tons)</u>
1	0.1
1-2	0.2

1-3	0.3
1-4	0.3
1-5	5.0
1-6	9.8
1-7	12.2
1-8	12.2
1-9	12.2
1-10	12.2
1-11	12.2
1-12	12.2

After the first 12 calendar months of operation following issuance of this permit, compliance with the annual emission limitation for PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> shall be based upon a rolling, 12-month summation of the monthly emissions.

4. The quality of diesel fuel burned in this emissions unit shall have a combination of heat and sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 0.0456 lb SO<sub>2</sub>/MMBtu of actual heat input.

Compliance with the above mentioned specification shall be determined by using analytical results provided by the permittee or oil supplier for each shipment of oil.

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with the following ASTM methods: ASTM method D4294, ASTM method D240, or ASTM method 6010 for sulfur content; and ASTM method D240 for heat content. The newest or most recent revisions to the applicable test method shall be used for these analyses. Alternative, equivalent methods may be used upon written approval by the appropriate Ohio EPA District Office or local air agency.

### III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information for emissions unit P001 - P008:
  - a. The natural gas usage rate for each month.
  - b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the natural gas usage rates.

Also, during the first 12 calendar months of operation following issuance of this permit,

the permittee shall record the cumulative natural gas usage rate for each calendar month.

2. The permittee shall maintain monthly records of the following information for emissions unit P001 - P008:
  - a. The diesel fuel usage rate for each month.
  - b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the diesel fuel usage rates.

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

3. The permittee shall maintain monthly records of the following information for emissions unit P001 - P008:
  - a. The PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emissions for each month. The NO<sub>x</sub> emissions shall be maintained in tons when firing natural gas and diesel fuel and ppm when firing natural gas.
  - b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emissions.

Also, during the first 12 calendar months of operation following issuance of this permit, the permittee shall record the cumulative PM/PM10, SO<sub>2</sub>, No<sub>x</sub>, (in ppm and TPY) CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emissions for each calendar month.

4. Certification

Prior to the installation of the continuous NO<sub>x</sub> monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 6 for approval by the Ohio EPA, Central Office.

Within 60 days of the startup of this emissions unit, the permittee shall conduct certification tests of such equipment pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6, and/or 40 CFR Part 75. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance

with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous NO<sub>x</sub> monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6 and/or 40 CFR Part 75.

5. The permittee shall operate and maintain existing equipment to continuously monitor and record NO<sub>x</sub> from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 and/or 40 CFR Part 75.

The permittee shall maintain records of all data obtained by the continuous NO<sub>x</sub> monitoring system including, but not limited to, parts per million NO<sub>x</sub> on an instantaneous (one-minute) basis, emissions of NO<sub>x</sub> in units of the applicable standard in the appropriate averaging period (hourly), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

6. Within 180 days of the effective date of this permit, 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. The plan shall follow the requirements of 40 CFR Part 60, Appendix F and/or 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NO<sub>x</sub> monitoring system must be kept on site and available for inspection during regular office hours.

7. Certification

Prior to the installation of the continuous CO monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 4 and 6 for approval by the Ohio EPA, Central Office.

Within 60 days of the effective date of this permit, the permittee shall conduct certification tests of the continuous CO monitoring system pursuant to ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 4 and 6. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of

the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous CO monitoring system shall be granted upon determination by the Ohio EPA Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 4 and 6.

8. The permittee shall operate and maintain equipment to continuously monitor and record CO from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to, parts per million CO on an instantaneous (one minute) basis, emissions of CO in units of the applicable standard in the appropriate averaging period (hourly), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

9. Within 180 days of the effective date of this permit, 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. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.
10. The permittee shall monitor the sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of the monitoring shall be determined as follows:
  - a. If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.
  - b. If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom fuel schedules for the determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Ohio EPA, Central Office before they can be used.
  - c. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received and the permittee's or oil supplier's analyses for sulfur content and heat content.

#### IV. Reporting Requirements

1. The permittee shall submit deviation reports that identify all exceedances of the rolling, 12-month natural gas and diesel fuel usage limitations, and the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emission limitations and, for the first twelve calendar months of operation following issuance of this permit, all exceedances of the maximum allowable cumulative natural gas and diesel fuel usage limitations and the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emission limitations.
2. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, 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 limits specified in 40 CFR Part 76 or any limitations specified in the terms and conditions of this permit or variance. These reports shall also contain the total NO<sub>x</sub> emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting 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.

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

3. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any) of all instances of CO values in excess of any

applicable limitation(s) specified in OAC Chapter 3745-21, 40 CFR Part 60, or any limitation(s) specified in the terms and conditions of this permit, in units of the standard. These reports shall also contain the total CO emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting 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.

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

4. The permittee shall also submit annual reports which specify the total PM/PM10, VOC, SO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub> emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 30 of each year.
5. The permittee shall submit, on a quarterly basis, copies of the permittee's or oil supplier's analyses for each shipment of oil (diesel fuel) which is received for burning in this emissions unit. The permittee's or oil supplier's analyses shall document the sulfur content (percent) and heat content (Btu/gallon) for each shipment of oil. The following information shall also be included with the copies of the permittee's or oil supplier's analyses:
  - a. the total quantity of oil received in each shipment (gallons);
  - b. the weighted\* average sulfur content (percent by weight) for the oil received during each calendar month;
  - c. the weighted\* average heat content (Btu/gallon) of the oil received during each calendar month; and,

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- d. the weighted\* average SO<sub>2</sub> emission rate (lbs/MMBtu of actual heat input) of the oil combusted during each calendar month (the SO<sub>2</sub> emission rate shall be calculated as specified in OAC 3745-18-04(F)).

\*In proportion to the quantity of oil received in each shipment during each calendar month.

These quarterly reports shall be submitted by February 15, May 15, August 15, and November 15 of each year and shall cover the oil shipments received during the previous calendar quarters.

6. Pursuant to the NSPS, the source owner/operator is hereby advised of the requirements to report the following at the appropriate times:
- a. construction date (no later than 30 days after such date);
  - b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
  - c. actual start-up date (within 15 days after such date); and,
  - d. date of performance testing (if requiredm at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency  
DAPC - Permit Management Unit  
P.O. Box 1049  
Columbus, OH 43216-1049

and

Department of Environmental Services  
250 William Howard Taft Road  
Cincinnati, OH 45219

## V. Testing Requirements

### 1. Emission testing requirements

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted within 60 days after achieving the maximum production rate but no later than 180 days after initial startup of the emissions unit.
- b. The emission testing shall be conducted to demonstrate compliance with the NO<sub>x</sub>, CO and VOC emissions limits.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for NO<sub>x</sub>, Method 7E of 40 CFR Part 60, Appendix A, for CO Method 10 of 40 CFR Part 60, Appendix A and for VOC Method 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

2. Compliance with the PM/PM<sub>10</sub> emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.

3. Compliance with SO<sub>2</sub> emission limit shall be demonstrated by the manufacturer's guaranteed emissions data and the sulfur analyses of the fuels combusted (see term A.III.10).
4. Compliance with the NO<sub>x</sub> and CO emission limits shall be demonstrated by the monitoring in terms A.III.4 - A.III.9
5. Compliance with the H<sub>2</sub>SO<sub>4</sub> emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.
6. Compliance with the Beryllium and Arsenic limits shall be demonstrated by the use of AP-42 Table 3.1-4.
7. Compliance with the Benzene limit shall be demonstrated by the use of AP-42 Table 3.2-3 and Table 3.4-3.
8. Compliance with the visible emission limitation in term A.I.2.a. and A.I.2.d. shall be determined by Method 9, 40 CFR Part 60 Appendix A.
9. Compliance with the VOC limits shall be demonstrated by the use of AP-42 Table 3.1-2 and table 3.4-1.
10. Compliance with the natural gas and diesel fuel usage limits shall be demonstrated by the recordkeeping in term A.III.1 and A.III.2.
11. Compliance with the Lead and Mercury limits shall be demonstrated by the use of AP-42 Table 3.1-4.

## VI. Miscellaneous Requirements

None.

**B. State Only Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Limitations/ Control Measures</u>	<u>Emissions</u>
80 Megawatt (Nominal) Simple-Cycle Combustion Turbine #3	OAC rule 3745-31-28		The requirements of this rule were satisfied based in a letter dated 1/21/99.

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]****A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

Operations, and/or <u>Equipment</u>	Property,	<u>Applicable Rules/Requirements</u>	emission rate shall not exceed 12 ppm by volume of 15% oxygen on a dry basis, based on a rolling, 12-month summation of the monthly NO <sub>x</sub> emissions in ppm.
80 Megawatt Simple-Cycle Turbine #4	(Nominal) Combustion	40 CFR Part 52.21 and OAC rule 3745-31-11 thru 31-20	OAC rule 3745-17-07
			OAC rule 3745-17-11(B)(4)
		When burning natural gas, the NO <sub>x</sub>	40 CFR Part 60 Subpart GG

OAC rule 3745-18-06(F)	Applicable Limitations/Control Measures	Emissions	52.21
OAC rule 3745-31-05(A)(3)	60.5 TPY PM/PM10* 120.8 TPY SO2* 733.3 TPY NOx* 541.0 TPY CO* 12.2 TPY H2SO4 mist* 0.00084 TPY Beryllium* 0.012 TPY Arsenic* 7.7 TPY Benzene* 0.008 lb PM/PM10/MMBtu 58.0 lbs SO2/hour 196.0 lbs NOx/hour 54.0 lbs CO/hour 6.0 lbs H2SO4 mist/hour	Less Stringent than 40 CFR Part 52.21	36.4 TPY VOC*
Synthetic Minor to avoid Emission Offset Rule	15 ppm NOx by volume at 15 % oxygen on a dry basis when firing natural gas, based on a one hour average as determined in term A.V.I.	10.0 lbs VOC/hour	0.15 TPY Lead
40 CFR Part 63-41 thru 6.44**	42 ppm NOx by volume at 15 % oxygen on a dry basis when firing diesel fuel, based on a one hour average as determined in term A.V.I.	0.0023 TPY Mercury	For PM/PM10, SO2, NOx, CO, H2SO4 mist, Beryllium, Arsenic, and Benzene, best available technology is equivalent to best available control technology.
** For purposes of this permit and for the Hazardous Air Pollutants (HAPs) emitted from this emissions unit, the best available control technology determination to satisfy the requirements of 40 CFR Part 52.21 is equivalent to the maximum achievable control technology determination used to satisfy the requirements of 40 CFR Part 63.41 thru 63.44. This is documented in the letter dated 1/21/99.	0.05 % sulfur 0.0456 lbs SO2/MMBtu	* Emissions unit P001-P008, combined, based on a rolling, 12-month summation.	
	See term A.I.2.a		
	Less stringent than 40 CFR Part 52.21		
	Less Stringent than 40 CFR Part		

**2. Additional Terms and Conditions**

- 2.a** Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule when combusting diesel fuel.
- 2.b** Compliance with OAC rule 3745-31-15, 40 CFR Part 52.21 and OAC rule 3745-31-05 shall be demonstrated by the use of dry low NOx combustors with a 15 ppm NOX emission limit when combusting natural gas, the use of water injection with a 42 ppm NOX emission limit when combusting diesel fuel and limited natural gas and diesel fuel usage.
- 2.c** The hourly emission limitation(s) outlined in term B.I.1. are based upon the emissions unit’s Potential to Emit (PTE). Therefore, no hourly records are required to demonstrate compliance with these limits.
- 2.d** Visible particulate emissions from any stack shall not exceed 10 percent opacity, as a six-minute average when combusting natural gas.
- 2.e** The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.

**II. Operational Restrictions**

- 1. The maximum annual natural gas usage rate for emissions units P001-P008 shall not exceed 2.03 x 10<sup>10</sup> cubic feet per year, based upon a rolling, 12-month summation of the natural gas usage rate.

To ensure enforceability during the first 12 calendar months of operation following issuance of this permit, the permittee shall not exceed the natural gas usage rates specified in the following table:

<u>Month</u>	<u>Maximum Allowable Natural Gas Usage (MM cubic feet per year)</u>
1	5,856.875
1-2	11,908.978

1-3	17,961.082
1-4	20,336.370
1-5	20,336.370
1-6	20,336.370
1-7	20,336.370
1-8	20,336.370
1-9	20,336.370
1-10	20,336.370
1-11	20,336.370
1-12	20,336.370

After the first 12 calendar months of operation following issuance of this permit, compliance with the annual natural gas usage rate limitation shall be based upon a rolling, 12-month summation of the usage rates.

