

**Synthetic Minor Determination and/or**  **Netting Determination**  
Permit To Install **14-05794**

**A. Source Description**

GE Aircraft Engines (GEAE) is a major manufacturer of aircraft engines (military and commercial) and a mega-site Title V facility located in Hamilton County, Ohio. The facility is a major source of multiple criteria pollutants from operations such as fuel-burning sources (boilers, preheaters), engine test cells, and engine part coating operations. GE's Title V operating permit was issued 5/24/2004, and expires on 5/24/2009.

This permit to install (PTI) is for the Building 330 Air Supply Project which required modification of the existing short term and annual emission limitations for two engine test cells (EU F019 and F020) in order to accommodate new engine programs/designs at GEAE. These two test cells were originally grouped in an Air Supply Expansion Project initiated in 1991 that included a total of six preheaters (EUs B026-B029, B043, B044). Preheaters are used intermittently (depending on test requirements) in the engine test cells to supply heated intake air for the engine testing. The original Air Supply Expansion Project PTIs established operational and emission limit restrictions to avoid major modification new source review for the test cells and preheaters combined. Therefore, even though this permitting action was initiated primarily to address proposed emission increases in the test cells only, all the emission units from the original project permitting action have been included in this permit to install to ensure that the original project still does not trigger a major modification under new source review.

**B. Facility Emissions and Attainment Status**

The facility is located in Hamilton County which is currently non-attainment for VOCs (8-hour ozone standard), non-attainment for PM<sub>2.5</sub>, and attainment for all other criteria pollutants.

The facility is a major source of NO<sub>x</sub>, CO, SO<sub>2</sub>, OC, and HAPs from existing gas/oil-fired boilers, gas-fired preheaters, engine test cells, and engine part coating operations.

The permittee has requested that this permit be issued with federally enforceable emission limitations (synthetic minor) on all criteria pollutants to avoid triggering a major modification under new source review (NSR). This permit continues to maintain emission limitations consist with the original 1991 expansion project to ensure the original project does not trigger a major modification at the facility.

**C. Source Emissions**

The following table summarizes emissions due to the proposed Building 330 Air Supply Project and the major NSR threshold levels for each pollutant:

|  | <b>NO<sub>x</sub></b> | <b>CO</b> | <b>OC</b> | <b>PE/PM<sub>10</sub></b> | <b>SO<sub>2</sub></b> |
|--|-----------------------|-----------|-----------|---------------------------|-----------------------|
| Actual Emissions-All Project EUs Combined (TPY)* | 7.1                   | 2.02      | 0.24      | 0.11                      | 0.60                  |

|   |             |             |             |             |             |
|---|-------------|-------------|-------------|-------------|-------------|
| Current PTI Allowables-All Project EUs Combined (TPY)*              | 33.16       | 18.05       | 3.70        | 9.76        | 2.49        |
| <b>PTI 14-05794 Mod. Allowables-All Project EUs Combined (TPY)*</b> | <b>39.9</b> | <b>99.9</b> | <b>19.8</b> | <b>9.76</b> | <b>2.49</b> |
| Major NSR Threshold   | 40          | 100         | 40          | 25/15       | 40          |

*\*the above are rolling, 12-month summations of emissions*

Eight (8) existing emission units are included in this permit and have been subjected to modified federally enforceable emission limitations in order avoid major NSR. The modified emission limitations will still ensure that the original 1990's project permitting actions on these emission units avoids major NSR, but allows for increases in the annual NOx, CO, and OC emissions, to accommodate new engine programs at the permittee's facility. The modified emission limitations are a group limit (EUs B026-B029, B043, B044, F019, and F020 combined) at the permittee's request to allow for the variation in operation of test cells and preheaters across all engine programs. The federally enforceable emission limitations and associated operational and emissions record keeping and reporting to demonstrate compliance with these limitations will ensure that the Building 330 Air Supply Project avoids major modification non-attainment NSR and PSD.

#### **D. Conclusion**

The permittee has proposed federally enforceable emission limitations of 39.9 TPY NOx, 99.9 TPY CO, 19.8 TPY OC, 9.76 TPY PE/PM10, and 2.49 TPY SO2 as 12-month rolling summations; has proposed associated operational and emissions record keeping and reporting to demonstrate compliance with these limitations; and, has accepted the terms and conditions of this permit which will limit emissions of criteria pollutants as a Synthetic Minor so that the overall impact of the air supply project will not trigger non-attainment NSR and PSD for any of the criteria pollutants. The facility will maintain records and be subject to reporting as outlined in the permit to ensure compliance with the voluntary Synthetic Minor limitations.



State of Ohio Environmental Protection Agency

**RE: DRAFT PERMIT TO INSTALL  
HAMILTON COUNTY**

**CERTIFIED MAIL**

Street Address:

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

Mailing Address:  
Lazarus Gov.  
Center

**Application No:** 14-05794

**Fac ID:** 1431150060

**DATE:** 3/28/2006

General Electric Aircraft Engines  
Robert Drexelius  
1 Neumann Way Mail Drop N123  
Cincinnati, OH 45215

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$1600** will be due. Please do not submit any payment now.

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

Sincerely,

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

CC: USEPA

HCDES

OH-KY-IN Regional Council of Gov.

KY

IN

**HAMILTON COUNTY**

**PUBLIC NOTICE**

**ISSUANCE OF DRAFT PERMIT TO INSTALL 14-05794 FOR AN AIR CONTAMINANT SOURCE FOR  
General Electric Aircraft Engines**

On 3/28/2006 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **General Electric Aircraft Engines**, located at **1 Neumann Way, Cincinnati, Ohio**.

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 14-05794:

**Building 330 Air Supply Project - Modification of Existing Preheater and Test Cell Sources to Increase Engine Testing Capabilities**

Comments concerning this draft action, or a request for a public meeting, must be sent in writing to the address identified below no later than thirty (30) days from the date this notice is published. All inquiries concerning this draft action may be directed to the contact identified below.

Brad Miller, Hamilton County Department of Environmental Services, 250 William Howard Taft Pkwy,  
Cincinnati, OH 45219-2660 [(513)946-7777]



STATE OF OHIO ENVIRONMENTAL PROTECTION

AGENCY

**Permit To Install  
Terms and Conditions**

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

**DRAFT PERMIT TO INSTALL 14-05794**

Application Number: 14-05794  
Facility ID: 1431150060  
Permit Fee: **To be entered upon final issuance**  
Name of Facility: General Electric Aircraft Engines  
Person to Contact: Robert Drexelius  
Address: 1 Neumann Way Mail Drop N123  
Cincinnati, OH 45215

Location of proposed air contaminant source(s) [emissions unit(s)]:

**1 Neumann Way  
Cincinnati, Ohio**

Description of proposed emissions unit(s):

**Building 330 Air Supply Project - Modification of Existing Preheater and Test Cell Sources to Increase Engine Testing Capabilities**

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

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

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

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

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reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.9 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 (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
  - iv. If this permit is for an emissions unit located at a Title V facility, then each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d. The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

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

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

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

## **3. Risk Management Plans**

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

permittee shall comply with the requirement to register such a plan.

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

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

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

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

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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 any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

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**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 its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. 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 ORC section 3704.08.
  - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
  - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

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**Facility ID: 1431150060**

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

#### **10. Permit-To-Operate Application**

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this permit is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

#### **11. Best Available Technology**

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

#### **12. Air Pollution Nuisance**

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

#### **13. Permit-To-Install**

A permit-to-install must be obtained pursuant to OAC Chapter 3745-31 prior to "installation" of "any air contaminant source" as defined in OAC rule 3745-31-01, or "modification", as defined in OAC rule 3745-31-01, of any emissions unit included in

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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 shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

**2. Reporting Requirements**

The permittee shall submit required reports in the following manner:

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

**3. Permit Transfers**

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

**4. Authorization To Install or Modify**

If applicable, authorization to install or modify any new or existing emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of

**General Electric Aircraft Engines**

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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.

**5. Construction of New Sources(s)**

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

**6. Public Disclosure**

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

**7. Applicability**

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

**8. Construction Compliance Certification**

If applicable, the applicant shall provide Ohio EPA with a written certification (see enclosed form if applicable) 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.