2. The maximum annual diesel fuel usage rate for emissions units P001-P008 shall not exceed  $3.40 \times 10^7$  gallons per year, based upon a rolling, 12-month summation of the diesel fuel usage rate.

To ensure enforceability during the first 12 calendar months of operation following issuance of this permit, the permittee shall not exceed the diesel fuel usage rates specified in the following table:

<u>Month</u>	<u>Maximum Allowable Diesel Fuel Usage (MM gallons per year)</u>
1	0
1-2	0
1-3	0
1-4	0
1-5	13.616
1-6	27.231
1-7	34.039
1-8	34.039
1-9	34.039
1-10	34.039
1-11	34.039
1-12	34.039

After the first 12 calendar months of operation following issuance of this permit, compliance with the annual diesel fuel usage rate limitation shall be based upon a rolling, 12-month summation of the usage rates.

3. The combination of natural gas and diesel fuel usage for emissions units P001 - P008 shall not exceed the following emissions limits based upon a rolling, 12-month summation of the emissions:

60.5 TPY PM/PM10, 120.8 TPY SO<sub>2</sub>, 733.3 TPY NO<sub>x</sub>, 541.0 TPY CO, 36.4 TPY VOC and 12.2 TPY H<sub>2</sub>SO<sub>4</sub> mist.

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

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of PM/PM10 (Tons)</u>
1	14.5
1-2	29.4

1-3	44.3
1-4	50.2
1-5	58.3
1-6	60.5
1-7	60.5
1-8	60.5
1-9	60.5
1-10	60.5
1-11	60.5
1-12	60.5

	<u>Maximum Allowable Cumulative Emissions of SO2 (Tons)</u>
<u>Month(s)</u>	

1	1.7
1-2	3.5
1-3	5.3
1-4	6.0
1-5	51.2
1-6	97.6
1-7	120.8
1-8	120.8
1-9	120.8
1-10	120.8
1-11	120.8
1-12	120.8

	<u>Maximum Allowable Cumulative Emissions of NOx (Tons)</u>
<u>Month(s)</u>	

1	153.6
1-2	280.6
1-3	407.5
1-4	427.0
1-5	498.1
1-6	654.9
1-7	733.3

1-8	733.3
1-9	733.3
1-10	733.3
1-11	733.3
1-12	733.3

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of CO (Tons)</u>
-----------------	--

1	155.8
1-2	316.8
1-3	477.8
1-4	541.0
1-5	541.0
1-6	541.0
1-7	541.0
1-8	541.0
1-9	541.0
1-10	541.0
1-11	541.0
1-12	541.0

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of VOC (Tons)</u>
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1	5.8
1-2	11.8
1-3	17.7
1-4	20.1
1-5	24.2
1-6	32.3
1-7	36.4
1-8	36.4
1-9	36.4
1-10	36.4
1-11	36.4
1-12	36.4

**Duke Energy Madison, LLC**

DTI Application: **14-1682**

Facility ID: **1409000896**

Emissions Unit ID: **P004**

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of H<sub>2</sub>SO<sub>4</sub> (Tons)</u>
1	0.1
1-2	0.2
1-3	0.3
1-4	0.3
1-5	5.0
1-6	9.8
1-7	12.2
1-8	12.2
1-9	12.2
1-10	12.2
1-11	12.2
1-12	12.2

After the first 12 calendar months of operation following issuance of this permit, compliance with the annual emission limitation for PM/PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> shall be based upon a rolling, 12-month summation of the monthly emissions.

- The quality of diesel fuel burned in this emissions unit shall have a combination of heat and sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 0.0456 lb SO<sub>2</sub>/MMBtu of actual heat input.

Compliance with the above mentioned specification shall be determined by using analytical results provided by the permittee or oil supplier for each shipment of oil.

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with the following ASTM methods: ASTM method D4294, ASTM method D240, or ASTM method 6010 for sulfur content; and ASTM method D240 for heat content. The newest or most recent revisions to the applicable test method shall be used for these analyses. Alternative, equivalent methods may be used upon written approval by the appropriate Ohio EPA District Office or local air agency.

### **III. Monitoring and/or Recordkeeping Requirements**

- The permittee shall maintain monthly records of the following information for emissions unit P001 - P008:

- a. The natural gas usage rate for each month.
- b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the natural gas usage rates.

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

2. The permittee shall maintain monthly records of the following information for emissions unit P001 - P008:
  - a. The diesel fuel usage rate for each month.
  - b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the diesel fuel usage rates.

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

3. The permittee shall maintain monthly records of the following information for emissions unit P001 - P008:
  - a. The PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emissions for each month. The NO<sub>x</sub> emissions shall be maintained in tons when firing natural gas and diesel fuel and ppm when firing natural gas.
  - b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the PM/PM10, SO<sub>2</sub>, No<sub>x</sub>, (in ppm and TPY) CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emissions.

Also, during the first 12 calendar months of operation following issuance of this permit, the permittee shall record the cumulative PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emissions for each calendar month.

4. Certification

Prior to the installation of the continuous NO<sub>x</sub> monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 6 for approval by the Ohio EPA, Central Office.

Within 60 days of the startup of this emissions unit, the permittee shall conduct certification tests of such equipment pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6, and/or 40 CFR Part 75. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests

and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous NO<sub>x</sub> monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6 and/or 40 CFR Part 75.

5. The permittee shall operate and maintain existing equipment to continuously monitor and record NO<sub>x</sub> from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 and/or 40 CFR Part 75.

The permittee shall maintain records of all data obtained by the continuous NO<sub>x</sub> monitoring system including, but not limited to, parts per million NO<sub>x</sub> on an instantaneous (one-minute) basis, emissions of NO<sub>x</sub> in units of the applicable standard in the appropriate averaging period (hourly), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

6. Within 180 days of the effective date of this permit, 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. The plan shall follow the requirements of 40 CFR Part 60, Appendix F and/or 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NO<sub>x</sub> monitoring system must be kept on site and available for inspection during regular office hours.

7. Certification

Prior to the installation of the continuous CO monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 4 and 6 for approval by the Ohio EPA, Central Office.

Within 60 days of the effective date of this permit, the permittee shall conduct certification tests of the continuous CO monitoring system pursuant to ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 4 and 6. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate

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Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous CO monitoring system shall be granted upon determination by the Ohio EPA Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 4 and 6.

8. The permittee shall operate and maintain equipment to continuously monitor and record CO from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 .

The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to, parts per million CO on an instantaneous (one minute) basis, emissions of CO in units of the applicable standard in the appropriate averaging period (hourly), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

9. Within 180 days of the effective date of this permit, 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. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.
10. The permittee shall monitor the sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of the monitoring shall be determined as follows:
  - a. If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.
  - b. If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom fuel schedules for the determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Ohio EPA, Central Office before they can be used.
  - c. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received and the permittee's or oil supplier's analyses for sulfur content and heat content.

#### **IV. Reporting Requirements**

1. The permittee shall submit deviation reports that identify all exceedances of the rolling, 12-month natural gas and diesel fuel usage limitations, and the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emission limitations and, for the first twelve calendar months of operation following issuance of this permit, all exceedances of the maximum allowable cumulative natural gas and diesel fuel usage limitations and the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emission limitations.
2. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the

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end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, 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 limits specified in 40 CFR Part 76 or any limitations specified in the terms and conditions of this permit or variance. These reports shall also contain the total NO<sub>x</sub> emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting 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.

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

3. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any) of all instances of CO values in excess of any applicable limitation(s) specified in OAC Chapter 3745-21, 40 CFR Part 60, or any limitation(s) specified in the terms and conditions of this permit, in units of the standard. These reports shall also contain the total CO emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting 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.

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

4. The permittee shall also submit annual reports which specify the total PM/PM10, VOC, SO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub> emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 30 of each year.
5. The permittee shall submit, on a quarterly basis, copies of the permittee's or oil supplier's analyses for each shipment of oil (diesel fuel) which is received for burning in this emissions unit. The

permittee's or oil supplier's analyses shall document the sulfur content (percent) and heat content (Btu/gallon) for each shipment of oil. The following information shall also be included with the copies of the permittee's or oil supplier's analyses:

- a. the total quantity of oil received in each shipment (gallons);
- b. the weighted\* average sulfur content (percent by weight) for the oil received during each calendar month;
- c. the weighted\* average heat content (Btu/gallon) of the oil received during each calendar month; and,
- d. the weighted\* average SO<sub>2</sub> emission rate (lbs/MMBtu of actual heat input) of the oil combusted during each calendar month (the SO<sub>2</sub> emission rate shall be calculated as specified in OAC 3745-18-04(F)).

\*In proportion to the quantity of oil received in each shipment during each calendar month.

These quarterly reports shall be submitted by February 15, May 15, August 15, and November 15 of each year and shall cover the oil shipments received during the previous calendar quarters.

6. Pursuant to the NSPS, the source owner/operator is hereby advised of the requirements to report the following at the appropriate times:

- a. construction date (no later than 30 days after such date);
- b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
- c. actual start-up date (within 15 days after such date); and,
- d. date of performance testing (if requiredm at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency  
DAPC - Permit Management Unit  
P.O. Box 1049  
Columbus, OH 43216-1049

and

Department of Environmental Services  
250 William Howard Taft Road  
Cincinnati, OH 45219

## **V. Testing Requirements**

### 1. Emission testing requirements

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted within 60 days after achieving the maximum production rate but no later than 180 days after initial startup of the emissions unit.
- b. The emission testing shall be conducted to demonstrate compliance with the NO<sub>x</sub>, CO and VOC emissions limits.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for NO<sub>x</sub>, Method 7E of 40 CFR Part 60, Appendix A, for CO Method 10 of 40 CFR Part 60, Appendix A and for VOC Method 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

2. Compliance with the PM/PM10 emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.
3. Compliance with SO<sub>2</sub> emission limit shall be demonstrated by the manufacturer's guaranteed emissions data and the sulfur analyses of the fuels combusted (see term A.III.10).
4. Compliance with the NO<sub>x</sub> and CO emission limits shall be demonstrated by the monitoring in terms A.III.4 - A.III.9
5. Compliance with the H<sub>2</sub>SO<sub>4</sub> emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.
6. Compliance with the Beryllium and Arsenic limits shall be demonstrated by the use of AP-42 Table 3.1-4.
7. Compliance with the Benzene limit shall be demonstrated by the use of AP-42 Table 3.2-3 and Table 3.4-3.
8. Compliance with the visible emission limitation in term A.I.2.a. and A.I.2.d. shall be determined by Method 9, 40 CFR Part 60 Appendix A.
9. Compliance with the VOC limits shall be demonstrated by the use of AP-42 Table 3.1-2 and table 3.4-1.
10. Compliance with the natural gas and diesel fuel usage limits shall be demonstrated by the recordkeeping in term A.III.1 and A.III.2.
11. Compliance with the Lead and Mercury limits shall be demonstrated by the use of AP-42 Table 3.1-4.

**VI. Miscellaneous Requirements**

None.

**B. State Only Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/ Control Measures</u>
80 Megawatt (Nominal) Simple-Cycle Combustion Turbine #4	OAC rule 3745-31-28	The requirements of this rule were satisfied based on a letter dated 1/21/99.

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

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None.