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

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

**General Electric Aircraft Engines****Facility ID: 1431150060****PTI Application: 14-05794****Issued: To be entered upon final issuance****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> |
|------------------|----------------------|
| NOx              | 39.9                 |
| CO               | 99.9                 |
| OC               | 19.8                 |
| PE/PM10          | 9.76                 |
| SO2              | 2.49                 |

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**General Electric Aircraft Engines**  
**PTI Application: 14-05701**  
**Issue**

**Facility ID: 1431150060**

Emissions Unit ID: B026

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

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

None

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

None

General  
PTI A

Emissions Unit ID: B026

Issued: To be entered upon final issuance

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

**A. State and Federally Enforceable Section**

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

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

| <u>Operations, Property,<br/>and/or Equipment</u>                       | <u>Applicable Rules/Requirements</u>   |
|---|--|
| B026 - 87.5 mmBtu/hr<br>Stahl A Natural Gas-Fired<br>Preheater (EA-212) | OAC rule 3745-31-05(A)(3)  |
|   | OAC rule 3745-31-05(C)<br>(Synthetic Minor to Avoid<br>Non-Attainment New Source Review<br>and Prevention of Significant<br>Deterioration) |
|   | OAC rule 3745-17-07(A)   |
|   | OAC rule 3745-17-10(B)(1)  |

**General  
PTI A**

Emissions Unit ID: B026

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

|                               | Applicable Emissions<br>Limitations/Control Measures   | Requirements of OAC rule   |
|-------------------------------|--|--|
| OAC rule 3745-21-08(B)        | Nitrogen Oxides (NOx) emissions shall not exceed 0.10 pound per mmBtu of actual heat input*.   | 3745-31-05(C), OAC rule 3745-21-08(B), OAC rule 3745-23-06(B) and 40 CFR Part 63 Subpart DDDDD.  |
| OAC rule 3745-23-06(B)        | Carbon Monoxide (CO) emissions shall not exceed 0.08 pound per mmBtu of actual heat input*.  | See term and condition A.I. 2.a.   |
| 40 CFR Part 63, Subpart DDDDD | Organic Compounds (OC) emissions shall not exceed 0.011 pound per mmBtu of actual heat input*.   | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
|                               | Particulate emissions (PE) and Particulate matter less than 10 microns in diameter (PM10) shall not exceed 0.002 pound per mmBtu of actual heat input*.                            | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
|                               | Sulfur dioxide (SO2) emissions shall not exceed 0.0006 pound per mmBtu of actual heat input*.  | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
|                               | *The emission limitations outlined above are based on the emission unit's potential to emit (PTE). Therefore, no records are required to demonstrate compliance with these limits. | See term and condition A.I. 2.b.<br>See term and condition A.I. 2.c.   |
|                               | Visible particulate emissions from any stack shall not exceed 10 percent opacity, as a six-minute average.   | See term and condition A.I.2.d.  |
|                               | The requirements of this rule also include compliance with the   |  |

## 2. Additional Terms and Conditions

- 2.a** The maximum total annual emissions from emissions units B026, B027, B028, B029, B043, B044, F019, and F020, combined, shall not exceed the following emission limitations based upon a rolling, 12-month summation:

39.9 tons per year NO<sub>x</sub>;  
99.9 tons per year CO;  
19.8 tons per year OC;  
9.76 tons per year PE/PM<sub>10</sub>;and  
2.49 tons per year SO<sub>2</sub>.

The annual emission limitations specified in this permit are based on the permittee's projected needs for testing engines in various ranges of operation. The permittee may adjust the number of hours of testing and fuel amounts used as long as the annual emission limitations specified in this permit are not exceeded.

The permittee has existing records to demonstrate compliance with the rolling, 12-month emissions limitations upon issuance of this permit, therefore first year monthly emission limitations are not necessary.

- 2.b** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install.

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

- 2.c** The permittee shall satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by complying with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install.

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

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federally-approved SIP for Ohio.

- 2.d** The application and enforcement of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR Part 63 Subpart DDDDD, as promulgated by the US Environmental Protection Agency (USEPA) on September 13, 2004, is delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 63 are also federally enforceable.

This emissions unit is identified as an affected source under the definition of an existing large gaseous fuel unit pursuant to 40 CFR 63.7490 and 40 CFR 63.7575. An existing large gaseous fuel unit is subject only to the initial notification requirements under 40 CFR 63.9(b) pursuant to 40 CFR 63.7506(b). No other emission limitations, work practice standards, performance testing, record keeping, or reporting requirements are applicable to this emission unit under 40 CFR Part 63 Subpart DDDDD. The initial notification for this emissions unit, as required under 40 CFR 63.9(b), was submitted to USEPA and the Hamilton County Department of Environmental Services on February 4, 2005. Therefore, no further reporting pursuant to 40 CFR Part 63 is required.

- 2.e** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the emission limitations and visible emission limitations.

**II. Operational Restrictions**

None

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

1. The permittee shall maintain monthly records of the following information in order to monitor compliance with the rolling, 12-month summation emission limitations:
  - a. the total natural gas usage, in mmscf or pounds, for this emissions unit,
  - b. the total emissions, in tons, for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub>, for this emissions unit,
  - c. the total emissions, in tons, for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub>, for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined, and
  - d. the updated rolling, 12-month summation emissions total, in tons, for NO<sub>x</sub>, CO,

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OC, PE/PM10, and SO2 for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).

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

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitations for NOx, CO, OC, PE/PM10, and SO2 for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined.  
The quarterly deviation reports shall be submitted in accordance with the reporting requirements of the General terms and Conditions of this permit.
2. The permittee shall submit annual reports that list the monthly emission totals and the rolling, 12-month summations for NOx, CO, OC, PE/PM10, and SO2 for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined. These reports shall be submitted by January 31 of each year and cover the previous calendar year's operation.

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

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitations:
    - 0.10 pound NOx per mmBtu
    - 0.08 pound CO per mmBtu
    - 0.011 pound OC per mmBtu
    - 0.002 pound PE/PM10 per mmBtu
    - 0.0006 pound SO2 per mmBtu

Applicable Compliance Method:

The emission limitations specified above are based upon the emission unit's potential to emit, the emission factors found in AP-42, Fifth Edition, Section 1.4, Natural Gas Combustion (revised 7/1998), and the AP-42 conversion factor for the heat content of natural gas at 1,020 Btu/scf.

- b. Emission Limitations:

The total annual emissions from emissions units B026, B027, B028, B029, B043, B044, F019, and F020, combined, as rolling, 12-month summations:

  - 39.9 tons per year NOx;
  - 99.9 tons per year CO;
  - 19.8 tons per year OC;
  - 9.76 tons per year PE/PM10; and

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2.49 tons per year SO<sub>2</sub>.

Applicable Compliance Method:

Compliance with the emission limitations specified above shall be determined by the record keeping requirements specified in Section A.III.1.

c. Emission Limitation:

Visible particulate emissions shall not exceed 10 percent opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance with the visible particulate emission limitation shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Test Method 9.

## VI. Miscellaneous Requirements

1. The terms and conditions in this permit to install shall supercede the terms and conditions for emissions unit B026 contained in permit to install 14-02332, issued on October 2, 1991.

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Emissions Unit ID: B026

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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> |
|---|--------------------------------------|--|
| B026 - 87.5 mmBtu/hr<br>Stahl A Natural Gas-Fired<br>Preheater (EA-212) |                                      | See term and condition B.VI.                             |

**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**

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the increase in emissions due to the modification(s) to the

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Emissions Unit ID: B026

emissions unit was less than 1 ton per year of each toxic pollutant that has a listed Threshold Limit Value (TLV), as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices").



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| OAC rule                      | Applicable Emissions   | requirements of OAC rule   |
|-------------------------------|--|--|
| 3745-17-10(B)(1)              | <u>Limitations/Control Measures</u>  | 3745-31-05(C), OAC rule  |
|                               | Nitrogen Oxides (NOx) emissions shall not exceed 0.10 pound per mmBtu of actual heat input*.   | 3745-21-08(B), OAC rule 3745-23-06(B) and 40 CFR Part 63 Subpart DDDDD.  |
| OAC rule 3745-21-08(B)        | Carbon Monoxide (CO) emissions shall not exceed 0.08 pound per mmBtu of actual heat input*.  | See term and condition A.I. 2.a.   |
| OAC rule 3745-23-06(B)        | Organic Compounds (OC) emissions shall not exceed 0.011 pound per mmBtu of actual heat input*.   |  |
| 40 CFR Part 63, Subpart DDDDD | Particulate emissions (PE) and Particulate matter less than 10 microns in diameter (PM10) shall not exceed 0.002 pound per mmBtu of actual heat input*.                            | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
|                               | Sulfur dioxide (SO2) emissions shall not exceed 0.0006 pound per mmBtu of actual heat input*.  | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
|                               | *The emission limitations outlined above are based on the emission unit's potential to emit (PTE). Therefore, no records are required to demonstrate compliance with these limits. | See term and condition A.I. 2.b.<br>See term and condition A.I. 2.c.   |
|                               | Visible particulate emissions from any stack shall not exceed 10 percent opacity, as a six-minute average.   | See term and condition A.I.2.d.  |
|                               | The requirements of this rule also include compliance with the   |  |

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

- 2.a** The maximum total annual emissions from emissions units B026, B027, B028, B029, B043, B044, F019, and F020, combined, shall not exceed the following emission limitations based upon a rolling, 12-month summation:

39.9 tons per year NO<sub>x</sub>;  
99.9 tons per year CO;  
19.8 tons per year OC;  
9.76 tons per year PE/PM<sub>10</sub>;and  
2.49 tons per year SO<sub>2</sub>.

The annual emission limitations specified in this permit are based on the permittee's projected needs for testing engines in various ranges of operation. The permittee may adjust the number of hours of testing and fuel amounts used as long as the annual emission limitations specified in this permit are not exceeded.

The permittee has existing records to demonstrate compliance with the rolling, 12-month emissions limitations upon issuance of this permit, therefore first year monthly emission limitations are not necessary.

- 2.b** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install.

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

- 2.c** The permittee shall satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by complying with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install.

On February 15, 2005, OAC rule 3745-23-06 was rescinded and therefore no

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longer a part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-23-06, the requirement to satisfy "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** The application and enforcement of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR Part 63 Subpart DDDDD, as promulgated by the US Environmental Protection Agency (USEPA) on September 13, 2004, is delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 63 are also federally enforceable.

This emissions unit is identified as an affected source under the definition of an existing large gaseous fuel unit pursuant to 40 CFR 63.7490 and 40 CFR 63.7575. An existing large gaseous fuel unit is subject only to the initial notification requirements under 40 CFR 63.9(b) pursuant to 40 CFR 63.7506(b). No other emission limitations, work practice standards, performance testing, record keeping, or reporting requirements are applicable to this emission unit under 40 CFR Part 63 Subpart DDDDD. The initial notification for this emissions unit, as required under 40 CFR 63.9(b), was submitted to USEPA and the Hamilton County Department of Environmental Services on February 4, 2005. Therefore, no further reporting pursuant to 40 CFR Part 63 is required.

- 2.e** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the emission limitations and visible emission limitations.

## II. Operational Restrictions

None

## III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information in order to monitor compliance with the rolling, 12-month summation emission limitations:
  - a. the total natural gas usage, in mmscf or pounds, for this emissions unit,
  - b. the total emissions, in tons, for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub>, for this emissions unit,
  - c. the total emissions, in tons, for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub>, for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined, and
  - d. the updated rolling, 12-month summation emissions total, in tons, for NO<sub>x</sub>, CO,

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OC, PE/PM10, and SO2 for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).

**IV. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitations for NOx, CO, OC, PE/PM10, and SO2 for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined.  
The quarterly deviation reports shall be submitted in accordance with the reporting requirements of the General terms and Conditions of this permit.
2. The permittee shall submit annual reports that list the monthly emission totals and the rolling, 12-month summations for NOx, CO, OC, PE/PM10, and SO2 for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined. These reports shall be submitted by January 31 of each year and cover the previous calendar year's operation.

**V. Testing Requirements**

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitations:
    - 0.10 pound NOx per mmBtu
    - 0.08 pound CO per mmBtu
    - 0.011 pound OC per mmBtu
    - 0.002 pound PE/PM10 per mmBtu
    - 0.0006 pound SO2 per mmBtu

**Applicable Compliance Method:**

The emission limitations specified above are based upon the emission unit's potential to emit, the emission factors found in AP-42, Fifth Edition, Section 1.4, Natural Gas Combustion (revised 7/1998), and the AP-42 conversion factor for the heat content of natural gas at 1,020 Btu/scf.

- b. Emission Limitations:  
The total annual emissions from emissions units B026, B027, B028, B029, B043, B044, F019, and F020, combined, as rolling, 12-month summations:

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39.9 tons per year NOx;  
99.9 tons per year CO;  
19.8 tons per year OC;  
9.76 tons per year PE/PM10; and  
2.49 tons per year SO2.

Applicable Compliance Method:

Compliance with the emission limitations specified above shall be determined by the record keeping requirements specified in Section A.III.1.

c. Emission Limitation:

Visible particulate emissions shall not exceed 10 percent opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance with the visible particulate emission limitation shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Test Method 9.

## **VI. Miscellaneous Requirements**

1. The terms and conditions in this permit to install shall supercede the terms and conditions for emissions unit B027 contained in permit to install 14-02332, issued on October 2, 1991.

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Emissions Unit ID: B027

Issued: To be entered upon final issuance

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

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

| <u>Operations, Property, and/or Equipment</u>                           | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|--------------------------------------|--|
| B027 - 87.5 mmBtu/hr<br>Stahl B Natural Gas-Fired<br>Preheater (EA-213) |                                      | See term and condition B.VI.                             |

**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**

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the increase in emissions due to the modification(s) to the

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Emissions Unit ID: B027

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emissions unit was less than 1 ton per year of each toxic pollutant that has a listed Threshold Limit Value (TLV), as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices").



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Emissions Unit ID: B028

| OAC rule                      | Applicable Emissions Limitations/Control Measures   |  |
|-------------------------------|---|--|
| OAC 3745-17-10(B)(1)          | Nitrogen Oxides (NOx) emissions shall not exceed 0.10 pound per mmBtu of actual heat input*.  | See term and condition A.I. 2.a.   |
| OAC rule 3745-21-08(B)        | Carbon Monoxide (CO) emissions shall not exceed 0.08 pound per mmBtu of actual heat input*.   | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| OAC rule 3745-23-06(B)        | Organic Compounds (OC) emissions shall not exceed 0.011 pound per mmBtu of actual heat input*.  | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| 40 CFR Part 63, Subpart DDDDD | Particulate emissions (PE) and Particulate matter less than 10 microns in diameter (PM10) shall not exceed 0.002 pound per mmBtu of actual heat input*.                                 | See term and condition A.I. 2.b.   |
|                               | Sulfur dioxide (SO2) emissions shall not exceed 0.0006 pound per mmBtu of actual heat input*.   | See term and condition A.I. 2.c.   |
|                               | *The emission limitations outlined above are based on the emission unit's potential to emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.      | See term and condition A.I.2.d.  |
|                               | Visible particulate emissions from any stack shall not exceed 10 percent opacity, as a six-minute average.  |  |
|                               | The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C), OAC rule 3745-21-08(B), OAC rule 3745-23-06(B) and 40 CFR Part 63 Subpart DDDDD. |  |

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

- 2.a** The maximum total annual emissions from emissions units B026, B027, B028, B029, B043, B044, F019, and F020, combined, shall not exceed the following emission limitations based upon a rolling, 12-month summation:

39.9 tons per year NO<sub>x</sub>;  
99.9 tons per year CO;  
19.8 tons per year OC;  
9.76 tons per year PE/PM<sub>10</sub>;and  
2.49 tons per year SO<sub>2</sub>.

The annual emission limitations specified in this permit are based on the permittee's projected needs for testing engines in various ranges of operation. The permittee may adjust the number of hours of testing and fuel amounts used as long as the annual emission limitations specified in this permit are not exceeded.