**Part I II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**

**A. State and Federally Enforceable Section**

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

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

Operations, and/or <u>Equipment</u>	Property,	<u>Applicable Rules/Requirements</u>	
80 Megawatt Simple-Cycle Turbine #5	(Nominal) Combustion	40 CFR Part 52.21 and OAC rule 3745-31-11 thru 31-20	When burning natural gas, the N0x emission rate shall not exceed 12 ppm by volume at 15% oxygen on a dry basis, based on a rolling, 12-month summation of the monthly N0x emissions in ppm.  OAC rule 3745-17-07  OAC rule 3745-17-11(B)(4)  40 CFR Part 60 Subpart GG  OAC rule 3745-18-06(F)

OAC rule 3745-31-05(A)(3)	Applicable Emissions <u>Limitations/Control Measures</u>	36.4 TPY VOC*
Synthetic Minor to avoid Emission Offset Rule	60.5 TPY PM/PM10* 120.8 TPY SO2* 733.3 TPY NOx* 541.0 TPY CO* 12.2 TPY H2SO4 mist* 0.00084 TPY Beryllium* 0.012 TPY Arsenic* 7.7 TPY Benzene* 0.008 lb PM/PM10/MMBtu 58.0 lbs SO2/hour 196.0 lbs NOx/hour 54.0 lbs CO/hour 6.0 lbs H2SO4 mist/hour	10.0 lbs VOC/hour 0.15 TPY Lead 0.0023 TPY Mercury  For PM/PM10, SO2, NOx, CO, H2SO4 mist, Beryllium, Arsenic, and Benzene, best available technology is equivalent to best available control technology.
40 CFR Part 63-41 thru 6.44**	15 ppm NOx by volume at 15 % oxygen on a dry basis when firing natural gas, based on a one hour average as determined in term A.V.I.  42 ppm NOx by volume at 15 % oxygen on a dry basis when firing diesel fuel, based on a one hour average as determined in term A.V.I.  0.05 % sulfur 0.0456 lbs SO2/MMBtu	* Emissions unit P001-P008, combined, based on a rolling, 12-month summation.
** For purposes of this permit and for the Hazardous Air Pollutants (HAPs) emitted from this emissions unit, the best available control technology determination to satisfy the requirements of 40 CFR Part 52.21 is equivalent to the maximum achievable control technology determination used to satisfy the requirements of 40 CFR Part 63.41 thru 63.44. This is documented in the letter dated 1/21/99.	See term A.I.2.a  Less stringent than 40 CFR Part 52.21  Less Stringent than 40 CFR Part 52.21  Less Stringent than 40 CFR Part 52.21	

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**2. Additional Terms and Conditions**

- 2.a** Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule when combusting diesel fuel.
  
- 2.b** Compliance with OAC rule 3745-31-15, 40 CFR Part 52.21, and OAC rule 3745-31-05 shall be demonstrated by the use of dry low NOx combustors with a 15 ppm NOX emission limit when combusting natural gas, the use of water injection with a 42 ppm NOX emission limit when combusting diesel fuel and limited natural gas and diesel fuel usage.

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- 2.c The hourly emission limitation(s) outlined in term B.I.1. are based upon the emissions unit’s Potential to Emit (PTE). Therefore, no hourly records are required to demonstrate compliance with these limits.
- 2.d Visible particulate emissions from any stack shall not exceed 10 percent opacity, as a six-minute average when combusting natural gas.
- 2.e The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.

**II. Operational Restrictions**

- 1. The maximum annual natural gas usage rate for emissions units P001-P008 shall not exceed  $2.03 \times 10^{10}$  cubic feet per year, based upon a rolling, 12-month summation of the natural gas usage rate.

To ensure enforceability during the first 12 calendar months of operation following issuance of this permit, the permittee shall not exceed the natural gas usage rates specified in the following table:

<u>Month</u>	<u>Maximum Allowable Natural Gas Usage (MM cubic feet per year)</u>
1	5856.875
1-2	11,908.978
1-3	17,961.082
1-4	20,336.370
1-5	20,336.370
1-6	20,336.370
1-7	20,336.370
1-8	20,336.370
1-9	20,336.370
1-10	20,336.370
1-11	20,336.370
1-12	20,336.370

After the first 12 calendar months of operation following issuance of this permit, compliance with

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the annual natural gas usage rate limitation shall be based upon a rolling, 12-month summation of the usage rates.

2. The maximum annual diesel fuel usage rate for emissions units P001-P008 shall not exceed  $3.40 \times 10^7$  gallons per year, based upon a rolling, 12-month summation of the diesel fuel usage rate.

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To ensure enforceability during the first 12 calendar months of operation following issuance of this permit, the permittee shall not exceed the diesel fuel usage rates specified in the following table:

<u>Month</u>	<u>Maximum Allowable Diesel Fuel Usage (MM gallons per year)</u>
1	0
1-2	0
1-3	0
1-4	0
1-5	13.616
1-6	27.231
1-7	34.039
1-8	34.039
1-9	34.039
1-10	34.039
1-11	34.039
1-12	34.039

After the first 12 calendar months of operation following issuance of this permit, compliance with the annual diesel fuel usage rate limitation shall be based upon a rolling, 12-month summation of the usage rates.

- The combination of natural gas and diesel fuel usage for emissions units P001 - P008 shall not exceed the following emissions limits based upon a rolling, 12-month summation of the emissions:

60.5 TPY PM/PM10, 120.8 TPY SO2, 733.3 TPY NOx, 541.0 TPY CO, 36.4 TPY VOC and 12.2 TPY H2SO4 mist.

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

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of PM/PM10 (Tons)</u>
1	14.5
1-2	29.4

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1-3	44.3
1-4	50.2
1-5	58.3
1-6	60.5
1-7	60.5
1-8	60.5
1-9	60.5
1-10	60.5
1-11	60.5
1-12	60.5

Month(s)                      Maximum Allowable  
Cumulative Emissions  
of SO2 (Tons)

1	1.7
1-2	3.5
1-3	5.3
1-4	6.0
1-5	51.2
1-6	97.6
1-7	120.8
1-8	120.8
1-9	120.8
1-10	120.8
1-11	120.8
1-12	120.8

Month(s)                      Maximum Allowable  
Cumulative Emissions  
of NOx (Tons)

1	153.6
1-2	280.6
1-3	407.5
1-4	427.0
1-5	498.1
1-6	654.9
1-7	733.3
1-8	733.3
1-9	733.3
1-10	733.3

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1-11	733.3
1-12	733.3

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of CO (Tons)</u>
1	155.8
1-2	316.8
1-3	477.8
1-4	541.0
1-5	541.0
1-6	541.0
1-7	541.0
1-8	541.0
1-9	541.0
1-10	541.0
1-11	541.0
1-12	541.0

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of VOC (Tons)</u>
1	5.8
1-2	11.8
1-3	17.7
1-4	20.1
1-5	24.2
1-6	32.3
1-7	36.4
1-8	36.4
1-9	36.4
1-10	36.4
1-11	36.4
1-12	36.4

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of H2SO4 (Tons)</u>
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1	0.1
1-2	0.2
1-3	0.3
1-4	0.3
1-5	5.0
1-6	9.8
1-7	12.2
1-8	12.2
1-9	12.2
1-10	12.2
1-11	12.2
1-12	12.2

After the first 12 calendar months of operation following issuance of this permit, compliance with the annual emission limitation for PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> shall be based upon a rolling, 12-month summation of the monthly emissions.

4. The quality of diesel fuel burned in this emissions unit shall have a combination of heat and sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 0.0456 lb SO<sub>2</sub>/MMBtu of actual heat input.

Compliance with the above mentioned specification shall be determined by using analytical results provided by the permittee or oil supplier for each shipment of oil.

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with the following ASTM methods: ASTM method D4294, ASTM method D240, or ASTM method 6010 for sulfur content; and ASTM method D240 for heat content. The newest or most recent revisions to the applicable test method shall be used for these analyses. Alternative, equivalent methods may be used upon written approval by the appropriate Ohio EPA District Office or local air agency.

### **III. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall maintain monthly records of the following information for emissions unit P001 - P008:
  - a. The natural gas usage rate for each month.
  - b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the natural gas usage rates.

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

2. The permittee shall maintain monthly records of the following information for emissions unit P001 - P008:
  - a. The diesel fuel usage rate for each month.
  - b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the diesel fuel usage rates.

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

3. The permittee shall maintain monthly records of the following information for emissions unit P001 - P008:
  - a. The PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emissions for each month. The NO<sub>x</sub> emissions shall be maintained in tons when firing natural gas and diesel fuel and ppm when firing natural gas.
  - b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, (in ppm and TPY) CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emissions.

Also, during the first 12 calendar months of operation following issuance of this permit, the permittee shall record the cumulative PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emissions for each calendar month.

#### 4. Certification

Prior to the installation of the continuous NO<sub>x</sub> monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 6 for approval by the Ohio EPA, Central Office.

Within 60 days of the startup of this emissions unit, the permittee shall conduct certification tests of such equipment pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6, and/or 40 CFR Part 75. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests

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and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous NO<sub>x</sub> monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6 and/or 40 CFR Part 75.

5. The permittee shall operate and maintain existing equipment to continuously monitor and record NO<sub>x</sub> from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 and/or 40 CFR Part 75.

The permittee shall maintain records of all data obtained by the continuous NO<sub>x</sub> monitoring system including, but not limited to, parts per million NO<sub>x</sub> on an instantaneous (one-minute) basis, emissions of NO<sub>x</sub> in units of the applicable standard in the appropriate averaging period (hourly), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

6. Within 180 days of the effective date of this permit, 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. The plan shall follow the requirements of 40 CFR Part 60, Appendix F and/or 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NO<sub>x</sub> monitoring system must be kept on site and available for inspection during regular office hours.

7. Certification

Prior to the installation of the continuous CO monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 4 and 6 for approval by the Ohio EPA, Central Office.

Within 60 days of the effective date of this permit, the permittee shall conduct certification tests of the continuous CO monitoring system pursuant to ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 4 and 6. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous CO monitoring system shall be granted upon determination by the Ohio EPA Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 4 and 6.

8. The permittee shall operate and maintain equipment to continuously monitor and record CO from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 .

The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to, parts per million CO on an instantaneous (one minute) basis, emissions of CO in units of the applicable standard in the appropriate averaging period (hourly), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

9. Within 180 days of the effective date of this permit, 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. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during

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regular office hours.

10. The permittee shall monitor the sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of the monitoring shall be determined as follows:

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- a. If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.
- b. If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom fuel schedules for the determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Ohio EPA, Central Office before they can be used.
- c. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received and the permittee's or oil supplier's analyses for sulfur content and heat content.

#### **IV. Reporting Requirements**

1. The permittee shall submit deviation reports that identify all exceedances of the rolling, 12-month natural gas and diesel fuel usage limitations, and the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emission limitations and, for the first twelve calendar months of operation following issuance of this permit, all exceedances of the maximum allowable cumulative natural gas and diesel fuel usage limitations and the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emission limitations.
2. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, 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 limits specified in 40 CFR Part 76 or any limitations specified in the terms and conditions of this permit or variance. These reports shall also contain the total NO<sub>x</sub> emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting 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.

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If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be

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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.

3. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any) of all instances of CO values in excess of any applicable limitation(s) specified in OAC Chapter 3745-21, 40 CFR Part 60, or any limitation(s) specified in the terms and conditions of this permit, in units of the standard. These reports shall also contain the total CO emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting 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.

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

4. The permittee shall also submit annual reports which specify the total PM/PM10, VOC, SO2 and H2SO4 emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 30 of each year.
5. The permittee shall submit, on a quarterly basis, copies of the permittee's or oil supplier's analyses for each shipment of oil (diesel fuel) which is received for burning in this emissions unit. The permittee's or oil supplier's analyses shall document the sulfur content (percent) and heat content (Btu/gallon) for each shipment of oil. The following information shall also be included with the copies of the permittee's or oil supplier's analyses:

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- a. the total quantity of oil received in each shipment (gallons);
- b. the weighted\* average sulfur content (percent by weight) for the oil received during each calendar month;
- c. the weighted\* average heat content (Btu/gallon) of the oil received during each calendar month; and,
- d. the weighted\* average SO<sub>2</sub> emission rate (lbs/MMBtu of actual heat input) of the oil combusted during each calendar month (the SO<sub>2</sub> emission rate shall be calculated as specified in OAC 3745-18-04(F)).

\*In proportion to the quantity of oil received in each shipment during each calendar month.

These quarterly reports shall be submitted by February 15, May 15, August 15, and November 15 of each year and shall cover the oil shipments received during the previous calendar quarters.

6. Pursuant to the NSPS, the source owner/operator is hereby advised of the requirements to report the following at the appropriate times:

- c. construction date (no later than 30 days after such date);
- d. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
- e. actual start-up date (within 15 days after such date); and,
- f. date of performance testing (if requiredm at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency  
DAPC - Permit Management Unit  
P.O. Box 1049  
Columbus, OH 43216-1049

and

Department of Environmental Services  
250 William Howard Taft Road  
Cincinnati, OH 45219

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## **V. Testing Requirements**

### 1. Emission testing requirements

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted within 60 days after achieving the maximum production rate but no later than 180 days after initial startup of the emissions unit.
- b. The emission testing shall be conducted to demonstrate compliance with the NO<sub>x</sub>, CO and VOC emissions limits.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for NO<sub>x</sub>, Method 7E of 40 CFR Part 60, Appendix A, for CO Method 10 of 40 CFR Part 60, Appendix A and for VOC Method 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.
2. Compliance with the PM/PM10 emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.
  3. Compliance with SO<sub>2</sub> emission limit shall be demonstrated by the manufacturer's guaranteed emissions data and the sulfur analyses of the fuels combusted (see term A.III.10).
  4. Compliance with the NO<sub>x</sub> and CO emission limits shall be demonstrated by the monitoring in terms A.III.4 - A.III.9
  5. Compliance with the H<sub>2</sub>SO<sub>4</sub> emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.
  6. Compliance with the Beryllium and Arsenic limits shall be demonstrated by the use of AP-42 Table 3.1-4.
  7. Compliance with the Benzene limit shall be demonstrated by the use of AP-42 Table 3.2-3 and Table 3.4-3.
  8. Compliance with the visible emission limitation in term A.I.2.a. and A.I.2.d. shall be determined by Method 9, 40 CFR Part 60 Appendix A.
  9. Compliance with the VOC limits shall be demonstrated by the use of AP-42 Table 3.1-2 and table 3.4-1.
  10. Compliance with the natural gas and diesel fuel usage limits shall be demonstrated by the recordkeeping in term A.III.1 and A.III.2.
  11. Compliance with the Lead and Mercury limits shall be demonstrated by the use of AP-42 Table 3.1-4.

## **VI. Miscellaneous Requirements**

None.

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**B. State Only Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/ Control Measures</u>
80 Megawatt (Nominal) Simple-Cycle Combustion Turbine #5	OAC rule 3745-31-28	The requirements of this rule were satisfied based on a letter dated 1/21/99.

2. **Additional Terms and Conditions**

- 2.a None

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

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**VI. Miscellaneous Requirements**

None.

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]****A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

Operations, Property, and/or <u>Equipment</u>	<u>Applicable Rules/Requirements</u>	a dry basis, based on a rolling, 12-month summation of the monthly NO <sub>x</sub> emissions in ppm
80 Megawatt (Nominal) Simple-Cycle Combustion Turbine #6	40 CFR Part 52.21 and OAC rule 3745-31-11 thru 31-20	OAC rule 3745-17-07  OAC rule 3745-17-11(B)(4)  40 CFR Part 60 Subpart GG  OAC rule 3745-18-06(F)  OAC rule 3745-31-05(A)(3)
	When burning natural gas, the NO <sub>x</sub> emission rate shall not exceed 12 ppm by volume at 15% oxygen on	Synthetic Minor to avoid Emission Offset Rule  40 CFR Part 63-41 thru 6.44**

\*\* For purposes of this permit and for the Hazardous Air Pollutants (HAPs) emitted from this emissions unit, the best available control technology determination to satisfy the requirements of 40 CFR Part 52.21 is equivalent to the maximum achievable control technology determination used to satisfy the requirements of 40 CFR Part 63.41 thru 63.44. This is documented in the letter dated 1/21/99.

Applicable Emissions Limitations/Control Measures

- 60.5 TPY PM/PM10\*
- 120.8 TPY SO2\*
- 733.3 TPY NOx\*
- 541.0 TPY CO\*
- 12.2 TPY H2SO4 mist\*
- 0.00084 TPY Beryllium\*
- 0.012 TPY Arsenic\*
- 7.7 TPY Benzene\*
- 0.008 lb PM/PM10/MMBtu
- 58.0 lbs SO2/hour
- 196.0 lbs NOx/hour
- 54.0 lbs CO/hour
- 6.0 lbs H2SO4 mist/hour

15 ppm NOx by volume at 15 % oxygen on a dry basis when firing natural gas, based on a one hour average as determined in term A.V.I.

42 ppm NOx by volume at 15 % oxygen on a dry basis when firing diesel fuel, based on a one hour average as determined in term A.V.I.

0.05 % sulfur  
0.0456 lbs SO2/MMBtu

See term A.I.2.a

Less stringent than 40 CFR Part 52.21

Less Stringent than 40 CFR Part 52.21

Less Stringent than 40 CFR Part 52.21

- 10.0 lbs VOC/hour
- 0.15 TPY Lead
- 0.0023 TPY Mercury

For PM/PM10, SO2, NOx, CO, H2SO4 mist, Beryllium, Arsenic, and Benzene, best available technology is equivalent to best available control technology.

36.4 TPY VOC\*

\* Emissions unit P001-P008, combined, based on a rolling, 12-month summation.

**2. Additional Terms and Conditions**

- 2.a** Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule when combusting diesel fuel.
- 2.b** Compliance with OAC rule 3745-31-15 and 40 CFR Part 52.21 shall be demonstrated by the use of dry low NOx combustors with a 15 ppm NOX emission limit when combusting natural gas, the use of water injection with a 42 ppm NOX emission limit when combusting diesel fuel and limited natural gas and diesel fuel usage.

**II. Operational Restrictions**

1. The maximum annual natural gas usage rate for emissions units P001-P008 shall not exceed  $2.03 \times 10^{10}$  cubic feet per year, based upon a rolling, 12-month summation of the natural gas usage rate.

To ensure enforceability during the first 12 calendar months of operation following issuance of this permit, the permittee shall not exceed the natural gas usage rates specified in the following table:

<u>Month</u>	<u>Maximum Allowable Natural Gas Usage (MM cubic feet per year)</u>
1	5856.875
1-2	11,908.978
1-3	17,961.082
1-4	20,336.370
1-5	20,336.370
1-6	20,336.370
1-7	20,336.370
1-8	20,336.370
1-9	20,336.370
1-10	20,336.370
1-11	20,336.370
1-12	20,336.370

After the first 12 calendar months of operation following issuance of this permit, compliance with the annual natural gas usage rate limitation shall be based upon a rolling, 12-month summation of the usage rates.

2. The maximum annual diesel fuel usage rate for emissions units P001-P008 shall not exceed  $3.40 \times 10^7$  gallons per year, based upon a rolling, 12-month summation of the diesel fuel usage rate.

To ensure enforceability during the first 12 calendar months of operation following issuance of this permit, the permittee shall not exceed the diesel fuel usage rates specified in the following table:

<u>Month</u>	<u>Maximum Allowable Diesel Fuel Usage (MM gallons per year)</u>
1	0
1-2	0
1-3	0
1-4	0
1-5	13.616
1-6	27.231
1-7	34.039
1-8	34.039
1-9	34.039
1-10	34.039
1-11	34.039
1-12	34.039

After the first 12 calendar months of operation following issuance of this permit, compliance with the annual diesel fuel usage rate limitation shall be based upon a rolling, 12-month summation of the usage rates.

3. The combination of natural gas and diesel fuel usage for emissions units P001 - P008 shall not exceed the following emissions limits based upon a rolling, 12-month summation of the emissions:

60.5 TPY PM/PM10, 120.8 TPY SO<sub>2</sub>, 817.6 TPY NO<sub>x</sub>, 541.0 TPY CO, 36.4 TPY VOC and 12.2 TPY H<sub>2</sub>SO<sub>4</sub> mist.

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

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Emissions Unit ID: **P006**

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of PM/PM10 (Tons)</u>
1	14.5
1-2	29.4
1-3	44.3
1-4	50.2
1-5	58.3
1-6	60.5
1-7	60.5
1-8	60.5
1-9	60.5
1-10	60.5
1-11	60.5
1-12	60.5

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of SO2 (Tons)</u>
1	1.7
1-2	3.5
1-3	5.3
1-4	6.0
1-5	51.2
1-6	97.6
1-7	120.8
1-8	120.8
1-9	120.8
1-10	120.8
1-11	120.8
1-12	120.8

<u>Month</u>	<u>Maximum Allowable Cumulative Emissions of NOx (Tons)</u>
1	153.2
1-2	311.5

1-3	469.8
1-4	531.9
1-5	582.5
1-6	739.2
1-7	817.6
1-8	817.6
1-9	817.6
1-10	817.6
1-11	817.6
1-12	817.6

	<u>Maximum Allowable Cumulative Emissions of CO (Tons)</u>
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1	155.8
1-2	316.8
1-3	477.8
1-4	541.0
1-5	541.0
1-6	541.0
1-7	541.0
1-8	541.0
1-9	541.0
1-10	541.0
1-11	541.0
1-12	541.0

	<u>Maximum Allowable Cumulative Emissions of VOC (Tons)</u>
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1	5.8
1-2	11.8
1-3	17.7
1-4	20.1
1-5	24.2
1-6	32.3
1-7	36.4
1-8	36.4

1-9	36.4
1-10	36.4
1-11	36.4
1-12	36.4

Month(s)	<u>Maximum Allowable Cumulative Emissions of H2SO4 (Tons)</u>
1	0.1
1-2	0.2
1-3	0.3
1-4	0.3

1-5	5.0
1-6	9.8
1-7	12.2
1-8	12.2
1-9	12.2
1-10	12.2
1-11	12.2
1-12	12.2

After the first 12 calendar months of operation following issuance of this permit, compliance with the annual emission limitation for PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> shall be based upon a rolling, 12-month summation of the monthly emissions.

4. The quality of diesel fuel burned in this emissions unit shall have a combination of heat and sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 0.0456 lb SO<sub>2</sub>/MMBtu of actual heat input.

Compliance with the above mentioned specification shall be determined by using analytical results provided by the permittee or oil supplier for each shipment of oil.

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with the following ASTM methods: ASTM method D4294, ASTM method D240, or ASTM method 6010 for sulfur content; and ASTM method D240 for heat content. The newest or most recent revisions to the applicable test method shall be used for these analyses. Alternative, equivalent methods may be used upon written approval by the appropriate Ohio EPA District Office or local air agency.

### III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information for emissions unit P001 - P008:
  - a. The natural gas usage rate for each month.
  - b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the natural gas usage rates.

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

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2. The permittee shall maintain monthly records of the following information for emissions unit P001 - P008:
  - a. The diesel fuel usage rate for each month.

- b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the diesel fuel usage rates.

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

3. The permittee shall maintain monthly records of the following information for emissions unit P001 - P008:
  - a. The PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emissions for each month.
  - b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emissions.

Also, during the first 12 calendar months of operation following issuance of this permit, the permittee shall record the cumulative PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emissions for each calendar month.

4. Certification

Prior to the installation of the continuous NO<sub>x</sub> monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 6 for approval by the Ohio EPA, Central Office.

Within 60 days of the startup of this emissions unit, the permittee shall conduct certification tests of such equipment pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6, and/or 40 CFR Part 75. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous NO<sub>x</sub> monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6 and/or 40 CFR Part 75.

5. The permittee shall operate and maintain existing equipment to continuously monitor and record

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NO<sub>x</sub> from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 and/or 40 CFR Part 75.

The permittee shall maintain records of all data obtained by the continuous NO<sub>x</sub> monitoring system including, but not limited to, parts per million NO<sub>x</sub> on an instantaneous (one-minute) basis, emissions of NO<sub>x</sub> in units of the applicable standard in the appropriate averaging period (hourly), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

6. Within 180 days of the effective date of this permit, 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. The plan shall follow the requirements of 40 CFR Part 60, Appendix F and/or 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NO<sub>x</sub> monitoring system must be kept on site and available for inspection during regular office hours.

7. Certification

Prior to the installation of the continuous CO monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 4 and 6 for approval by the Ohio EPA, Central Office.

Within 60 days of the effective date of this permit, the permittee shall conduct certification tests of the continuous CO monitoring system pursuant to ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 4 and 6. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous CO monitoring system shall be granted upon determination by the Ohio EPA Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 4 and 6.

8. The permittee shall operate and maintain equipment to continuously monitor and record CO from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 .

The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to, parts per million CO on an instantaneous (one minute) basis, emissions of CO in units of the applicable standard in the appropriate averaging period (hourly),

results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

9. Within 180 days of the effective date of this permit, 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. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.
10. The permittee shall monitor the sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of the monitoring shall be determined as follows:
  - a. If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.
  - b. If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom fuel schedules for the determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Ohio EPA, Central Office before they can be used.
  - c. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received and the permittee's or oil supplier's analyses for sulfur content and heat content.