The permittee has existing records to demonstrate compliance with the rolling, 12-month emissions limitations upon issuance of this permit, therefore first year monthly emission limitations are not necessary.

- 2.b** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install.

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

- 2.c** The permittee shall satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by complying with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install.

On February 15, 2005, OAC rule 3745-23-06 was rescinded and therefore no

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longer a part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-23-06, the requirement to satisfy "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** The application and enforcement of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR Part 63 Subpart DDDDD, as promulgated by the US Environmental Protection Agency (USEPA) on September 13, 2004, is delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 63 are also federally enforceable.

This emissions unit is identified as an affected source under the definition of an existing large gaseous fuel unit pursuant to 40 CFR 63.7490 and 40 CFR 63.7575. An existing large gaseous fuel unit is subject only to the initial notification requirements under 40 CFR 63.9(b) pursuant to 40 CFR 63.7506(b). No other emission limitations, work practice standards, performance testing, record keeping, or reporting requirements are applicable to this emission unit under 40 CFR Part 63 Subpart DDDDD. The initial notification for this emissions unit, as required under 40 CFR 63.9(b), was submitted to USEPA and the Hamilton County Department of Environmental Services on February 4, 2005. Therefore, no further reporting pursuant to 40 CFR Part 63 is required.

- 2.e** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the emission limitations and visible emission limitations.

**II. Operational Restrictions**

None

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

1. The permittee shall maintain monthly records of the following information in order to monitor compliance with the rolling, 12-month summation emission limitations:
  - a. the total natural gas usage, in mmscf or pounds, for this emissions unit,
  - b. the total emissions, in tons, for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub>, for this emissions unit,

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- c. the total emissions, in tons, for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub>, for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined, and
- d. the updated rolling, 12-month summation emissions total, in tons, for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub> for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).

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

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitations for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub> for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined.  
 The quarterly deviation reports shall be submitted in accordance with the reporting requirements of the General terms and Conditions of this permit.
2. The permittee shall submit annual reports that list the monthly emission totals and the rolling, 12-month summations for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub> for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined. These reports shall be submitted by January 31 of each year and cover the previous calendar year's operation.

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

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitations:
    - 0.10 pound NO<sub>x</sub> per mmBtu
    - 0.08 pound CO per mmBtu
    - 0.011 pound OC per mmBtu
    - 0.002 pound PE/PM<sub>10</sub> per mmBtu
    - 0.0006 pound SO<sub>2</sub> per mmBtu

**Applicable Compliance Method:**

The emission limitations specified above are based upon the emission unit's potential to emit, the emission factors found in AP-42, Fifth Edition, Section 1.4, Natural Gas Combustion (revised 7/1998), and the AP-42 conversion factor for the heat content of natural gas at 1,020 Btu/scf.

- b. Emission Limitations:
  - The total annual emissions from emissions units B026, B027, B028, B029, B043, B044, F019, and F020, combined, as rolling, 12-month summations:

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39.9 tons per year NOx;  
99.9 tons per year CO;  
19.8 tons per year OC;  
9.76 tons per year PE/PM10; and  
2.49 tons per year SO2.

Applicable Compliance Method:

Compliance with the emission limitations specified above shall be determined by the record keeping requirements specified in Section A.III.1.

c. Emission Limitation:

Visible particulate emissions shall not exceed 10 percent opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance with the visible particulate emission limitation shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Test Method 9.

## **VI. Miscellaneous Requirements**

1. The terms and conditions in this permit to install shall supercede the terms and conditions for emissions unit B028 contained in permit to install 14-02332, issued on October 2, 1991.

## 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> |
|---|--------------------------------------|--|
| B028 - 87.5 mmBtu/hr<br>Stahl C Natural Gas-Fired<br>Preheater (EA-214) |                                      | See term and condition B.VI.                             |

### 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

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the increase in emissions due to the modification(s) to the emissions unit was less than 1 ton per year of each toxic pollutant that has a listed Threshold Limit Value (TLV), as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices").

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

Emissions Unit ID: B028



**General  
PTI A**

Emissions Unit ID: B029

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

| OAC rule<br>3745-17-10(B)(1)  | Applicable Emissions<br><u>Limitations/Control Measures</u>  | requirements of OAC rule<br>3745-31-05(C), OAC rule<br>3745-21-08(B), OAC rule<br>3745-23-06(B) and 40 CFR Part 63<br>Subpart DDDDD.             |
|-------------------------------|--|--|
| OAC rule 3745-21-08(B)        | Carbon Monoxide (CO) emissions shall not exceed 0.08 pound per mmBtu of actual heat input*.  | See term and condition A.I. 2.a.   |
| OAC rule 3745-23-06(B)        | Organic Compounds (OC) emissions shall not exceed 0.011 pound per mmBtu of actual heat input*.   | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| 40 CFR Part 63, Subpart DDDDD | Particulate emissions (PE) and Particulate matter less than 10 microns in diameter (PM10) shall not exceed 0.002 pound per mmBtu of actual heat input*.                            | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
|                               | Sulfur dioxide (SO2) emissions shall not exceed 0.0006 pound per mmBtu of actual heat input*.  | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
|                               | *The emission limitations outlined above are based on the emission unit's potential to emit (PTE). Therefore, no records are required to demonstrate compliance with these limits. | See term and condition A.I. 2.b.   |
|                               |  | See term and condition A.I. 2.c.   |
|                               | Visible particulate emissions from any stack shall not exceed 10 percent opacity, as a six-minute average.   | See term and condition A.I.2.d.  |
|                               | The requirements of this rule also include compliance with the   |  |

**2. Additional Terms and Conditions**

- 2.a** The maximum total annual emissions from emissions units B026, B027, B028, B029, B043, B044, F019, and F020, combined, shall not exceed the following emission limitations based upon a rolling, 12-month summation:

39.9 tons per year NO<sub>x</sub>;  
99.9 tons per year CO;  
19.8 tons per year OC;  
9.76 tons per year PE/PM<sub>10</sub>;and  
2.49 tons per year SO<sub>2</sub>.

The annual emission limitations specified in this permit are based on the permittee's projected needs for testing engines in various ranges of operation. The permittee may adjust the number of hours of testing and fuel amounts used as long as the annual emission limitations specified in this permit are not exceeded.

The permittee has existing records to demonstrate compliance with the rolling, 12-month emissions limitations upon issuance of this permit, therefore first year monthly emission limitations are not necessary.

- 2.b** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install.

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

- 2.c** The permittee shall satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by complying with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install.

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

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federally-approved SIP for Ohio.

- 2.d** The application and enforcement of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR Part 63 Subpart DDDDD, as promulgated by the US Environmental Protection Agency (USEPA) on September 13, 2004, is delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 63 are also federally enforceable.

This emissions unit is identified as an affected source under the definition of an existing large gaseous fuel unit pursuant to 40 CFR 63.7490 and 40 CFR 63.7575. An existing large gaseous fuel unit is subject only to the initial notification requirements under 40 CFR 63.9(b) pursuant to 40 CFR 63.7506(b). No other emission limitations, work practice standards, performance testing, record keeping, or reporting requirements are applicable to this emission unit under 40 CFR Part 63 Subpart DDDDD. The initial notification for this emissions unit, as required under 40 CFR 63.9(b), was submitted to USEPA and the Hamilton County Department of Environmental Services on February 4, 2005. Therefore, no further reporting pursuant to 40 CFR Part 63 is required.

- 2.e** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the emission limitations and visible emission limitations.

**II. Operational Restrictions**

None

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

1. The permittee shall maintain monthly records of the following information in order to monitor compliance with the rolling, 12-month summation emission limitations:
  - a. the total natural gas usage, in mmscf or pounds, for this emissions unit,
  - b. the total emissions, in tons, for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub>, for this emissions unit,
  - c. the total emissions, in tons, for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub>, for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined, and
  - d. the updated rolling, 12-month summation emissions total, in tons, for NO<sub>x</sub>, CO,

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OC, PE/PM10, and SO2 for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).