#### **IV. Reporting Requirements**

1. The permittee shall submit deviation reports that identify all exceedances of the rolling, 12-month natural gas and diesel fuel usage limitations, and the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emission limitations and, for the first twelve calendar months of operation following issuance of this permit, all exceedances of the maximum allowable cumulative natural gas and diesel fuel usage limitations and the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emission limitations.
2. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, 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 limits specified in 40 CFR Part 76 or any limitations specified in the terms and conditions of this permit or variance. These reports shall also contain the total NO<sub>x</sub> emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting 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.

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

3. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any) of all instances of CO values in excess of any applicable limitation(s) specified in OAC Chapter 3745-21, 40 CFR Part 60, or any limitation(s) specified in the terms and conditions of this permit, in units of the standard. These reports shall also contain the total CO emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting 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.

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

4. The permittee shall also submit annual reports which specify the total PM/PM10, VOC, SO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub> emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 30 of each year.
5. The permittee shall submit, on a quarterly basis, copies of the permittee's or oil supplier's analyses for each shipment of oil (diesel fuel) which is received for burning in this emissions unit. The permittee's or oil supplier's analyses shall document the sulfur content (percent) and heat content (Btu/gallon) for each shipment of oil. The following information shall also be included with the copies of the permittee's or oil supplier's analyses:
  - a. the total quantity of oil received in each shipment (gallons);
  - b. the weighted\* average sulfur content (percent by weight) for the oil received during each calendar month;
  - c. the weighted\* average heat content (Btu/gallon) of the oil received during each calendar month; and,
  - d. the weighted\* average SO<sub>2</sub> emission rate (lbs/MMBtu of actual heat input) of the oil combusted during each calendar month (the SO<sub>2</sub> emission rate shall be calculated as specified in OAC 3745-18-04(F)).

\*In proportion to the quantity of oil received in each shipment during each calendar month.

These quarterly reports shall be submitted by February 15, May 15, August 15, and November 15 of each year and shall cover the oil shipments received during the previous calendar quarters.

## V. Testing Requirements

1. Emission testing requirements

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted within 60 days after achieving the maximum production rate but no later than 180 days after initial startup of the emissions unit.
- b. The emission testing shall be conducted to demonstrate compliance with the NO<sub>x</sub>, CO and VOC emissions limits.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for NO<sub>x</sub>, Method 7E of 40 CFR Part 60, Appendix A, for CO Method 10 of 40 CFR Part 60, Appendix A and for VOC Method 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

2. Compliance with the PM/PM10 emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.
3. Compliance with SO<sub>2</sub> emission limit shall be demonstrated by the manufacturer's guaranteed emissions data and the sulfur analyses of the fuels combusted (see term A.III.10).
4. Compliance with the NO<sub>x</sub> and CO emission limits shall be demonstrated by the monitoring in terms A.III.4 - A.III.9
5. Compliance with the H<sub>2</sub>SO<sub>4</sub> emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.
6. Compliance with the Beryllium and Arsenic limits shall be demonstrated by the use of AP-42 Table 3.1-4.
7. Compliance with the Benzene limit shall be demonstrated by the use of AP-42 Table 3.2-3 and Table 3.4-3.
8. Compliance with the visible emission limitation in term A.I.2.a. shall be determined by Method 9, 40 CFR Part 60 Appendix A.
9. Compliance with the VOC limits shall be demonstrated by the use of AP-42 Table 3.1-2 and table 3.4-1.
10. Compliance with the natural gas and diesel fuel usage limits shall be demonstrated by the recordkeeping in term A.III.1 and A.III.2.

## **VI. Miscellaneous Requirements**

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None.

**B. State Only Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/ Control Measures</u>
80 Megawatt (Nominal) Simple-Cycle Combustion Turbine #6	OAC rule 3745-31-28	The requirements of this rule were satisfied based on a letter dated 1/21/99.

**2. Additional Terms and Conditions**

- 2.a The hourly emission limitation(s) outlined in term B.I.1. are based upon the emissions unit's Potential to Emit (PTE). Therefore, no hourly records are required to demonstrate compliance with these limits.
- 2.b Compliance with OAC rule 3745-31-05 shall be demonstrated by the use of dry low NOx combustors with a 15 ppm NOX emission limit when combusting natural gas, the use of water injection with a 42 ppm NOX emission limit and limited natural gas and diesel fuel usage.
- 2.c Visible particulate emissions from any stack shall not exceed 10 percent opacity, as a six-minute average when combusting natural gas.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

1. Compliance with the PM/PM10 emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.
2. Compliance with SO<sub>2</sub> emission limit shall be demonstrated by the manufacturer's guaranteed emissions data and the sulfur analyses of the fuels combusted (see term A.III.10).
3. Compliance with the NO<sub>x</sub> and CO emission limits shall be demonstrated by the monitoring in terms A.III.4 - A.III.9
4. Compliance with the H<sub>2</sub>SO<sub>4</sub> emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.
5. Compliance with the VOC limits shall be demonstrated by the use of AP-42 Table 3.1-2 and table 3.4-1.
6. Compliance with the Lead and Mercury limits shall be demonstrated by the use of AP-42 Table 3.1-4.
7. Compliance with the visible emission limitation in term B.I.2.c. shall be determined by Method 9, 40 CFR Part 60 Appendix A.

**VI. Miscellaneous Requirements**

None.

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**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**

**A. State and Federally Enforceable Section**

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

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

Operations, and/or <u>Equipment</u>	Property, Combustion	<u>Applicable Rules/Requirements</u>	
80 Megawatt Simple-Cycle Turbine #7	(Nominal)	40 CFR Part 52.21 and OAC rule 3745-31-11 thru 31-20	OAC rule 3745-15-07  OAC rule 3745-17-07  OAC rule 3745-17-11(B)(4)
			40 CFR Part 60 Subpart GG  OAC rule 3745-18-06(F)
			Synthetic Minor to avoid Emission Offset Rule

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Applicable Emissions  
 Limitations/Control  
Measures

60.5 TPY PM/PM10\*  
 120.8 TPY SO2\*  
 817.6 TPY NOx\*  
 541.0 TPY CO\*  
 12.2 TPY H2SO4 mist\*  
 0.00084 TPY Beryllium\*  
 0.012 TPY Arsenic\*  
 7.7 TPY Benzene\*

15 ppm NOx by volume at  
 15 % oxygen on a dry  
 basis when firing natural  
 gas

42 ppm NOx by volume at  
 15 % oxygen on a dry  
 basis when firing diesel  
 fuel

0.05 % sulfur  
 0.0456 lbs SO2/MMBtu

See Part I, term B.7

See term A.I.2.a

Less stringent than OAC  
 rule 3745-31-05 (See PM  
 emission limitation in term  
 B.I.1)

Less Stringent than 40  
 CFR Part 52.21

Less Stringent than 40  
 CFR Part 52.21

36.4 TPY VOC\*

\* Emissions unit P001-P008,  
 combined, based on a rolling,  
 12-month summation.

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**2. Additional Terms and Conditions**

- 2.a** Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule when combusting diesel fuel.
- 2.b** Compliance with OAC rule 3745-31-15 and 40 CFR Part 52.21 shall be demonstrated by the use of dry low NOx combustors with a 15 ppm NOX emission limit when combusting natural gas, the use of water injection with a 42 ppm NOX emission limit when combusting diesel fuel and limited natural gas and diesel fuel usage.

**II. Operational Restrictions**

- 1. The maximum annual natural gas usage rate for emissions units P001-P008 shall not exceed 2.03 x 10<sup>10</sup> cubic feet per year, based upon a rolling, 12-month summation of the natural gas usage rate.

To ensure enforceability during the first 12 calendar months of operation following issuance of this permit, the permittee shall not exceed the natural gas usage rates specified in the following table:

<u>Month</u>	<u>Maximum Allowable Natural Gas Usage (MM cubic feet per year)</u>
1	5856.875
1-2	11,908.978
1-3	17,961.082
1-4	20,336.370
1-5	20,336.370
1-6	20,336.370
1-7	20,336.370
1-8	20,336.370
1-9	20,336.370
1-10	20,336.370
1-11	20,336.370
1-12	20,336.370

After the first 12 calendar months of operation following issuance of this permit, compliance with the annual natural gas usage rate limitation shall be based upon a rolling, 12-month summation of the usage rates.

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2. The maximum annual diesel fuel usage rate for emissions units P001-P008 shall not exceed  $3.40 \times 10^7$  gallons per year, based upon a rolling, 12-month summation of the diesel fuel usage rate.

To ensure enforceability during the first 12 calendar months of operation following issuance of this permit, the permittee shall not exceed the diesel fuel usage rates specified in the following table:

<u>Month</u>	<u>Maximum Allowable Diesel Fuel Usage (MM gallons per year)</u>
1	0
1-2	0
1-3	0
1-4	0
1-5	13.616
1-6	27.231
1-7	34.039
1-8	34.039
1-9	34.039
1-10	34.039
1-11	34.039
1-12	34.039

After the first 12 calendar months of operation following issuance of this permit, compliance with the annual diesel fuel usage rate limitation shall be based upon a rolling, 12-month summation of the usage rates.

3. The combination of natural gas and diesel fuel usage for emissions units P001 - P008 shall not exceed the following emissions limits based upon a rolling, 12-month summation of the emissions:

60.5 TPY PM/PM10, 120.8 TPY SO<sub>2</sub>, 817.6 TPY NO<sub>x</sub>, 541.0 TPY CO, 36.4 TPY VOC and 12.2 TPY H<sub>2</sub>SO<sub>4</sub> mist.

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

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<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of PM/PM10 (Tons)</u>
1	14.5
1-2	29.4
1-3	44.3
1-4	50.2
1-5	58.3
1-6	60.5
1-7	60.5
1-8	60.5
1-9	60.5
1-10	60.5
1-11	60.5
1-12	60.5

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of SO2 (Tons)</u>
1	1.7
1-2	3.5
1-3	5.3
1-4	6.0
1-5	51.2
1-6	97.6
1-7	120.8
1-8	120.8
1-9	120.8
1-10	120.8
1-11	120.8
1-12	120.8

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of NOx (Tons)</u>
1	153.2
1-2	311.5
1-3	469.8
1-4	531.9

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1-5	582.5
1-6	739.2
1-7	817.6

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1-8	817.6
1-9	817.6
1-10	817.6
1-11	817.6
1-12	817.6

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of CO (Tons)</u>
1	155.8
1-2	316.8
1-3	477.8
1-4	541.0
1-5	541.0
1-6	541.0
1-7	541.0
1-8	541.0
1-9	541.0
1-10	541.0
1-11	541.0
1-12	541.0

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of VOC (Tons)</u>
1	5.8
1-2	11.8
1-3	17.7
1-4	20.1
1-5	24.2
1-6	32.3
1-7	36.4
1-8	36.4
1-9	36.4
1-10	36.4
1-11	36.4
1-12	36.4

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<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of H2SO4 (Tons)</u>
1	0.1
1-2	0.2
1-3	0.3
1-4	0.3
1-5	5.0
1-6	9.8
1-7	12.2
1-8	12.2
1-9	12.2
1-10	12.2
1-11	12.2
1-12	12.2

After the first 12 calendar months of operation following issuance of this permit, compliance with the annual emission limitation for PM/PM10, SO2, NOx, CO, VOC, and H2SO4 shall be based upon a rolling, 12-month summation of the monthly emissions.

- The quality of diesel fuel burned in this emissions unit shall have a combination of heat and sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 0.0456 lb SO2/MMBtu of actual heat input.

Compliance with the above mentioned specification shall be determined by using analytical results provided by the permittee or oil supplier for each shipment of oil.

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with the following ASTM methods: ASTM method D4294, ASTM method D240, or ASTM method 6010 for sulfur content; and ASTM method D240 for heat content. The newest or most recent revisions to the applicable test method shall be used for these analyses. Alternative, equivalent methods may be used upon written approval by the appropriate Ohio EPA District Office or local air agency.

### **III. Monitoring and/or Recordkeeping Requirements**

- The permittee shall maintain monthly records of the following information for emissions unit P001 - P008:

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- a. The natural gas usage rate for each month.
- b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the natural gas usage rates.

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

2. The permittee shall maintain monthly records of the following information for emissions unit P001 - P008:
  - a. The diesel fuel usage rate for each month.
  - b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the diesel fuel usage rates.

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

3. The permittee shall maintain monthly records of the following information for emissions unit P001 - P008:
  - a. The PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emissions for each month.
  - b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emissions.

Also, during the first 12 calendar months of operation following issuance of this permit, the permittee shall record the cumulative PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emissions for each calendar month.

4. Certification

Prior to the installation of the continuous NO<sub>x</sub> monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 6 for approval by the Ohio EPA, Central Office.

Within 60 days of the startup of this emissions unit, the permittee shall conduct certification tests of such equipment pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6, and/or 40 CFR Part 75. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate

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Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous NO<sub>x</sub> monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6 and/or 40 CFR Part 75.

5. The permittee shall operate and maintain existing equipment to continuously monitor and record NO<sub>x</sub> from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 and/or 40 CFR Part 75.

The permittee shall maintain records of all data obtained by the continuous NO<sub>x</sub> monitoring system including, but not limited to, parts per million NO<sub>x</sub> on an instantaneous (one-minute) basis, emissions of NO<sub>x</sub> in units of the applicable standard in the appropriate averaging period (hourly), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

6. Within 180 days of the effective date of this permit, 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. The plan shall follow the requirements of 40 CFR Part 60, Appendix F and/or 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NO<sub>x</sub> monitoring system must be kept on site and available for inspection during regular office hours.

7. Certification

Prior to the installation of the continuous CO monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 4 and 6 for approval by the Ohio EPA, Central Office.

Within 60 days of the effective date of this permit, the permittee shall conduct certification tests of the continuous CO monitoring system pursuant to ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 4 and 6. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and

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

8. The permittee shall operate and maintain equipment to continuously monitor and record CO from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 .

The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to, parts per million CO on an instantaneous (one minute) basis, emissions of CO in units of the applicable standard in the appropriate averaging period (hourly), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

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9. Within 180 days of the effective date of this permit, 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. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.
10. The permittee shall monitor the sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of the monitoring shall be determined as follows:
  - a. If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.
  - b. If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom fuel schedules for the determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Ohio EPA, Central Office before they can be used.
  - c. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received and the permittee's or oil supplier's analyses for sulfur content and heat content.

#### **IV. Reporting Requirements**

1. The permittee shall submit deviation reports that identify all exceedances of the rolling, 12-month natural gas and diesel fuel usage limitations, and the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emission limitations and, for the first twelve calendar months of operation following issuance of this permit, all exceedances of the maximum allowable cumulative natural gas and diesel fuel usage limitations and the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emission limitations.
2. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, 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 limits specified in 40 CFR Part 76 or any limitations specified in the terms and conditions of this permit or variance. These reports shall also contain the total NO<sub>x</sub> emissions for

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the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting 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

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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.

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

3. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any) of all instances of CO values in excess of any applicable limitation(s) specified in OAC Chapter 3745-21, 40 CFR Part 60, or any limitation(s) specified in the terms and conditions of this permit, in units of the standard. These reports shall also contain the total CO emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting 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.

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

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4. The permittee shall also submit annual reports which specify the total PM/PM10, VOC, SO2 and H2SO4 emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 30 of each year.

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5. The permittee shall submit, on a quarterly basis, copies of the permittee's or oil supplier's analyses for each shipment of oil (diesel fuel) which is received for burning in this emissions unit. The permittee's or oil supplier's analyses shall document the sulfur content (percent) and heat content (Btu/gallon) for each shipment of oil. The following information shall also be included with the copies of the permittee's or oil supplier's analyses:
  - a. the total quantity of oil received in each shipment (gallons);
  - b. the weighted\* average sulfur content (percent by weight) for the oil received during each calendar month;
  - c. the weighted\* average heat content (Btu/gallon) of the oil received during each calendar month; and,
  - d. the weighted\* average SO<sub>2</sub> emission rate (lbs/MMBtu of actual heat input) of the oil combusted during each calendar month (the SO<sub>2</sub> emission rate shall be calculated as specified in OAC 3745-18-04(F)).

\*In proportion to the quantity of oil received in each shipment during each calendar month.

These quarterly reports shall be submitted by February 15, May 15, August 15, and November 15 of each year and shall cover the oil shipments received during the previous calendar quarters.

## **V. Testing Requirements**

### 1. Emission testing requirements

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted within 60 days after achieving the maximum production rate but no later than 180 days after initial startup of the emissions unit.
- b. The emission testing shall be conducted to demonstrate compliance with the NO<sub>x</sub>, CO and VOC emissions limits.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for NO<sub>x</sub>, Method 7E of 40 CFR Part 60, Appendix A, for CO Method 10 of 40 CFR Part 60, Appendix A and for VOC Method 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior

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approval from the Ohio EPA.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

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Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

2. Compliance with the PM/PM10 emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.
3. Compliance with SO<sub>2</sub> emission limit shall be demonstrated by the manufacturer's guaranteed emissions data and the sulfur analyses of the fuels combusted (see term A.III.10).
4. Compliance with the NO<sub>x</sub> and CO emission limits shall be demonstrated by the monitoring in terms A.III.4 - A.III.9
5. Compliance with the H<sub>2</sub>SO<sub>4</sub> emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.
6. Compliance with the Beryllium and Arsenic limits shall be demonstrated by the use of AP-42 Table 3.1-4.
7. Compliance with the Benzene limit shall be demonstrated by the use of AP-42 Table 3.2-3 and Table 3.4-3.

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8. Compliance with the visible emission limitation in term A.I.2.a. shall be determined by Method 9, 40 CFR Part 60 Appendix A.
9. Compliance with the VOC limits shall be demonstrated by the use of AP-42 Table 3.1-2 and table 3.4-1.

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10. Compliance with the natural gas and diesel fuel usage limits shall be demonstrated by the recordkeeping in term A.III.1 and A.III.2.

## **VI. Miscellaneous Requirements**

None.

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**B. State Only Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Limitations/ Control Measures</u>	Emissions
80 Megawatt (Nominal) Simple-Cycle Combustion Turbine #7	OAC rule 3745-31-05	0.008 lb PM/PM10/MMBtu 58.0 lbs SO2/hour 196.0 lbs NOx/hour 54.0 lbs CO/hour 6.0 lbs H2SO4 mist/hour 10.0 lbs VOC/hour 0.15 TPY Lead 0.0023 TPY Mercury See term B.I.2.c.	
	OAC rule 3745-31-28	See term B.I.2.b.	

**2. Additional Terms and Conditions**

- 2.a The hourly emission limitation(s) outlined in term B.I.1. are based upon the emissions unit's Potential to Emit (PTE). Therefore, no hourly records are required to demonstrate compliance with these limits.
- 2.b Compliance with OAC rule 3745-31-05 shall be demonstrated by the use of dry low NOx combustors with a 15 ppm NOX emission limit when combusting natural gas, the use of water injection with a 42 ppm NOX emission limit and limited natural gas and diesel fuel usage.
- 2.c Visible particulate emissions from any stack shall not exceed 10 percent opacity, as a

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six-minute average when combusting natural gas.

## **II. Operational Restrictions**

None.

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### **III. Monitoring and/or Recordkeeping Requirements**

None.

### **IV. Reporting Requirements**

None.

### **V. Testing Requirements**

1. Compliance with the PM/PM10 emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.
2. Compliance with SO<sub>2</sub> emission limit shall be demonstrated by the manufacturer's guaranteed emissions data and the sulfur analyses of the fuels combusted (see term A.III.10).
3. Compliance with the NO<sub>x</sub> and CO emission limits shall be demonstrated by the monitoring in terms A.III.4 - A.III.9
4. Compliance with the H<sub>2</sub>SO<sub>4</sub> emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.
5. Compliance with the VOC limits shall be demonstrated by the use of AP-42 Table 3.1-2 and table 3.4-1.
6. Compliance with the Lead and Mercury limits shall be demonstrated by the use of AP-42 Table 3.1-4.
7. Compliance with the visible emission limitation in term B.I.2.c. shall be determined by Method 9, 40 CFR Part 60 Appendix A.

### **VI. Miscellaneous Requirements**

None.

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**

**A. State and Federally Enforceable Section**

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

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

Operations, and/or <u>Equipment</u>	Property,	<u>Applicable Rules/Requirements</u>	
80 Megawatt Simple-Cycle Turbine #8	(Nominal) Combustion	40 CFR Part 52.21 and OAC rule 3745-31-11 thru 31-20	OAC rule 3745-15-07  OAC rule 3745-17-07  OAC rule 3745-17-11(B)(4)
			40 CFR Part 60 Subpart GG  OAC rule 3745-18-06(F)
			Synthetic Minor to avoid Emission Offset Rule

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Applicable Emissions  
 Limitations/Control  
Measures

60.5 TPY PM/PM10\*  
 120.8 TPY SO2\*  
 817.6 TPY NOx\*  
 541.0 TPY CO\*  
 12.2 TPY H2SO4 mist\*  
 0.00084 TPY Beryllium\*  
 0.012 TPY Arsenic\*  
 7.7 TPY Benzene\*

15 ppm NOx by volume at  
 15 % oxygen on a dry  
 basis when firing natural  
 gas

42 ppm NOx by volume at  
 15 % oxygen on a dry  
 basis when firing diesel  
 fuel

0.05 % sulfur  
 0.0456 lbs SO2/MMBtu

See Part I, term B.7

See term A.I.2.a

Less stringent than OAC  
 rule 3745-31-05 (See PM  
 emission limitation in term  
 B.I.1)

Less Stringent than 40  
 CFR Part 52.21

Less Stringent than 40  
 CFR Part 52.21

36.4 TPY VOC\*

\* Emissions unit P001-P008,  
 combined, based on a rolling,  
 12-month summation.

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**2. Additional Terms and Conditions**

- 2.a** Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule when combusting diesel fuel.
- 2.b** Compliance with OAC rule 3745-31-15 and 40 CFR Part 52.21 shall be demonstrated by the use of dry low NOx combustors with a 15 ppm NOX emission limit when combusting natural gas, the use of water injection with a 42 ppm NOX emission limit when combusting diesel fuel and limited natural gas and diesel fuel usage.

**II. Operational Restrictions**

- 1. The maximum annual natural gas usage rate for emissions units P001-P008 shall not exceed 2.03 x 10<sup>10</sup> cubic feet per year, based upon a rolling, 12-month summation of the natural gas usage rate.

To ensure enforceability during the first 12 calendar months of operation following issuance of this permit, the permittee shall not exceed the natural gas usage rates specified in the following table:

<u>Month</u>	<u>Maximum Allowable Natural Gas Usage (MM cubic feet per year)</u>
1	5856.875
1-2	11,908.978
1-3	17,961.082
1-4	20,336.370
1-5	20,336.370
1-6	20,336.370
1-7	20,336.370
1-8	20,336.370
1-9	20,336.370
1-10	20,336.370
1-11	20,336.370
1-12	20,336.370

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After the first 12 calendar months of operation following issuance of this permit, compliance with the annual natural gas usage rate limitation shall be based upon a rolling, 12-month summation of the usage rates.

2. The maximum annual diesel fuel usage rate for emissions units P001-P008 shall not exceed  $3.40 \times 10^7$  gallons per year, based upon a rolling, 12-month summation of the diesel fuel usage rate.

To ensure enforceability during the first 12 calendar months of operation following issuance of this permit, the permittee shall not exceed the diesel fuel usage rates specified in the following table:

<u>Month</u>	<u>Maximum Allowable Diesel Fuel Usage (MM gallons per year)</u>
1	0
1-2	0
1-3	0
1-4	0
1-5	13.616
1-6	27.231
1-7	34.039
1-8	34.039
1-9	34.039
1-10	34.039
1-11	34.039
1-12	34.039

After the first 12 calendar months of operation following issuance of this permit, compliance with the annual diesel fuel usage rate limitation shall be based upon a rolling, 12-month summation of the usage rates.

3. The combination of natural gas and diesel fuel usage for emissions units P001 - P008 shall not exceed the following emissions limits based upon a rolling, 12-month summation of the emissions:

60.5 TPY PM/PM10, 120.8 TPY SO<sub>2</sub>, 817.6 TPY NO<sub>x</sub>, 541.0 TPY CO, 36.4 TPY VOC and 12.2 TPY H<sub>2</sub>SO<sub>4</sub> mist.