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

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitations for NO<sub>x</sub>, CO, OC, PE/PM10, and SO<sub>2</sub> for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined.  
The quarterly deviation reports shall be submitted in accordance with the reporting requirements of the General terms and Conditions of this permit.
2. The permittee shall submit annual reports that list the monthly emission totals and the rolling, 12-month summations for NO<sub>x</sub>, CO, OC, PE/PM10, and SO<sub>2</sub> for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined. These reports shall be submitted by January 31 of each year and cover the previous calendar year's operation.

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

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitations:
    - 0.10 pound NO<sub>x</sub> per mmBtu
    - 0.08 pound CO per mmBtu
    - 0.011 pound OC per mmBtu
    - 0.002 pound PE/PM10 per mmBtu
    - 0.0006 pound SO<sub>2</sub> per mmBtu

Applicable Compliance Method:

The emission limitations specified above are based upon the emission unit's potential to emit, the emission factors found in AP-42, Fifth Edition, Section 1.4, Natural Gas Combustion (revised 7/1998), and the AP-42 conversion factor for the heat content of natural gas at 1,020 Btu/scf.

- b. Emission Limitations:

The total annual emissions from emissions units B026, B027, B028, B029, B043, B044, F019, and F020, combined, as rolling, 12-month summations:

  - 39.9 tons per year NO<sub>x</sub>;
  - 99.9 tons per year CO;
  - 19.8 tons per year OC;
  - 9.76 tons per year PE/PM10; and

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2.49 tons per year SO<sub>2</sub>.

Applicable Compliance Method:

Compliance with the emission limitations specified above shall be determined by the record keeping requirements specified in Section A.III.1.

c. Emission Limitation:

Visible particulate emissions shall not exceed 10 percent opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance with the visible particulate emission limitation shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Test Method 9.

**VI. Miscellaneous Requirements**

1. The terms and conditions in this permit to install shall supercede the terms and conditions for emissions unit B029 contained in permit to install 14-02332, issued on October 2, 1991.

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Emissions Unit ID: B029

Issued: To be entered upon final issuance

**B. State Only Enforceable Section**

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

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

| <u>Operations, Property, and/or Equipment</u>                           | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|--------------------------------------|--|
| B029 - 87.5 mmBtu/hr<br>Stahl D Natural Gas-Fired<br>Preheater (EA-215) |                                      | See term and condition B.VI.                             |

**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**

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the increase in emissions due to the modification(s) to the

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emissions unit was less than 1 ton per year of each toxic pollutant that has a listed Threshold Limit Value (TLV), as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices").

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

**A. State and Federally Enforceable Section**

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

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

| <u>Operations, Property, and/or Equipment</u>                       | <u>Applicable Rules/Requirements</u>  |
|---|---|
| B043 - 23.5 mmBtu/hr Stahl E Natural Gas-Fired Preheater (EA-212-A) | OAC rule 3745-31-05(A)(3)   |
|   | OAC rule 3745-31-05(C)<br>(Synthetic Minor to Avoid Non-Attainment New Source Review and Prevention of Significant Deterioration) |
|   | OAC rule 3745-17-07(A)  |

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

|                               | Applicable Emissions<br>Limitations/Control Measures   | requirements of OAC rule   |
|-------------------------------|--|--|
| OAC rule 3745-17-10(B)(1)     | Nitrogen Oxides (NOx) emissions shall not exceed 0.10 pound per mmBtu of actual heat input*.   | 3745-31-05(C), OAC rule 3745-21-08(B), OAC rule 3745-23-06(B) and 40 CFR Part 63 Subpart DDDDD.  |
| OAC rule 3745-21-08(B)        | Carbon Monoxide (CO) emissions shall not exceed 0.08 pound per mmBtu of actual heat input*.  | See term and condition A.I. 2.a.   |
| OAC rule 3745-23-06(B)        | Organic Compounds (OC) emissions shall not exceed 0.011 pound per mmBtu of actual heat input*.   |  |
| 40 CFR Part 63, Subpart DDDDD | Particulate emissions (PE) and Particulate matter less than 10 microns in diameter (PM10) shall not exceed 0.002 pound per mmBtu of actual heat input*.                            | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
|                               | Sulfur dioxide (SO2) emissions shall not exceed 0.0006 pound per mmBtu of actual heat input*.  | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
|                               | *The emission limitations outlined above are based on the emission unit's potential to emit (PTE). Therefore, no records are required to demonstrate compliance with these limits. | See term and condition A.I. 2.b.   |
|                               |  | See term and condition A.I. 2.c.   |
|                               | Visible particulate emissions from any stack shall not exceed 10 percent opacity, as a six-minute average.   | See term and condition A.I.2.d.  |
|                               | The requirements of this rule also include compliance with the   |  |

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

- 2.a** The maximum total annual emissions from emissions units B026, B027, B028, B029, B043, B044, F019, and F020, combined, shall not exceed the following emission limitations based upon a rolling, 12-month summation:

39.9 tons per year NO<sub>x</sub>;  
99.9 tons per year CO;  
19.8 tons per year OC;  
9.76 tons per year PE/PM<sub>10</sub>;and  
2.49 tons per year SO<sub>2</sub>.

The annual emission limitations specified in this permit are based on the permittee's projected needs for testing engines in various ranges of operation. The permittee may adjust the number of hours of testing and fuel amounts used as long as the annual emission limitations specified in this permit are not exceeded.

The permittee has existing records to demonstrate compliance with the rolling, 12-month emissions limitations upon issuance of this permit, therefore first year monthly emission limitations are not necessary.

- 2.b** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install.

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

- 2.c** The permittee shall satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by complying with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install.

On February 15, 2005, OAC rule 3745-23-06 was rescinded and therefore no

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longer a part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-23-06, the requirement to satisfy "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** The application and enforcement of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR Part 63 Subpart DDDDD, as promulgated by the US Environmental Protection Agency (USEPA) on September 13, 2004, is delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 63 are also federally enforceable.

This emissions unit is identified as an affected source under the definition of an existing large gaseous fuel unit pursuant to 40 CFR 63.7490 and 40 CFR 63.7575. An existing large gaseous fuel unit is subject only to the initial notification requirements under 40 CFR 63.9(b) pursuant to 40 CFR 63.7506(b). No other emission limitations, work practice standards, performance testing, record keeping, or reporting requirements are applicable to this emission unit under 40 CFR Part 63 Subpart DDDDD. The initial notification for this emissions unit, as required under 40 CFR 63.9(b), was submitted to USEPA and the Hamilton County Department of Environmental Services on February 4, 2005. Therefore, no further reporting pursuant to 40 CFR Part 63 is required.

- 2.e** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the emission limitations and visible emission limitations.

## **II. Operational Restrictions**

None

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

1. The permittee shall maintain monthly records of the following information in order to monitor compliance with the rolling, 12-month summation emission limitations:
  - a. the total natural gas usage, in mmscf or pounds, for this emissions unit,
  - b. the total emissions, in tons, for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub>, for this emissions unit,
  - c. the total emissions, in tons, for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub>, for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined, and
  - d. the updated rolling, 12-month summation emissions total, in tons, for NO<sub>x</sub>, CO,

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OC, PE/PM10, and SO2 for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).

**IV. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitations for NOx, CO, OC, PE/PM10, and SO2 for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined.  
The quarterly deviation reports shall be submitted in accordance with the reporting requirements of the General terms and Conditions of this permit.
2. The permittee shall submit annual reports that list the monthly emission totals and the rolling, 12-month summations for NOx, CO, OC, PE/PM10, and SO2 for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined. These reports shall be submitted by January 31 of each year and cover the previous calendar year's operation.

**V. Testing Requirements**

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitations:
    - 0.10 pound NOx per mmBtu
    - 0.08 pound CO per mmBtu
    - 0.011 pound OC per mmBtu
    - 0.002 pound PE/PM10 per mmBtu
    - 0.0006 pound SO2 per mmBtu

**Applicable Compliance Method:**

The emission limitations specified above are based upon the emission unit's potential to emit, the emission factors found in AP-42, Fifth Edition, Section 1.4, Natural Gas Combustion (revised 7/1998), and the AP-42 conversion factor for the heat content of natural gas at 1,020 Btu/scf.