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

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<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of PM/PM10 (Tons)</u>
1	14.5
1-2	29.4
1-3	44.3
1-4	50.2
1-5	58.3
1-6	60.5
1-7	60.5
1-8	60.5
1-9	60.5
1-10	60.5
1-11	60.5
1-12	60.5

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of SO2 (Tons)</u>
1	1.7
1-2	3.5
1-3	5.3
1-4	6.0
1-5	51.2
1-6	97.6
1-7	120.8
1-8	120.8
1-9	120.8
1-10	120.8
1-11	120.8
1-12	120.8

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of NOx (Tons)</u>
1	153.2
1-2	311.5

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1-3	469.8
1-4	531.9
1-5	582.5
1-6	739.2
1-7	817.6
1-8	817.6
1-9	817.6
1-10	817.6
1-11	817.6
1-12	817.6

	<u>Maximum Allowable</u>
	<u>Cumulative Emissions</u>
<u>Month(s)</u>	<u>of CO (Tons)</u>

1	155.8
1-2	316.8
1-3	477.8
1-4	541.0
1-5	541.0
1-6	541.0
1-7	541.0
1-8	541.0
1-9	541.0
1-10	541.0
1-11	541.0
1-12	541.0

	<u>Maximum Allowable</u>
	<u>Cumulative Emissions</u>
<u>Month(s)</u>	<u>of VOC (Tons)</u>

1	5.8
1-2	11.8
1-3	17.7
1-4	20.1
1-5	24.2
1-6	32.3
1-7	36.4
1-8	36.4

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1-9	36.4
1-10	36.4
1-11	36.4
1-12	36.4

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of H2SO4 (Tons)</u>
1	0.1
1-2	0.2
1-3	0.3
1-4	0.3
1-5	5.0
1-6	9.8
1-7	12.2
1-8	12.2
1-9	12.2
1-10	12.2
1-11	12.2
1-12	12.2

After the first 12 calendar months of operation following issuance of this permit, compliance with the annual emission limitation for PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> shall be based upon a rolling, 12-month summation of the monthly emissions.

- The quality of diesel fuel burned in this emissions unit shall have a combination of heat and sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 0.0456 lb SO<sub>2</sub>/MMBtu of actual heat input.

Compliance with the above mentioned specification shall be determined by using analytical results provided by the permittee or oil supplier for each shipment of oil.

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with the following ASTM methods: ASTM method D4294, ASTM method D240, or ASTM method 6010 for sulfur content; and ASTM method D240 for heat content. The newest or most recent revisions to the applicable test method shall be used for these analyses. Alternative, equivalent methods may be used upon written approval by the appropriate Ohio EPA District Office or local air agency.

### **III. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall maintain monthly records of the following information for emissions unit P001 - P008:
  - a. The natural gas usage rate for each month.
  - b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the natural gas usage rates.

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

2. The permittee shall maintain monthly records of the following information for emissions unit P001 - P008:
  - a. The diesel fuel usage rate for each month.
  - b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the diesel fuel usage rates.

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

3. The permittee shall maintain monthly records of the following information for emissions unit P001 - P008:
  - a. The PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emissions for each month.
  - b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emissions.

Also, during the first 12 calendar months of operation following issuance of this permit, the permittee shall record the cumulative PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emissions for each calendar month.

4. Certification

Prior to the installation of the continuous NO<sub>x</sub> monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 6 for approval by the

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Ohio EPA, Central Office.

Within 60 days of the startup of this emissions unit, the permittee shall conduct certification tests of such equipment pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6, and/or 40 CFR Part 75. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous NO<sub>x</sub> monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6 and/or 40 CFR Part 75.

5. The permittee shall operate and maintain existing equipment to continuously monitor and record NO<sub>x</sub> from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 and/or 40 CFR Part 75.

The permittee shall maintain records of all data obtained by the continuous NO<sub>x</sub> monitoring system including, but not limited to, parts per million NO<sub>x</sub> on an instantaneous (one-minute) basis, emissions of NO<sub>x</sub> in units of the applicable standard in the appropriate averaging period (hourly), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

6. Within 180 days of the effective date of this permit, 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. The plan shall follow the requirements of 40 CFR Part 60, Appendix F and/or 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NO<sub>x</sub> monitoring system must be kept on site and available for inspection during regular office hours.

7. Certification

Prior to the installation of the continuous CO monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 4 and 6 for approval by the Ohio EPA, Central Office.

Within 60 days of the effective date of this permit, the permittee shall conduct certification tests of the continuous CO monitoring system pursuant to ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 4 and 6. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous CO monitoring system shall be granted upon determination by the Ohio EPA Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 4 and 6.

8. The permittee shall operate and maintain equipment to continuously monitor and record CO from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 .

The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to, parts per million CO on an instantaneous (one minute) basis, emissions of CO in units of the applicable standard in the appropriate averaging period (hourly), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

9. Within 180 days of the effective date of this permit, 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. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during

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regular office hours.

10. The permittee shall monitor the sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of the monitoring shall be determined as follows:

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- a. If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.
- b. If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom fuel schedules for the determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Ohio EPA, Central Office before they can be used.
- c. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received and the permittee's or oil supplier's analyses for sulfur content and heat content.

#### **IV. Reporting Requirements**

1. The permittee shall submit deviation reports that identify all exceedances of the rolling, 12-month natural gas and diesel fuel usage limitations, and the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emission limitations and, for the first twelve calendar months of operation following issuance of this permit, all exceedances of the maximum allowable cumulative natural gas and diesel fuel usage limitations and the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and H<sub>2</sub>SO<sub>4</sub> emission limitations.
2. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, 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 limits specified in 40 CFR Part 76 or any limitations specified in the terms and conditions of this permit or variance. These reports shall also contain the total NO<sub>x</sub> emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting 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.

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If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit

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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.

3. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any) of all instances of CO values in excess of any applicable limitation(s) specified in OAC Chapter 3745-21, 40 CFR Part 60, or any limitation(s) specified in the terms and conditions of this permit, in units of the standard. These reports shall also contain the total CO emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting 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.

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

4. The permittee shall also submit annual reports which specify the total PM/PM10, VOC, SO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub> emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 30 of each year.
5. The permittee shall submit, on a quarterly basis, copies of the permittee's or oil supplier's analyses for each shipment of oil (diesel fuel) which is received for burning in this emissions unit. The permittee's or oil supplier's analyses shall document the sulfur content (percent) and heat content (Btu/gallon) for each shipment of oil. The following information shall also be included with the

copies of the permittee's or oil supplier's analyses:

- a. the total quantity of oil received in each shipment (gallons);
- b. the weighted\* average sulfur content (percent by weight) for the oil received during each calendar month;
- c. the weighted\* average heat content (Btu/gallon) of the oil received during each calendar month; and,
- d. the weighted\* average SO<sub>2</sub> emission rate (lbs/MMBtu of actual heat input) of the oil combusted during each calendar month (the SO<sub>2</sub> emission rate shall be calculated as specified in OAC 3745-18-04(F)).

\*In proportion to the quantity of oil received in each shipment during each calendar month.

These quarterly reports shall be submitted by February 15, May 15, August 15, and November 15 of each year and shall cover the oil shipments received during the previous calendar quarters.

## V. Testing Requirements

### 1. Emission testing requirements

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted within 60 days after achieving the maximum production rate but no later than 180 days after initial startup of the emissions unit.
- b. The emission testing shall be conducted to demonstrate compliance with the NO<sub>x</sub>, CO and VOC emissions limits.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for NO<sub>x</sub>, Method 7E of 40 CFR Part 60, Appendix A, for CO Method 10 of 40 CFR Part 60, Appendix A and for VOC Method 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

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Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services shall be permitted to witness the test(s), examine the testing equipment, and acquire data and

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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 Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

2. Compliance with the PM/PM10 emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.
3. Compliance with SO<sub>2</sub> emission limit shall be demonstrated by the manufacturer's guaranteed emissions data and the sulfur analyses of the fuels combusted (see term A.III.10).
4. Compliance with the NO<sub>x</sub> and CO emission limits shall be demonstrated by the monitoring in terms A.III.4 - A.III.9
5. Compliance with the H<sub>2</sub>SO<sub>4</sub> emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.
6. Compliance with the Beryllium and Arsenic limits shall be demonstrated by the use of AP-42 Table 3.1-4.
7. Compliance with the Benzene limit shall be demonstrated by the use of AP-42 Table 3.2-3 and Table 3.4-3.
8. Compliance with the visible emission limitation in term A.I.2.a. shall be determined by Method 9, 40 CFR Part 60 Appendix A.
9. Compliance with the VOC limits shall be demonstrated by the use of AP-42 Table 3.1-2 and table 3.4-1.
10. Compliance with the natural gas and diesel fuel usage limits shall be demonstrated by the recordkeeping in term A.III.1 and A.III.2.

## **VI. Miscellaneous Requirements**

None.

**B. State Only Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Limitations/ Control Measures</u>	Emissions
80 Megawatt (Nominal) Simple-Cycle Combustion Turbine #8	OAC rule 3745-31-05	0.008 lb PM/PM10/MMBtu 58.0 lbs SO2/hour 196.0 lbs NOx/hour 54.0 lbs CO/hour 6.0 lbs H2SO4 mist/hour 10.0 lbs VOC/hour 0.15 TPY Lead 0.0023 TPY Mercury See term B.I.2.c.	
	OAC rule 3745-31-28	See term B.I.2.b.	

**2. Additional Terms and Conditions**

- 2.a The hourly emission limitation(s) outlined in term B.I.1. are based upon the emissions unit's Potential to Emit (PTE). Therefore, no hourly records are required to demonstrate compliance with these limits.
- 2.b Compliance with OAC rule 3745-31-05 shall be demonstrated by the use of dry low NOx combustors with a 15 ppm NOX emission limit when combusting natural gas, the use of water injection with a 42 ppm NOX emission limit and limited natural gas and diesel fuel usage.
- 2.c Visible particulate emissions from any stack shall not exceed 10 percent opacity, as a six-minute average when combusting natural gas.

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## **II. Operational Restrictions**

None.

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### **III. Monitoring and/or Recordkeeping Requirements**

None.

### **IV. Reporting Requirements**

None.

### **V. Testing Requirements**

1. Compliance with the PM/PM10 emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.
2. Compliance with SO<sub>2</sub> emission limit shall be demonstrated by the manufacturer's guaranteed emissions data and the sulfur analyses of the fuels combusted (see term A.III.10).
3. Compliance with the NO<sub>x</sub> and CO emission limits shall be demonstrated by the monitoring in terms A.III.4 - A.III.9
4. Compliance with the H<sub>2</sub>SO<sub>4</sub> emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.
5. Compliance with the VOC limits shall be demonstrated by the use of AP-42 Table 3.1-2 and table 3.4-1.
6. Compliance with the Lead and Mercury limits shall be demonstrated by the use of AP-42 Table 3.1-4.
7. Compliance with the visible emission limitation in term B.I.2.c. shall be determined by Method 9, 40 CFR Part 60 Appendix A.

### **VI. Miscellaneous Requirements**

None.

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**

**A. State and Federally Enforceable Section**

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

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

Operations, and/or <u>Equipment</u>	Property,	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
520,000 Gallon Fixed Roof Storage Tank #1		40 CFR Part 60 Subpart Kb  OAC rule 3745-21-09(L)	See term A.III.1  See term A.III.2 and A.IV.1

**2. Additional Terms and Conditions**

2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

1. In accordance with 40 CFR 60.116b(a) and (b), the permittee shall keep readily accessible records showing the dimension of this storage tank (vessel) and an analysis showing the capacity of the storage tank for the life of the emissions unit.

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2. The permittee shall maintain records of the following information:
  - a. The types of petroleum liquids stored in the tank.
  - b. The maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid that has a maximum true vapor pressure greater than 1.0 pound per square inch absolute.

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**IV. Reporting Requirements**

1. If the permittee places, stores, or holds in this emissions unit any petroleum liquid with a true vapor pressure which is greater than 1.52 pounds per square inch absolute and such emissions unit does not comply with OAC rule 3745-21-09(L)(1), the permittee shall so notify the Department of Environmental Services within 30 days of becoming aware of the occurrence.

**V. Testing Requirements**

1. Compliance with OAC rule 3745-21-09(L) shall be demonstrated by the recordkeeping in term A.III.2.

**VI. Miscellaneous Requirements**

None.

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**B. State Only Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Limitations/ Control Measures</u>	Emissions
520,000 Gallon Fixed Roof Storage Tank #1	OAC rule 3745-31-05	0.43 TPY VOC	

2. **Additional Terms and Conditions**

- 2.a Compliance with OAC rule 3745-31-05 shall be demonstrated by the use of submerged fill for the storage tank.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

1. Compliance with the ton per year emission limit shall be determined using the emission factors from AP-42 section 7.1.

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**VI. Miscellaneous Requirements**

None.

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**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]****A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

Operations, Property, and/or <u>Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
520,000 Gallon Fixed Roof Storage Tank #2	40 CFR Part 60 Subpart Kb OAC rule 3745-21-09(L)	See term A.III.1  See term A.III.2 and A.IV.1

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

1. In accordance with 40 CFR 60.116b(a) and (b), the permittee shall keep readily accessible records showing the dimension of this storage tank (vessel) and an analysis showing the capacity of the storage tank for the life of the emissions unit.
2. The permittee shall maintain records of the following information:
  - a. The types of petroleum liquids stored in the tank.
  - b. The maximum true vapor pressure (in pounds per square inch absolute), as stored, of each

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liquid that has a maximum true vapor pressure greater than 1.0 pound per square inch absolute.

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**IV. Reporting Requirements**

1. If the permittee places, stores, or holds in this emissions unit any petroleum liquid with a true vapor pressure which is greater than 1.52 pounds per square inch absolute and such emissions unit does not comply with OAC rule 3745-21-09(L)(1), the permittee shall so notify the Department of Environmental Services within 30 days of becoming aware of the occurrence.

**V. Testing Requirements**

1. Compliance with OAC rule 3745-21-09(L) shall be demonstrated by the recordkeeping in term A.III.2.

**VI. Miscellaneous Requirements**

None.

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**B. State Only Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Limitations/ Control Measures</u>	Emissions
520,000 Gallon Fixed Roof Storage Tank #2	OAC rule 3745-31-05	0.43 TPY VOC	

**2. Additional Terms and Conditions**

- 2.a Compliance with OAC rule 3745-31-05 shall be demonstrated by the use of submerged fill for the storage tank.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

1. Compliance with the ton per year emission limit shall be determined using the emission factors from AP-42 section 7.1.

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**VI. Miscellaneous Requirements**

None.

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]****A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

Operations, Property, and/or <u>Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
520,000 Gallon Fixed Roof Storage Tank #3	40 CFR Part 60 Subpart Kb OAC rule 3745-21-09(L)	See term A.III.1  See term A.III.2 and A.IV.1

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

1. In accordance with 40 CFR 60.116b(a) and (b), the permittee shall keep readily accessible records showing the dimension of this storage tank (vessel) and an analysis showing the capacity of the storage tank for the life of the emissions unit.
2. The permittee shall maintain records of the following information:
  - a. The types of petroleum liquids stored in the tank.
  - b. The maximum true vapor pressure (in pounds per square inch absolute), as stored, of each

liquid that has a maximum true vapor pressure greater than 1.0 pound per square inch absolute.

**IV. Reporting Requirements**

1. If the permittee places, stores, or holds in this emissions unit any petroleum liquid with a true vapor pressure which is greater than 1.52 pounds per square inch absolute and such emissions unit does not comply with OAC rule 3745-21-09(L)(1), the permittee shall so notify the Department of Environmental Services within 30 days of becoming aware of the occurrence.

**V. Testing Requirements**

1. Compliance with OAC rule 3745-21-09(L) shall be demonstrated by the recordkeeping in term A.III.2.

**VI. Miscellaneous Requirements**

None.

**B. State Only Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Limitations/ Control Measures</u>	<u>Emissions</u>
520,000 Gallon Fixed Roof Storage Tank #3	OAC rule 3745-31-05	0.43 TPY VOC	

**2. Additional Terms and Conditions**

- 2.a Compliance with OAC rule 3745-31-05 shall be demonstrated by the use of submerged fill for the storage tank.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

1. Compliance with the ton per year emission limit shall be determined using the emission factors from AP-42 section 7.1.

**VI. Miscellaneous Requirements**

None.

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]****A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

Operations, and/or <u>Equipment</u>	Property,	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
520,000 Gallon Fixed Roof Storage Tank #4		40 CFR Part 60 Subpart Kb OAC rule 3745-21-09(L)	See term A.III.1  See term A.III.2 and A.IV.1

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

1. In accordance with 40 CFR 60.116b(a) and (b), the permittee shall keep readily accessible records showing the dimension of this storage tank (vessel) and an analysis showing the capacity of the storage tank for the life of the emissions unit.
2. The permittee shall maintain records of the following information:
  - a. The types of petroleum liquids stored in the tank.
  - b. The maximum true vapor pressure (in pounds per square inch absolute), as stored, of each

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liquid that has a maximum true vapor pressure greater than 1.0 pound per square inch absolute.

**IV. Reporting Requirements**

1. If the permittee places, stores, or holds in this emissions unit any petroleum liquid with a true vapor pressure which is greater than 1.52 pounds per square inch absolute and such emissions unit does not comply with OAC rule 3745-21-09(L)(1), the permittee shall so notify the Department of Environmental Services within 30 days of becoming aware of the occurrence.

**V. Testing Requirements**

1. Compliance with OAC rule 3745-21-09(L) shall be demonstrated by the recordkeeping in term A.III.2.

**VI. Miscellaneous Requirements**

None.

**B. State Only Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Limitations/Control Measures</u>	<u>Emissions</u>
520,000 Gallon Fixed Roof Storage Tank #4	OAC rule 3745-31-05	0.43 TPY VOC	

2. **Additional Terms and Conditions**

- 2.a Compliance with OAC rule 3745-31-05 shall be demonstrated by the use of submerged fill for the storage tank.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

1. Compliance with the ton per year emission limit shall be determined using the emission factors from AP-42 section 7.1.

**VI. Miscellaneous Requirements**

None.

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**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]****A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

Operations, and/or <u>Equipment</u>	Property,	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
1.5 Megawatt Diesel Generator #1	Emergency	OAC rule 3745-15-07	See Part I, term B.7
		OAC rule 3745-17-07	See term A.I.2.a
		OAC rule 3745-17-11(B)(5)(b)	0.062 lb PM-PM10/MMBtu

**2. Additional Terms and Conditions**

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

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

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**V. Testing Requirements**

1. Compliance with the PM/PM10 emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.
2. Compliance with the visible emission limitation in term A.I.2.a. shall be determined by Method 9, 40 CFR Part 60 Appendix A.

**VI. Miscellaneous Requirements**

None.

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**B. State Only Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Limitations/ Control Measures</u>	<u>Emissions</u>
1.5 Megawatt Emergency Diesel Generator #2	OAC rule 3745-31-05	0.27 TPY PM-PM10 6.95 lbs SO <sub>2</sub> /hour 1.74 TPY SO <sub>2</sub> 55.07 lbs NO <sub>x</sub> /hour 13.77 TPY NO <sub>x</sub> 14.63 lbs CO/hour 3.66 TPY CO 1.41 lbs VOC/hour 0.35 TPY VOC	

- Additional Terms and Conditions**

- Compliance with OAC rule 3745-31-05 shall be demonstrated by limiting the hours of operation of this emissions unit.

**II. Operational Restrictions**

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

**III. Monitoring and/or Recordkeeping Requirements**

- The permittee shall maintain monthly records of the following information:

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- a. The operating hours for each month.
- b. The rolling, 12-month summation of the operating hours.

**IV. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month operating hours limitation.

**V. Testing Requirements**

1. Compliance with the PM/PM10 emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.
2. Compliance with SO2 emission limit shall be demonstrated by the use of AP-42 Table 3.4-1.
3. Compliance with the NOx, CO and VOC emission limits shall be demonstrated by the use of AP-42 Table 3.4-1.
4. Compliance with the hours of operation limitation in term B.II.1 shall be demonstrated by the recordkeeping in term B.III.1.

**VI. Miscellaneous Requirements**

None.

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]****I. Applicable Emissions Limitations and/or Control Requirements**

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

Operations, Property, and/or <u>Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
1.5 Megawatt Emergency Diesel Generator #1	OAC rule 3745-15-07	See Part I, term B.7
	OAC rule 3745-17-07	See term A.I.2.a
	OAC rule 3745-17-11(B)(5)(b)	0.062 lb PM-PM10/MMBtu

**2. Additional Terms and Conditions**

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

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

1. Compliance with the PM/PM10 emission limit shall be demonstrated by the manufacturer's

guaranteed emissions data.

2. Compliance with the visible emission limitation in term A.I.2.a. shall be determined by Method 9, 40 CFR Part 60 Appendix A.

**VI. Miscellaneous Requirements**

None.

**B. State Only Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Limitations/ Control Measures</u>	Emissions
1.5 Megawatt Emergency Diesel Generator #2	OAC rule 3745-31-05	0.27 TPY PM-PM10 6.95 lbs SO2/hour 1.74 TPY SO2 55.07 lbs NOx/hour 13.77 TPY NOx 14.63 lbs CO/hour 3.66 TPY CO 1.41 lbs VOC/hour 0.35 TPY VOC	

2. **Additional Terms and Conditions**

- 2.a Compliance with OAC rule 3745-31-05 shall be demonstrated by limiting the hours of operation of this emissions unit.

**II. Operational Restrictions**

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

**III. Monitoring and/or Recordkeeping Requirements**

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

- a. The operating hours for each month.
- b. The rolling, 12-month summation of the operating hours.

**IV. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month operating hours limitation.

**V. Testing Requirements**

1. Compliance with the PM/PM10 emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.
2. Compliance with SO<sub>2</sub> emission limit shall be demonstrated by the use of AP-42 Table 3.4-1.
3. Compliance with the NO<sub>x</sub>, CO and VOC emission limits shall be demonstrated by the use of AP-42 Table 3.4-1.
4. Compliance with the hours of operation limitation in term B.II.1 shall be demonstrated by the recordkeeping in term B.III.1.

**VI. Miscellaneous Requirements**

None.

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S) [Continued]**

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

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

Operations, Property, and/or <u>Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
140 Kilowatt Emergency Diesel Fire Pump	OAC rule 3745-15-07	See Part I, term B.7
	OAC rule 3745-17-07	See term A.I.2.a
	OAC rule 3745-17-11(B)(5)(a)	0.310 lb PM-PM10/MMBtu

**2. Additional Terms and Conditions**

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

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

1. Compliance with the PM/PM10 emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.

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2. Compliance with the visible emission limitation in term A.I.2.a. shall be determined by Method 9, 40 CFR Part 60 Appendix A.

**VI. Miscellaneous Requirements**

None.

**B. State Only Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Limitations/ Control Measures</u>	<u>Emissions</u>
140 Kilowatt Emergency Diesel Fire Pump	OAC rule 3745-31-05	0.04 TPY PM-PM10 0.65 lbs SO <sub>2</sub> /hour 0.16 TPY SO <sub>2</sub> 5.14 lbs NO <sub>x</sub> /hour 1.28 TPY NO <sub>x</sub> 1.37 lbs CO/hour 0.34 TPY CO 0.13 lbs VOC/hour 0.03 TPY VOC	

**2. Additional Terms and Conditions**

- Compliance with OAC rule 3745-31-05 shall be demonstrated by limiting the hours of operation of this emissions unit.

**II. Operational Restrictions**

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

**III. Monitoring and/or Recordkeeping Requirements**

- The permittee shall maintain monthly records of the following information:

- a. The operating hours for each month.
- b. The rolling, 12-month summation of the operating hours.

**IV. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month operating hours limitation.

**V. Testing Requirements**

1. Compliance with the PM/PM10 emission limit shall be demonstrated by the manufacturer's guaranteed emissions data.
2. Compliance with SO<sub>2</sub> emission limit shall be demonstrated by the use of AP-42 Table 3.4-1.
3. Compliance with the NO<sub>x</sub>, CO and VOC emission limits shall be demonstrated by the use of AP-42 Table 3.4-1.
4. Compliance with the hours of operation limitation in term B.II.1 shall be demonstrated by the recordkeeping in term B.III.1.

**VI. Miscellaneous Requirements**

None.