- b. Emission Limitations:  
The total annual emissions from emissions units B026, B027, B028, B029, B043, B044, F019, and F020, combined, as rolling, 12-month summations:

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**PTI Application: 14-05701**  
**Issue**

**Facility ID: 1431150060**

Emissions Unit ID: B043

39.9 tons per year NO<sub>x</sub>;  
99.9 tons per year CO;  
19.8 tons per year OC;  
9.76 tons per year PE/PM<sub>10</sub>; and  
2.49 tons per year SO<sub>2</sub>.

Applicable Compliance Method:

Compliance with the emission limitations specified above shall be determined by the record keeping requirements specified in Section A.III.1.

c. Emission Limitation:

Visible particulate emissions shall not exceed 10 percent opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance with the visible particulate emission limitation shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Test Method 9.

## **VI. Miscellaneous Requirements**

1. The terms and conditions in this permit to install shall supercede the terms and conditions for emissions unit B043 contained in permit to install 14-03451, issued on August 17, 1994.

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PTI A

Emissions Unit ID: B043

Issued: To be entered upon final issuance

**B. State Only Enforceable Section**

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

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

| <u>Operations, Property, and/or Equipment</u>                             | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|--------------------------------------|--|
| B043 - 23.5 mmBtu/hr<br>Stahl E Natural Gas-Fired<br>Preheater (EA-212-A) |                                      | See term and condition B.VI.                             |

**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**

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the increase in emissions due to the modification(s) to the

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Emissions Unit ID: B044

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

emissions unit was less than 1 ton per year of each toxic pollutant that has a listed Threshold Limit Value (TLV), as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices").

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

**A. State and Federally Enforceable Section**

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

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

| <u>Operations, Property, and/or Equipment</u>                       | <u>Applicable Rules/Requirements</u>                |
|---|---|
| B044 - 23.5 mmBtu/hr Stahl F Natural Gas-Fired Preheater (EA-212-B) | OAC rule 3745-31-05(A)(3)                           |
|   | OAC rule 3745-31-05(C)<br>(Synthetic Minor to Avoid |

## General Electric Aircraft Engines

PTI Application: 14-05704

## Issue

Facility ID: 1431150060

Emissions Unit ID: B044

| Non-Attainment New Source Review and Prevention of Significant Deterioration) | Applicable Emissions Limitations/Control Measures   |  |
|---|---|--|
| OAC rule 3745-17-07(A)  | Nitrogen Oxides (NOx) emissions shall not exceed 0.10 pound per mmBtu of actual heat input*.  | See term and condition A.I. 2.a.   |
| OAC rule 3745-17-10(B)(1)   | Carbon Monoxide (CO) emissions shall not exceed 0.08 pound per mmBtu of actual heat input*.   | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| OAC rule 3745-21-08(B)  | Organic Compounds (OC) emissions shall not exceed 0.011 pound per mmBtu of actual heat input*.  | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| OAC rule 3745-21-08(B)  | Particulate emissions (PE) and Particulate matter less than 10 microns in diameter (PM10) shall not exceed 0.002 pound per mmBtu of actual heat input*.                                 | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| OAC rule 3745-23-06(B)  | Sulfur dioxide (SO2) emissions shall not exceed 0.0006 pound per mmBtu of actual heat input*.   | See term and condition A.I. 2.b.   |
| 40 CFR Part 63, Subpart DDDDD   | *The emission limitations outlined above are based on the emission unit's potential to emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.      | See term and condition A.I. 2.c.   |
|   | Visible particulate emissions from any stack shall not exceed 10 percent opacity, as a six-minute average.  | See term and condition A.I.2.d.  |
|   | The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C), OAC rule 3745-21-08(B), OAC rule 3745-23-06(B) and 40 CFR Part 63 Subpart DDDDD. |  |

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

- 2.a** The maximum total annual emissions from emissions units B026, B027, B028, B029, B043, B044, F019, and F020, combined, shall not exceed the following emission limitations based upon a rolling, 12-month summation:

39.9 tons per year NO<sub>x</sub>;  
99.9 tons per year CO;  
19.8 tons per year OC;  
9.76 tons per year PE/PM<sub>10</sub>;and  
2.49 tons per year SO<sub>2</sub>.

The annual emission limitations specified in this permit are based on the permittee's projected needs for testing engines in various ranges of operation. The permittee may adjust the number of hours of testing and fuel amounts used as long as the annual emission limitations specified in this permit are not exceeded.

The permittee has existing records to demonstrate compliance with the rolling, 12-month emissions limitations upon issuance of this permit, therefore first year monthly emission limitations are not necessary.

- 2.b** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install.

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

- 2.c** The permittee shall satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by complying with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install.

On February 15, 2005, OAC rule 3745-23-06 was rescinded and therefore no

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

longer a part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-23-06, the requirement to satisfy "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** The application and enforcement of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR Part 63 Subpart DDDDD, as promulgated by the US Environmental Protection Agency (USEPA) on September 13, 2004, is delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 63 are also federally enforceable.

This emissions unit is identified as an affected source under the definition of an existing large gaseous fuel unit pursuant to 40 CFR 63.7490 and 40 CFR 63.7575. An existing large gaseous fuel unit is subject only to the initial notification requirements under 40 CFR 63.9(b) pursuant to 40 CFR 63.7506(b). No other emission limitations, work practice standards, performance testing, record keeping, or reporting requirements are applicable to this emission unit under 40 CFR Part 63 Subpart DDDDD. The initial notification for this emissions unit, as required under 40 CFR 63.9(b), was submitted to USEPA and the Hamilton County Department of Environmental Services on February 4, 2005. Therefore, no further reporting pursuant to 40 CFR Part 63 is required.

- 2.e** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the emission limitations and visible emission limitations.

**II. Operational Restrictions**

None

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

1. The permittee shall maintain monthly records of the following information in order to monitor compliance with the rolling, 12-month summation emission limitations:
  - a. the total natural gas usage, in mmscf or pounds, for this emissions unit,
  - b. the total emissions, in tons, for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub>, for this emissions unit,

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- c. the total emissions, in tons, for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub>, for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined, and
- d. the updated rolling, 12-month summation emissions total, in tons, for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub> for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).

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

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitations for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub> for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined.  
The quarterly deviation reports shall be submitted in accordance with the reporting requirements of the General terms and Conditions of this permit.
2. The permittee shall submit annual reports that list the monthly emission totals and the rolling, 12-month summations for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub> for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined. These reports shall be submitted by January 31 of each year and cover the previous calendar year's operation.

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

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitations:
    - 0.10 pound NO<sub>x</sub> per mmBtu
    - 0.08 pound CO per mmBtu
    - 0.011 pound OC per mmBtu
    - 0.002 pound PE/PM<sub>10</sub> per mmBtu
    - 0.0006 pound SO<sub>2</sub> per mmBtu

**Applicable Compliance Method:**

The emission limitations specified above are based upon the emission unit's potential to emit, the emission factors found in AP-42, Fifth Edition, Section 1.4, Natural Gas Combustion (revised 7/1998), and the AP-42 conversion factor for the heat content of natural gas at 1,020 Btu/scf.

- b. Emission Limitations:  
The total annual emissions from emissions units B026, B027, B028, B029, B043, B044, F019, and F020, combined, as rolling, 12-month summations:

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Emissions Unit ID: B044

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

39.9 tons per year NO<sub>x</sub>;  
99.9 tons per year CO;  
19.8 tons per year OC;  
9.76 tons per year PE/PM<sub>10</sub>; and  
2.49 tons per year SO<sub>2</sub>.

Applicable Compliance Method:

Compliance with the emission limitations specified above shall be determined by the record keeping requirements specified in Section A.III.1.

c. Emission Limitation:

Visible particulate emissions shall not exceed 10 percent opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance with the visible particulate emission limitation shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Test Method 9.

## **VI. Miscellaneous Requirements**

1. The terms and conditions in this permit to install shall supercede the terms and conditions for emissions unit B044 contained in permit to install 14-03451, issued on August 17, 1994.

**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> |
|---|--------------------------------------|--|
| B044 - 23.5 mmBtu/hr Stahl F Natural Gas-Fired Preheater (EA-212-B) |                                      | See term and condition B.VI.                             |

**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**

- 1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the increase in emissions due to the modification(s) to the emissions unit was less than 1 ton per year of each toxic pollutant that has a listed Threshold Limit Value (TLV), as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices").



**General  
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Emissions Unit ID: F019

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

| <u>Applicable Emissions<br/>Limitations/Control<br/>Measures</u>   | required to demonstrate<br>compliance with these limits.  |
|--|---|
| Nitrogen Oxides (NOx) emissions shall not exceed 5.0 pounds per mmBtu of actual heat input*.   | The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C), OAC rule 3745-21-08(B), OAC rule 3745-23-06(B), and 40 CFR Part 63 Subpart P. See term and condition A.I. 2.a. |
| Carbon Monoxide (CO) emissions shall not exceed 7.40 pounds per mmBtu of actual heat input*.   | See term and condition A.I. 2.a.  |
| Organic Compounds (OC) emissions shall not exceed 3.13 pounds per mmBtu of actual heat input*.   | See term and condition A.I. 2.b.  |
| Particulate emissions (PE) and Particulate matter less than 10 microns in diameter (PM10) shall not exceed 0.71 pound per mmBtu of actual heat input*. | See term and condition A.I. 2.c.<br><br>See term and condition A.I.2.d.   |
| Sulfur dioxide (SO2) emissions shall not exceed 0.44 pound per mmBtu of actual heat input*.  |   |
| *The emission limitations outlined above are based on the emission unit's potential to emit (PTE). Therefore, no records are                           |   |

Emissions Unit ID: F019

## 2. Additional Terms and Conditions

- 2.a** The maximum total annual emissions from emissions units B026, B027, B028, B029, B043, B044, F019, and F020, combined, shall not exceed the following emission limitations based upon a rolling, 12-month summation:

39.9 tons per year NO<sub>x</sub>;  
99.9 tons per year CO;  
19.8 tons per year OC;  
9.76 tons per year PE/PM<sub>10</sub>;and  
2.49 tons per year SO<sub>2</sub>.

The annual emission limitations specified in this permit are based on the permittee's projected needs for testing engines in various ranges of operation. The permittee may adjust the number of hours of testing and fuel amounts used as long as the annual emission limitations specified in this permit are not exceeded.

The permittee has existing records to demonstrate compliance with the rolling, 12-month emissions limitations upon issuance of this permit, therefore first year monthly emission limitations are not necessary.

- 2.b** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install.

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

- 2.c** The permittee shall satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by complying with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install.

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

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federally-approved SIP for Ohio.

- 2.d** The application and enforcement of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Engine Test Cells/Stands, 40 CFR Part 63 Subpart P, as promulgated by the US Environmental Protection Agency (USEPA) on May 27, 2003, is delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 63 are also federally enforceable.

This emissions unit is identified as an existing affected source under the Subpart P definition 40 CFR 63.9290. However, an existing affected source is specifically excluded from the requirements of 40 CFR Part 63 Subpart A and Subpart P pursuant to 40 CFR 60.9290(b). For the purpose of this permit to install action, this modification does not trigger the definition of reconstruction under 40 CFR Part 63; therefore, this emissions unit is still considered exempt from the requirements of 40 CFR Part 63.

- 2.e** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the emission limitations.

**II. Operational Restrictions**

None

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

1. The permittee shall calculate the NO<sub>x</sub>, CO, OC, SO<sub>2</sub>, and PE/PM<sub>10</sub> emissions from each engine test in this emissions unit by employing either the "Fuel Flow or Time at 3-Band Throttle Settings" method or the "Instantaneous Emissions Tracking" method developed by General Electric Aircraft Engines.
2. The permittee shall collect and record the following information monthly when the "Fuel Flow or Time at 3-Band Throttle Settings" methods for calculating NO<sub>x</sub>, CO, OC, SO<sub>2</sub>, and PE/PM<sub>10</sub> emissions from an engine test are used:
  - a. the date each engine test was performed;
  - b. the type of engine that was tested;
  - c. the type(s) and amount(s) of fuel used during each test;
  - d. the total hours of engine testing;

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- e. the total NO<sub>x</sub>, CO, OC, SO<sub>2</sub>, and PE/PM<sub>10</sub> emitted during each test (by employing the predefined emission curves for the type of engine being tested); and
  - f. the total monthly NO<sub>x</sub>, CO, OC, SO<sub>2</sub>, and PE/PM<sub>10</sub> emissions, in tons (the summation of the emission totals contained in line e for all tests performed during the month).
3. The permittee shall collect and record the following information when the "Instantaneous Emissions Tracking" system for calculating NO<sub>x</sub>, CO, OC, SO<sub>2</sub>, and PE/PM<sub>10</sub> emissions from an engine test is used:
- a. the date each engine test was performed;
  - b. the type of engine that was tested;
  - c. the type(s) and amount(s) of fuel used during each test;
  - d. the total hours of engine testing;
  - e. the total NO<sub>x</sub>, CO, OC, SO<sub>2</sub>, and PE/PM<sub>10</sub> emitted during each test (by employing the predefined emission curves for the type of engine being tested); and
  - f. the total monthly NO<sub>x</sub>, CO, OC, SO<sub>2</sub>, and PE/PM<sub>10</sub> emissions, in tons (the summation of the emission totals contained in line e for all tests performed during the month).
4. The permittee shall maintain monthly records of the following information in order to monitor compliance with the rolling, 12-month summation emission limitations:
- a. the total emissions, in tons, for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub>, for this emissions unit,
  - b. the total emissions, in tons, for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub>, for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined, and
  - c. the updated rolling, 12-month summation emissions total, in tons, for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub> for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).

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

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

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitations for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub> for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined.  
The quarterly deviation reports shall be submitted in accordance with the reporting requirements of the General terms and Conditions of this permit.
2. The permittee shall submit annual reports that list the monthly emission totals and the rolling, 12-month summations for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub> for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined. These reports shall be submitted by January 31 of each year and cover the previous calendar year's operation.

**V. Testing Requirements**

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitations:
    - 5.0 pounds NO<sub>x</sub> per mmBtu
    - 7.40 pounds CO per mmBtu
    - 3.13 pounds OC per mmBtu
    - 0.71 pound PE/PM<sub>10</sub> per mmBtu
    - 0.44 pound SO<sub>2</sub> per mmBtu

Applicable Compliance Method:  
The emission limitations specified above are based upon the emission unit's potential to emit, the permittee-supplied emission factors, and the operational parameters as provided in the PTI application 14-05794, submitted December 12, 2005.

If required, the permittee shall demonstrate compliance with these emission limitations through emission testing performed in accordance with the appropriate methods found in 40 CFR Part 60, Appendix A.
  - b. Emission Limitations:
    - The total annual emissions from emissions units B026, B027, B028, B029, B043, B044, F019, and F020, combined, as rolling, 12-month summations:
      - 39.9 tons per year NO<sub>x</sub>;
      - 99.9 tons per year CO;

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19.8 tons per year OC;  
9.76 tons per year PE/PM10; and  
2.49 tons per year SO2.

Applicable Compliance Method:

Compliance with the emission limitations specified above shall be determined by the record keeping requirements specified in Section A.III.1.

**VI. Miscellaneous Requirements**

1. The terms and conditions in this permit to install shall supercede the terms and conditions for emissions unit F019 contained in permit to install 14-03965, issued on March 13, 1996.

**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> |
|---|--------------------------------------|--|
| F019 - Engine and Component Test Cell A-18 (EA-210) |                                      | See term and condition B.VI.                             |

**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**

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the increase in emissions due to the modification(s) to the emissions unit was less than 1 ton per year of each toxic pollutant that has a listed Threshold Limit Value (TLV), as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices").

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

**A. State and Federally Enforceable Section**

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

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

| <u>Operations, Property, and/or Equipment</u>       | <u>Applicable Rules/Requirements</u>  |
|---|---|
| F020 - Engine and Component Test Cell A-19 (EA-211) | <p>OAC rule 3745-31-05(A)(3)</p> <p>OAC rule 3745-31-05(C)<br/>(Synthetic Minor to Avoid Non-Attainment New Source Review and Prevention of Significant Deterioration)</p> <p>OAC rule 3745-21-08(B)</p> <p>OAC rule 3745-23-06(B)</p> <p>40 CFR Part 63, Subpart P P P P P</p> |

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Emissions Unit ID: F020

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

| <u>Applicable Emissions<br/>Limitations/Control<br/>Measures</u>  | required to demonstrate<br>compliance with these limits.  |
|---|---|
| Nitrogen Oxides (NO <sub>x</sub> ) emissions shall not exceed 5.0 pounds per mmBtu of actual heat input*.   | The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C), OAC rule 3745-21-08(B), OAC rule 3745-23-06(B), and 40 CFR Part 63 Subpart P. See term and condition A.I. 2.a. |
| Carbon Monoxide (CO) emissions shall not exceed 7.40 pounds per mmBtu of actual heat input*.  | See term and condition A.I. 2.a.  |
| Organic Compounds (OC) emissions shall not exceed 3.13 pounds per mmBtu of actual heat input*.  | See term and condition A.I. 2.b.  |
| Particulate emissions (PE) and Particulate matter less than 10 microns in diameter (PM <sub>10</sub> ) shall not exceed 0.71 pound per mmBtu of actual heat input*. | See term and condition A.I. 2.c.<br><br>See term and condition A.I.2.d.   |
| Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.44 pound per mmBtu of actual heat input*.  |   |
| *The emission limitations outlined above are based on the emission unit's potential to emit (PTE). Therefore, no records are  |   |

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

- 2.a** The maximum total annual emissions from emissions units B026, B027, B028, B029, B043, B044, F019, and F020, combined, shall not exceed the following emission limitations based upon a rolling, 12-month summation:

39.9 tons per year NO<sub>x</sub>;  
99.9 tons per year CO;  
19.8 tons per year OC;  
9.76 tons per year PE/PM<sub>10</sub>;and  
2.49 tons per year SO<sub>2</sub>.

The annual emission limitations specified in this permit are based on the permittee's projected needs for testing engines in various ranges of operation. The permittee may adjust the number of hours of testing and fuel amounts used as long as the annual emission limitations specified in this permit are not exceeded.

The permittee has existing records to demonstrate compliance with the rolling, 12-month emissions limitations upon issuance of this permit, therefore first year monthly emission limitations are not necessary.

- 2.b** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install.

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

- 2.c** The permittee shall satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by complying with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install.

On February 15, 2005, OAC rule 3745-23-06 was rescinded and therefore no

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longer a part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-23-06, the requirement to satisfy "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** The application and enforcement of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Engine Test Cells/Stands, 40 CFR Part 63 Subpart P, as promulgated by the US Environmental Protection Agency (USEPA) on May 27, 2003, is delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 63 are also federally enforceable.

This emissions unit is identified as an existing affected source under the Subpart P definition 40 CFR 63.9290. However, an existing affected source is specifically excluded from the requirements of 40 CFR Part 63 Subpart A and Subpart P pursuant to 40 CFR 60.9290(b). For the purpose of this permit to install action, this modification does not trigger the definition of reconstruction under 40 CFR Part 63; therefore, this emissions unit is still considered exempt from the requirements of 40 CFR Part 63.

- 2.e** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the emission limitations.

## II. Operational Restrictions

None

## III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall calculate the NO<sub>x</sub>, CO, OC, SO<sub>2</sub>, and PE/PM<sub>10</sub> emissions from each engine test in this emissions unit by employing either the "Fuel Flow or Time at 3-Band Throttle Settings" method or the "Instantaneous Emissions Tracking" method developed by General Electric Aircraft Engines.
2. The permittee shall collect and record the following information monthly when the "Fuel Flow or Time at 3-Band Throttle Settings" methods for calculating NO<sub>x</sub>, CO, OC, SO<sub>2</sub>, and PE/PM<sub>10</sub> emissions from an engine test are used:
  - a. the date each engine test was performed;
  - b. the type of engine that was tested;
  - c. the type(s) and amount(s) of fuel used during each test;
  - d. the total hours of engine testing;

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- e. the total NO<sub>x</sub>, CO, OC, SO<sub>2</sub>, and PE/PM<sub>10</sub> emitted during each test (by employing the predefined emission curves for the type of engine being tested); and
  - f. the total monthly NO<sub>x</sub>, CO, OC, SO<sub>2</sub>, and PE/PM<sub>10</sub> emissions, in tons (the summation of the emission totals contained in line e for all tests performed during the month).
3. The permittee shall collect and record the following information when the "Instantaneous Emissions Tracking" system for calculating NO<sub>x</sub>, CO, OC, SO<sub>2</sub>, and PE/PM<sub>10</sub> emissions from an engine test is used:
  - a. the date each engine test was performed;
  - b. the type of engine that was tested;
  - c. the type(s) and amount(s) of fuel used during each test;
  - d. the total hours of engine testing;
  - e. the total NO<sub>x</sub>, CO, OC, SO<sub>2</sub>, and PE/PM<sub>10</sub> emitted during each test (by employing the predefined emission curves for the type of engine being tested); and
  - f. the total monthly NO<sub>x</sub>, CO, OC, SO<sub>2</sub>, and PE/PM<sub>10</sub> emissions, in tons (the summation of the emission totals contained in line e for all tests performed during the month).
4. The permittee shall maintain monthly records of the following information in order to monitor compliance with the rolling, 12-month summation emission limitations:
  - a. the total emissions, in tons, for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub>, for this emissions unit,
  - b. the total emissions, in tons, for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub>, for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined, and
  - c. the updated rolling, 12-month summation emissions total, in tons, for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub> for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined (the total amount of emissions for the current

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month plus the total amount of emissions for the previous eleven calendar months).

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

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitations for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub> for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined.  
The quarterly deviation reports shall be submitted in accordance with the reporting requirements of the General terms and Conditions of this permit.
2. The permittee shall submit annual reports that list the monthly emission totals and the rolling, 12-month summations for NO<sub>x</sub>, CO, OC, PE/PM<sub>10</sub>, and SO<sub>2</sub> for emission units B026, B027, B028, B029, B043, B044, F019, and F020, combined. These reports shall be submitted by January 31 of each year and cover the previous calendar year's operation.

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

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitations:
    - 5.0 pounds NO<sub>x</sub> per mmBtu
    - 7.40 pounds CO per mmBtu
    - 3.13 pounds OC per mmBtu
    - 0.71 pound PE/PM<sub>10</sub> per mmBtu
    - 0.44 pound SO<sub>2</sub> per mmBtu

**Applicable Compliance Method:**

The emission limitations specified above are based upon the emission unit's potential to emit, the permittee-supplied emission factors, and the operational parameters as provided in the PTI application 14-05794, submitted December 12, 2005.

If required, the permittee shall demonstrate compliance with these emission limitations through emission testing performed in accordance with the appropriate methods found in 40 CFR Part 60, Appendix A.

- b. Emission Limitations:

The total annual emissions from emissions units B026, B027, B028, B029, B043, B044, F019, and F020, combined, as rolling, 12-month summations:

  - 39.9 tons per year NO<sub>x</sub>;
  - 99.9 tons per year CO;

General

PTI A

Emissions Unit ID: F020

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

19.8 tons per year OC;  
9.76 tons per year PE/PM10; and  
2.49 tons per year SO2.

Applicable Compliance Method:

Compliance with the emission limitations specified above shall be determined by the record keeping requirements specified in Section A.III.1.

**VI. Miscellaneous Requirements**

1. The terms and conditions in this permit to install shall supercede the terms and conditions for emissions unit F020 contained in permit to install 14-03965, issued on March 13, 1996.

General  
PTI A

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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> |
|---|--------------------------------------|--|
| F020 - Engine and Component Test Cell A-19 (EA-211) |                                      | See term and condition B.VI.                             |

**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**

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the increase in emissions due to the modification(s) to the

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emissions unit was less than 1 ton per year of each toxic pollutant that has a listed Threshold Limit Value (TLV), as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices").