



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

5/7/2013

Certified Mail

Ms. Joanne Reinhold  
 General Electric Aviation, Evendale Plant  
 One Neumann Way  
 Mail Drop N123  
 Cincinnati, OH 45215

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL  
 Facility ID: 1431150060  
 Permit Number: P0112127  
 Permit Type: Initial Installation  
 County: Hamilton

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

Dear Permit Holder:

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

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

**How to appeal this permit**

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

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

## **How to save money, reduce pollution and reduce energy consumption**

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: [www.ohioairquality.org/clean\\_air](http://www.ohioairquality.org/clean_air)

## **How to give us feedback on your permitting experience**

Please complete a survey at [www.epa.ohio.gov/dapc/permitsurvey.aspx](http://www.epa.ohio.gov/dapc/permitsurvey.aspx) and give us feedback on your permitting experience. We value your opinion.

## **How to get an electronic copy of your permit**

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

If you have any questions, please contact Southwest Ohio Air Quality Agency at (513)946-7777 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,

*Michael W. Ahern*

Michael W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA  
SWOQA; Indiana; Kentucky



**FINAL**

**Division of Air Pollution Control  
Permit-to-Install  
for  
General Electric Aviation, Evendale Plant**

Facility ID:	1431150060
Permit Number:	P0112127
Permit Type:	Initial Installation
Issued:	5/7/2013
Effective:	5/7/2013





**Division of Air Pollution Control**  
**Permit-to-Install**  
for  
General Electric Aviation, Evendale Plant

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## Authorization

Facility ID: 1431150060  
Facility Description: Manufactures turbine engines and parts  
Application Number(s): A0045201, A0046928  
Permit Number: P0112127  
Permit Description: Installation of Test Cell 1 for Production Gas Turbines, installation of Test Cell A20 for R&D Engine Components, and Installation of Four Gas-Fired Air Preheaters at the General Electric Aviation Evendale Plant.  
Permit Type: Initial Installation  
Permit Fee: \$1,200.00  
Issue Date: 5/7/2013  
Effective Date: 5/7/2013

This document constitutes issuance to:

General Electric Aviation, Evendale Plant  
One Neumann Way  
Cincinnati, OH 45215

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

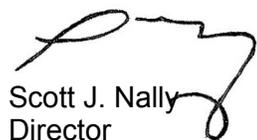
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Southwest Ohio Air Quality Agency  
250 William Howard Taft Rd.  
Cincinnati, OH 45219  
(513)946-7777

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

  
Scott J. Nally  
Director



## Authorization (continued)

Permit Number: P0112127  
 Permit Description: Installation of Test Cell 1 for Production Gas Turbines, installation of Test Cell A20 for R&D Engine Components, and Installation of Four Gas-Fired Air Preheaters at the General Electric Aviation Evendale Plant.

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

<b>Emissions Unit ID:</b>	<b>P291</b>
Company Equipment ID:	Test Cell 1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P292</b>
Company Equipment ID:	Test Cell A20
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

**Group Name: Preheaters A - D**

<b>Emissions Unit ID:</b>	<b>B053</b>
Company Equipment ID:	Cell A20 Preheater A
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>B054</b>
Company Equipment ID:	Cell A20 Preheater B
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>B055</b>
Company Equipment ID:	Cell A20 Preheater C
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>B056</b>
Company Equipment ID:	Cell A20 Preheater D
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



**Final Permit-to-Install**  
General Electric Aviation, Evendale Plant  
**Permit Number:** P0112127  
**Facility ID:** 1431150060  
**Effective Date:**5/7/2013

## **A. Standard Terms and Conditions**



## **1. Federally Enforceable Standard Terms and Conditions**

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
  - (1) Standard Term and Condition A.2.a), Severability Clause
  - (2) Standard Term and Condition A.3.c) through A. 3.e)General Requirements
  - (3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements
  - (4) Standard Term and Condition A.9., Reporting Requirements
  - (5) Standard Term and Condition A.10., Applicability
  - (6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
  - (7) Standard Term and Condition A.14., Public Disclosure
  - (8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
  - (9) Standard Term and Condition A.16., Fees
  - (10) Standard Term and Condition A.17., Permit Transfers

## **2. Severability Clause**

- a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

## **3. General Requirements**

- a) 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.

#### **4. Monitoring and Related Record Keeping and Reporting Requirements**

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
  - (1) The date, place (as defined in the permit), and time of sampling or measurements.
  - (2) The date(s) analyses were performed.
  - (3) The company or entity that performed the analyses.
  - (4) The analytical techniques or methods used.
  - (5) The results of such analyses.
  - (6) The operating conditions existing at the time of sampling or measurement.
- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
  - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Southwest Ohio Air Quality Agency.



- (2) 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 Southwest Ohio Air Quality Agency. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.
  - (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the Southwest Ohio Air Quality 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.
  - (4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

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

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Southwest Ohio Air Quality 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).

## **6. Compliance Requirements**

- a) 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.
- b) 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.



- c) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
  - (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
  - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- d) The permittee shall submit progress reports to the Southwest Ohio Air Quality Agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
  - (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

## **7. Best Available Technology**

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

## **8. Air Pollution Nuisance**

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

## **9. Reporting Requirements**

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Southwest Ohio Air Quality 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 Southwest Ohio Air Quality 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.)

## **10. Applicability**

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

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

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.
- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in Ohio EPA's "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).



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

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

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

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

The permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77. The permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if 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).

## **13. Construction Compliance Certification**

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

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.
- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

## **14. Public Disclosure**

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



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

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

**16. Fees**

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

**17. Permit Transfers**

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

**18. Risk Management Plans**

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

**19. Title IV Provisions**

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



**Final Permit-to-Install**  
General Electric Aviation, Evendale Plant  
**Permit Number:** P0112127  
**Facility ID:** 1431150060  
**Effective Date:**5/7/2013

## **B. Facility-Wide Terms and Conditions**



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

a) None.

2. Emissions Offset Requirements:

The permittee shall submit a letter to the Southwest Ohio Air Quality Agency and to Ohio EPA, prior to start up, documenting that General Electric Aviation, Evendale Plant obtained legal ownership of the emission offsets from Smart Papers Holdings, LLC (Facility ID 1409040212): 193.49 tons per year (TPY) of NOx. In accordance with OAC rule 3745-31-26(A)(2) and (B), and 40 CFR Part 51, Appendix S, the minimum required offset ratio for NOx is 1.1 to 1.0.

Hamilton County is in marginal non-attainment for the eight hour ozone standard. In accordance with the requirements in OAC rule 3745-31-22(A)(3), emission reduction shall be used to offset the net emission increase generated by this project to provide a net air quality benefit as specified under OAC rule 3745-31-22(A)(4). The permanent shutdown or permanent emission reduction of sources as specified in the below table shall be approved by Ohio EPA as verified emission reduction credits (ERCs) as defined in OAC rule 3745-111-01 before General Electric Aviation, Evendale Plant begins operation of emissions units B053 (43 mmBtu/hr Natural Gas, Indirect-Fired Air Preheater A), B054 (43 mmBtu/hr Natural Gas, Indirect-Fired Air Preheater B), B055 (43 mmBtu/hr Natural Gas, Indirect-Fired Air Preheater C), B056 (43 mmBtu/hr Natural Gas, Indirect-Fired Air Preheater D), P291 (Production Test Cell 1 for Engines/Turbines fueled by Liquid Fuels (e.g. Diesel Fuel, Jet Fuel, Biofuels) or Gaseous Fuels), and P292 (Engine Component Test Cell A20 for Engine Components fueled by Liquid Fuels (e.g. Diesel Fuel, Jet Fuel, Biofuels) or Gaseous Fuels). Any verified ERCs that are not used for this permit to install (PTI) shall be banked in accordance with OAC rule 3745-31-24(I), OAC rule 3745-111-02, and OAC rule 3745-111-05:

A	B	C	D
<b>Company Name and Facility ID Providing Offsets</b>	<b>Emissions Unit ID No. and Description</b>	<b>TPY of NOx ERC Used for PTI</b>	<b>Emission Reduction Activity and Date of Reduction</b>
Smart Papers Holdings, LLC (Facility ID: 1409040212)	420 mmBtu/hr pulverized-dry bottom coal-fired boiler (Emissions Unit B010)	183.90	Permanent Shutdown March 27, 2012
	249 mmBtu/hour coal-fired boiler (Emissions Unit B020)	9.59	Permanent Shutdown March 27, 2012

3. In accordance with OAC rule 3745-31-22(A)(4), the emission offsets discussed above must provide a positive net air quality benefit in the affected area pursuant to OAC rule 3745-31-25. The permittee shall demonstrate compliance with OAC rule 3745-31-22(A)(4) by complying with the requirements



listed in OAC rule 3745-31-22(A)(1), (A)(2), and (A)(3) as specified in the terms and conditions of this PTI.

4. The following emissions units contained in this permit are subject to 40 CFR Part 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants (NESHAP) Industrial, Commercial, and Institutional Boilers and Process heaters: B053, B054, B055, B056. The complete NESHAP requirements, including the NESHAP General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website <http://www.ecfr.gov> or by contacting the appropriate Ohio EPA District office or local air agency.

The permittee shall comply with all applicable requirements of 40 CFR Part 63, Subpart DDDDD. The permittee shall also comply with all the applicable requirements of 40 CFR Part 63, Subpart A (General Provisions) as identified in Table 10 of 40 CFR Part 63, Subpart DDDDD. Compliance with all applicable requirements shall be achieved by the dates set forth in 40 CFR Part 63, Subpart DDDDD and Subpart A.



## **C. Emissions Unit Terms and Conditions**



**1. P291, Test Cell 1**

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

Production Test Cell 1 for Engines/Turbines fueled by Liquid Fuels (e.g. Diesel Fuel, Jet Fuel, Biofuels) or Gaseous Fuels

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
  - (1) None.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)  <i>Best Available Technology (BAT)</i>	Carbon monoxide (CO) emissions shall not exceed 5.1 pounds per mmBtu of actual heat input.  Volatile organic compound (VOC) emissions shall not exceed 0.7 pound per mmBtu of actual heat input.  Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.11 pound per mmBtu of actual heat input.  See b)(2)h.  The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-10 through -27 for nitrogen oxides (NO <sub>x</sub> ) emissions.
b.	OAC rules 3745-31-21 through -27  <i>Nonattainment New Source Review</i>	Nitrogen oxides (NO <sub>x</sub> ) emissions shall not exceed 1.7 pounds per mmBtu of actual heat input.  See b)(2)a., b)(2)f., and b)(2)h.
c.	OAC rules 3745-31-10 through -20  <i>Prevention of Significant Deterioration</i>	Nitrogen oxides (NO <sub>x</sub> ) emissions shall not exceed 1.7 pounds per mmBtu of actual heat input.  See b)(2)a., b)(2)g., and b)(2)h.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001	Particulate matter (PM) emissions (filterable and condensable), particulate matter 10 microns and less in diameter (PM10) emissions (filterable and condensable), and particulate matter 2.5 microns and less in diameter (PM2.5) emissions shall not exceed 0.038 pound per mmBtu of actual heat input.  See b)(2)c. and b)(2)h.  The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D) for PM/PM10/PM2.5 emissions.
e.	OAC rule 3745-31-05(C), as effective 12/1/2006	See b)(2)d.
f.	OAC rule 3745-31-05(D)  <i>Synthetic Minor to Avoid New Source Review</i>	See b)(2)b. and c)(1).
g.	OAC rule 3745-18-06(E)	See b)(2)e.
h.	40 CFR Part 63, Subpart P	See b)(2)j.

(2) Additional Terms and Conditions

- a. The emissions of nitrogen oxides (NOx) from this emissions unit shall not exceed 92.0 tons per year, based upon a rolling, 12-month summation of the monthly emissions.
- b. The emissions from emissions units B053 (43 mmBtu/hr Natural Gas, Indirect-Fired Air Preheater A), B054 (43 mmBtu/hr Natural Gas, Indirect-Fired Air Preheater B), B055 (43 mmBtu/hr Natural Gas, Indirect-Fired Air Preheater C), B056 (43 mmBtu/hr Natural Gas, Indirect-Fired Air Preheater D), P291 (Production Test Cell 1 for Engines/Turbines fueled by Liquid Fuels (e.g. Diesel Fuel, Jet Fuel, Biofuels) or Gaseous Fuels), and P292 (Engine Component Test Cell A20 for Engine Components fueled by Liquid Fuels (e.g. Diesel Fuel, Jet Fuel, Biofuels) or Gaseous Fuels), combined, shall not exceed:
  - i. 99.9 tons per year of CO, based upon a rolling, 12-month summation of the monthly emissions;
  - ii. 39.9 tons per year of VOC, based upon a rolling, 12-month summation of the monthly emissions;



- iii. 9.9 tons per year of PM/PM10/PM2.5 (filterable and condensable), based upon a rolling, 12-month summation of the monthly emissions;
- iv. 24.9 tons per year of SO<sub>2</sub>, based upon a rolling, 12-month summation of the monthly emissions; and
- v. 74,000 tons per year of carbon dioxide equivalent (CO<sub>2</sub>e), based upon a rolling, 12-month summation of the monthly emissions.

To ensure enforceability during the first 12 calendar months of operation, the permittee shall not exceed the combined emission levels for the above-listed emissions units specified in the following table:

Month(s)	Maximum Allowable Cumulative Emissions of CO (tons)	Maximum Allowable Cumulative Emissions of VOC (tons)	Maximum Allowable Cumulative Emissions of PM/PM10/PM2.5 (tons)	Maximum Allowable Cumulative Emissions of SO <sub>2</sub> (tons)	Maximum Allowable Cumulative Emissions of CO <sub>2</sub> e (tons)
1	24.99	9.99	2.49	6.24	18,500
1-2	34.98	13.98	3.48	8.73	25,900
1-3	44.97	17.97	4.47	11.22	33,300
1-4	49.96	19.96	4.96	12.46	37,000
1-5	54.95	21.95	5.45	13.7	40,700
1-6	59.94	23.94	5.94	14.94	44,400
1-7	69.93	27.93	6.93	17.43	51,800
1-8	79.92	31.92	7.92	19.92	59,200
1-9	89.91	35.91	8.91	22.41	66,600
1-10	99.9	39.9	9.9	24.9	74,000
1-11	99.9	39.9	9.9	24.9	74,000
1-12	99.9	39.9	9.9	24.9	74,000

- c. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code



(ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

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

Permit to Install P0112127 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment), as proposed by the permittee, for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3):

- i. for particulate matter (PM) emissions (filterable and condensable), particulate matter 10 microns and less in diameter (PM10) emissions (filterable and condensable), and particulate matter 2.5 microns and less in diameter (PM2.5) emissions: the emissions from the emissions units specified in b)(2)b. shall not exceed 9.9 TPY, based upon a rolling, 12-month summation.
- e. The sulfur dioxide emissions from this emissions unit are due solely to the combustion of liquid or gaseous fuels. Pursuant to OAC rule 3745-18-01(B)(14), the liquid or gaseous fuels and the combustion air are not considered to be part of the emissions unit's total process weight which is used in establishing the allowable sulfur dioxide emission limitation. The only other materials introduced into the emissions unit are the turbine engines or turbine engine components that are to be tested. The total weight of the turbine engines or turbine engine components greater than 1000 pounds could be used to establish the sulfur dioxide allowable emission limitation. However, using the total weight of the turbine engines or turbine engine components to establish the sulfur dioxide allowable emission limitation would yield a relatively high allowable sulfur dioxide emission limitation compared to the sulfur dioxide emissions generated by the combustion of the turbine fuels. Therefore, a sulfur dioxide emission limitation has not been established for this emissions unit. In addition, any turbine engine components that are less than 1000 pounds would be exempt from the requirements of OAC rule 3745-18-06(E) pursuant to OAC rule 3745-18-06(C).
- f. The permittee has performed a Lowest Achievable Emission Rate (LAER) review for NOx. The emission limitations based on the LAER requirements are listed under OAC rules 3745-31-21 through -27 in b)(1)b. above. It has been determined that emission limitations alone constitute LAER for this emissions unit.



- g. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), BACT for NO<sub>x</sub> has been determined to be no control and is based upon design emissions levels. Compliance with BACT has been determined to be compliance with the emissions limitations established pursuant to OAC rules 3745-31-10 through -20 in b)(1)c. above.
  - h. The pound per mmBtu emission limitations for NO<sub>x</sub>, CO, VOC, SO<sub>2</sub>, and PM/PM<sub>10</sub>/PM<sub>2.5</sub> are based upon the emissions unit's potential to emit. Therefore, no additional monitoring, recordkeeping, or reporting are required to demonstrate compliance with these limitations.
  - i. Compliance with ORC 3704.03(T) shall be demonstrated by the emission limitations and compliance with applicable LAER/BACT requirements, record keeping, reporting, and emissions testing required by this permit that are associated with the above ORC 3704.03(T) limitations and requirements.
  - j. As defined in 40 CFR 63.9290, the General Electric Aviation – Evendale facility is identified as an existing affected source under 40 CFR Part 63, Subpart P. As provided for under 40 CFR 63.9290(b), as an existing affected source, the facility is specifically exempt from the requirements of 40 CFR Part 63, Subpart A and Subpart P. The new test cell (emissions unit P291) will become part of the existing affected source and also is exempt from the requirements of 40 CFR Part 63, Subpart A and Subpart P.
- c) Operational Restrictions
- (1) The permittee may not burn any liquid fuel which has a sulfur content greater than 0.1% by weight in this emissions unit.
- d) Monitoring and/or Recordkeeping Requirements
- (1) The permittee shall calculate the NO<sub>x</sub>, CO, VOC, SO<sub>2</sub>, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, and CO<sub>2e</sub> emissions from each engine test at this emissions unit by employing either the "Fuel Flow or Time at 3-Band Throttle Settings" methods or the "Instantaneous Emissions Tracking" system developed by General Electric Aviation.
  - (2) The permittee shall collect and record the following information monthly for this emissions unit when the "Fuel Flow or Time at 3-Band Throttle Settings" methods or the "Instantaneous Emissions Tracking" system for calculating NO<sub>x</sub>, CO, VOC, SO<sub>2</sub>, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, and CO<sub>2e</sub> emissions from an engine test is/are used:
    - a. the date each engine test was performed;
    - b. the type of engine that was tested;
    - c. identification of which method specified in d)(1) was employed to calculate emissions during each test;



- d. the type(s) and amount(s) of fuel used during each test;
  - e. the total hours of engine testing and the type and total amount of each fuel used, as determined by the automated instantaneous fuel flow tracker;
  - f. the total NO<sub>x</sub>, CO, VOC, SO<sub>2</sub>, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, and CO<sub>2e</sub> emitted during each test, in tons (as described in the Emissions Protocol Document);
  - g. the total monthly CO, VOC, SO<sub>2</sub>, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, and CO<sub>2e</sub> emissions, in tons (the summation of the emission totals contained in line f. for all tests performed during the month); and
  - h. in the event that data is unable to be captured, the permittee shall maintain records of the duration and any corrective actions taken to restore the monitoring equipment in a timely fashion.
- (3) The permittee shall maintain monthly records of the following information for this emissions unit in order to demonstrate compliance with the rolling, 12-month summation emission limitation:
- a. the total monthly emissions of NO<sub>x</sub>, in tons; and
  - b. the updated rolling, 12-month summation of NO<sub>x</sub> emissions, in tons, (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).
- (4) The permittee shall maintain monthly records of the following information in order to demonstrate compliance with the rolling, 12-month summation emission limitations:
- a. the total monthly emissions, in tons, of CO, VOC, SO<sub>2</sub>, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, and CO<sub>2e</sub> for emissions units B053, B054, B055, B056, P291, and P292, combined; and
  - b. the updated rolling, 12-month summation of CO, VOC, SO<sub>2</sub>, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, and CO<sub>2e</sub> emissions, in tons, for emissions units B053, B054, B055, B056, P291, and P292, combined, (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months). During the first 12 calendar months of operation, the permittee shall record the updated cumulative CO, VOC, SO<sub>2</sub>, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, and CO<sub>2e</sub> emissions, in tons, for each calendar month.
- (5) The permittee shall properly install, operate, and maintain equipment to continuously monitor the fuel flow for the emissions unit (in gallons per minute or cubic feet per minute) during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee. Fuel flow meters shall meet the requirements of 40 CFR Part 75, Appendix D, including the initial certification requirements in 2.1.5 and the quality assurance requirements in 2.1.6 of this appendix, or an equivalent approved method with calibration requirements.



- (6) The permittee shall maintain records of the total quantity of liquid fuel received and the permittee's or fuel supplier's analyses for sulfur content.

Analysis for sulfur content from a representative sample of each liquid fuel storage tank, which feeds this emissions unit, shall be performed by the permittee on a frequency of once per calendar month for each liquid fuel combusted in this emissions unit. Analysis shall be performed in accordance with the appropriate ASTM methods, such as D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods including D396-07.

Alternatively, the permittee shall maintain records of fuel supplier-provided analysis or certifications for each fuel shipment.

e) Reporting Requirements

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

- a. any exceedances of the sulfur content limitation specified in c)(1); and
- b. any exceedances of the rolling, 12-month emission limitations (or monthly cumulative emission limitations for the first 12 months of operation, if applicable) for NO<sub>x</sub>, CO, VOC, SO<sub>2</sub>, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, and CO<sub>2e</sub> specified in b)(2)a. and b)(2)b.

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

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

f) Testing Requirements

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

- a. Emission Limitations:

Carbon monoxide (CO) emissions shall not exceed 5.1 pounds per mmBtu of actual heat input.

Volatile organic compound (VOC) emissions shall not exceed 0.7 pound per mmBtu of actual heat input.

Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 0.11 pound per mmBtu of actual heat input.



Particulate matter (PM) emissions (filterable and condensable), particulate matter 10 microns and less in diameter (PM10) emissions (filterable and condensable), and particulate matter 2.5 microns and less in diameter (PM2.5) emissions shall not exceed 0.038 pound per mmBtu of actual heat input.

Nitrogen oxides (NOx) emissions shall not exceed 1.7 pounds per mmBtu of actual heat input and 92.0 tons per year, based upon a rolling, 12-month summation of the monthly emissions.

For emissions units B053, B054, B055, B056, P291, and P292, combined, emissions shall not exceed:

99.9 tons per year of CO, based upon a rolling, 12-month summation of the monthly emissions;

39.9 tons per year of VOC, based upon a rolling, 12-month summation of the monthly emissions;

9.9 tons per year of PM/PM10/PM2.5 (filterable and condensable), based upon a rolling, 12-month summation of the monthly emissions;

24.9 tons per year of SO<sub>2</sub>, based upon a rolling, 12-month summation of the monthly emissions; and

74,000 tons per year of carbon dioxide equivalent (CO<sub>2</sub>e), based upon a rolling, 12-month summation of the monthly emissions.

**Applicable Compliance Method:**

The pound per mmBtu emission limitations are based on the emissions unit's potential to emit. The pound per mmBtu emission limitations are based on the permittee-supplied emission factors submitted in the application for PTI P0112127.

The permittee shall develop an Emissions Protocol Document which shall be maintained at the facility and shall be made available to the appropriate Ohio EPA District Office or local air agency upon request. The Emissions Protocol Document shall define procedures for (a) developing emission factors; (b) calculating emission rates; and (c) conducting periodic audits of the procedure. The permittee has developed emission factors pursuant to protocols referenced in 40 CFR Part 87, ICAO Annex 16, AP-42, and 40 CFR Part 98 for use in the emissions tracking and record keeping for engines tested at this facility.

Emission factors shall be developed for NO<sub>x</sub>, CO, VOC, SO<sub>2</sub>, PM/PM10/PM2.5 (filterable and condensable), and CO<sub>2</sub>e for each new engine family to be tested at this facility. In the event that measured factors are not available, engineering judgment shall be used to develop estimated emission factors for each new engine family.



The filterable portion of the PM/PM10/PM2.5 emissions factor shall be developed from facility information. The condensable portion of the PM/PM10/PM2.5 emissions factor shall be developed by calculating the ratio of the filterable particulate AP-42 emissions factor to the condensable particulate AP-42 emissions factor and applying it to the facility-developed filterable portion of the emissions factor.

Compliance with the annual emission limitations, in tons per year, shall be demonstrated by the record keeping requirements specified in d)(1) through d)(4). The permittee shall calculate the emission rates using the emission factors and the automated instantaneous fuel flow tracking required in d)(2)e. for emissions units P291 and P292, and fuel flow meters for emissions units B053, B054, B055, and B056.

The permittee shall conduct periodic audits to ensure continued operation of the emission tracking system. The permittee shall retain records to document the results of the periodic audits.

The permittee shall make provisions for the Ohio EPA and/or the Southwest Ohio Air Quality Agency to execute the same audit procedure at any time during normal business hours.

- (2) Compliance with the sulfur content of the liquid fuel restriction in c)(1) for this emissions unit shall be based upon the record keeping requirements as specified in d)(6).

g) Miscellaneous Requirements

- (1) None.



**2. P292, Test Cell A20**

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

Engine Component Test Cell A20 for Engine Components fueled by Liquid Fuels (e.g. Diesel Fuel, Jet Fuel, Biofuels) or Gaseous Fuels

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
  - (1) None.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)  <i>Best Available Technology (BAT)</i>	Carbon monoxide (CO) emissions shall not exceed 7.3 pounds per mmBtu of actual heat input.  Volatile organic compound (VOC) emissions shall not exceed 0.7 pound per mmBtu of actual heat input.  Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.11 pound per mmBtu of actual heat input.  See b)(2)h.  The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-10 through -27 for nitrogen oxides (NO <sub>x</sub> ) emissions.
b.	OAC rules 3745-31-21 through -27  <i>Nonattainment New Source Review</i>	Nitrogen oxides (NO <sub>x</sub> ) emissions shall not exceed 4.4 pounds per mmBtu of actual heat input.  See b)(2)a., b)(2)f., and b)(2)h.
c.	OAC rules 3745-31-10 through -20  <i>Prevention of Significant Deterioration</i>	Nitrogen oxides (NO <sub>x</sub> ) emissions shall not exceed 4.4 pounds per mmBtu of actual heat input.  See b)(2)a., b)(2)g., and b)(2)h.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001	Particulate matter (PM) emissions (filterable and condensable), particulate matter 10 microns and less in diameter (PM10) emissions (filterable and condensable), and particulate matter 2.5 microns and less in diameter (PM2.5) emissions shall not exceed 0.038 pound per mmBtu of actual heat input.  See b)(2)c. and b)(2)h.
e.	OAC rule 3745-31-05(A)(3)(b), as effective 12/1/2006	See b)(2)d.
f.	OAC rule 3745-31-05(D)  <i>Synthetic Minor to Avoid New Source Review</i>	See b)(2)b. and c)(1).
g.	OAC rule 3745-18-06(E)	See b)(2)e.

(2) Additional Terms and Conditions

- a. The emissions of nitrogen oxides (NOx) from this emissions unit shall not exceed 80.0 tons per year, based upon a rolling, 12-month summation of the monthly emissions.
- b. The emissions from emissions units B053 (43 mmBtu/hr Natural Gas, Indirect-Fired Air Preheater A), B054 (43 mmBtu/hr Natural Gas, Indirect-Fired Air Preheater B), B055 (43 mmBtu/hr Natural Gas, Indirect-Fired Air Preheater C), B056 (43 mmBtu/hr Natural Gas, Indirect-Fired Air Preheater D), P291 (Production Test Cell 1 for Engines/Turbines fueled by Liquid Fuels (e.g. Diesel Fuel, Jet Fuel, Biofuels) or Gaseous Fuels), and P292 (Engine Component Test Cell A20 for Engine Components fueled by Liquid Fuels (e.g. Diesel Fuel, Jet Fuel, Biofuels) or Gaseous Fuels), combined, shall not exceed:
  - i. 99.9 tons per year of CO, based upon a rolling, 12-month summation of the monthly emissions;
  - ii. 39.9 tons per year of VOC, based upon a rolling, 12-month summation of the monthly emissions;
  - iii. 9.9 tons per year of PM/PM10/PM2.5 (filterable and condensable), based upon a rolling, 12-month summation of the monthly emissions;
  - iv. 24.9 tons per year of SO2, based upon a rolling, 12-month summation of the monthly emissions; and
  - v. 74,000 tons per year of carbon dioxide equivalent (CO2e), based upon a rolling, 12-month summation of the monthly emissions.



To ensure enforceability during the first 12 calendar months of operation, the permittee shall not exceed the combined emission levels for the above-listed emissions units specified in the following table:

Month(s)	Maximum Allowable Cumulative Emissions of CO (tons)	Maximum Allowable Cumulative Emissions of VOC (tons)	Maximum Allowable Cumulative Emissions of PM/PM10/PM2.5 (tons)	Maximum Allowable Cumulative Emissions of SO2 (tons)	Maximum Allowable Cumulative Emissions of CO2e (tons)
1	24.99	9.99	2.49	6.24	18,500
1-2	34.98	13.98	3.48	8.73	25,900
1-3	44.97	17.97	4.47	11.22	33,300
1-4	49.96	19.96	4.96	12.46	37,000
1-5	54.95	21.95	5.45	13.7	40,700
1-6	59.94	23.94	5.94	14.94	44,400
1-7	69.93	27.93	6.93	17.43	51,800
1-8	79.92	31.92	7.92	19.92	59,200
1-9	89.91	35.91	8.91	22.41	66,600
1-10	99.9	39.9	9.9	24.9	74,000
1-11	99.9	39.9	9.9	24.9	74,000
1-12	99.9	39.9	9.9	24.9	74,000

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



approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

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

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the particulate matter (PM) (filterable and condensable), particulate matter 10 microns and less in diameter (PM10) (filterable and condensable), and particulate matter 2.5 microns and less in diameter (PM2.5) emissions from this air contaminant source since the uncontrolled potential to emit for PM/PM10/PM2.5 is less than 10 tons per year.

- e. The sulfur dioxide emissions from this emissions unit are due solely to the combustion of liquid or gaseous fuels. Pursuant to OAC rule 3745-18-01(B)(14), the liquid or gaseous fuels and the combustion air are not considered to be part of the emissions unit's total process weight which is used in establishing the allowable sulfur dioxide emission limitation. The only other materials introduced into the emissions unit are the turbine engines or turbine engine components that are to be tested. The total weight of the turbine engines or turbine engine components greater than 1000 pounds could be used to establish the sulfur dioxide allowable emission limitation. However, using the total weight of the turbine engines or turbine engine components to establish the sulfur dioxide allowable emission limitation would yield a relatively high allowable sulfur dioxide emission limitation compared to the sulfur dioxide emissions generated by the combustion of the turbine fuels. Therefore, a sulfur dioxide emission limitation has not been established for this emissions unit. In addition, any turbine engine components that are less than 1000 pounds would be exempt from the requirements of OAC rule 3745-18-06(E) pursuant to OAC rule 3745-18-06(C).
- f. The permittee has performed a Lowest Achievable Emission Rate (LAER) review for NOx. The emission limitations based on the LAER requirements are listed under OAC rules 3745-31-21 through -27 in b)(1)b. above. It has been determined that emission limitations alone constitute LAER for this emissions unit.
- g. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), BACT for NOx has been determined to be no control and is based upon design emissions levels. Compliance with BACT has been determined to be compliance with the emissions limitations established pursuant to OAC rules 3745-31-10 through -20 in b)(1)c. above.
- h. The pound per mmBtu emission limitations for NOx, CO, VOC, SO2, and PM/PM10/PM2.5 are based upon the emissions unit's potential to emit. Therefore, no additional monitoring, recordkeeping, or reporting are required to demonstrate compliance with these limitations.
- i. Compliance with ORC 3704.03(T) shall be demonstrated by the emission limitations and compliance with applicable LAER/BACT requirements, record



keeping, reporting, and emissions testing required by this permit that are associated with the above ORC 3704.03(T) limitations and requirements.

c) Operational Restrictions

- (1) The permittee may not burn any liquid fuel which has a sulfur content greater than 0.1% by weight in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall calculate the NO<sub>x</sub>, CO, VOC, SO<sub>2</sub>, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, and CO<sub>2e</sub> emissions from each engine test at this emissions unit by employing either the "Fuel Flow or Time at 4-Band Throttle Settings" methods or the "Instantaneous Emissions Tracking" system developed by General Electric Aviation.
- (2) The permittee shall collect and record the following information monthly for this emissions unit when the "Fuel Flow or Time at 4-Band Throttle Settings" methods or the "Instantaneous Emissions Tracking" system for calculating NO<sub>x</sub>, CO, VOC, SO<sub>2</sub>, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, and CO<sub>2e</sub> emissions from an engine test is/are used:
  - a. the date each engine test was performed;
  - b. the type of engine that was tested;
  - c. identification of which method specified in d)(1) was employed to calculate emissions during each test;
  - d. the type(s) and amount(s) of fuel used during each test;
  - e. the total hours of engine testing and the type and total amount of each fuel used, as determined by the automated instantaneous fuel flow tracker;
  - f. the total NO<sub>x</sub>, CO, VOC, SO<sub>2</sub>, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, and CO<sub>2e</sub> emitted during each test, in tons (as described in the Emissions Protocol Document);
  - g. the total monthly CO, VOC, SO<sub>2</sub>, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, and CO<sub>2e</sub> emissions, in tons (the summation of the emission totals contained in line f. for all tests performed during the month); and
  - h. in the event that data is unable to be captured, the permittee shall maintain records of the duration and any corrective actions taken to restore the monitoring equipment in a timely fashion.
- (3) The permittee shall maintain monthly records of the following information for this emissions unit in order to demonstrate compliance with the rolling, 12-month summation emission limitation:



- a. the total monthly emissions of NO<sub>x</sub>, in tons; and
  - b. the updated rolling, 12-month summation of NO<sub>x</sub> emissions, in tons, (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).
- (4) The permittee shall maintain monthly records of the following information in order to demonstrate compliance with the rolling, 12-month summation emission limitations:
- a. the total monthly emissions, in tons, of CO, VOC, SO<sub>2</sub>, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, and CO<sub>2e</sub> for emissions units B053, B054, B055, B056, P291, and P292, combined; and
  - b. the updated rolling, 12-month summation of CO, VOC, SO<sub>2</sub>, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, and CO<sub>2e</sub> emissions, in tons, for emissions units B053, B054, B055, B056, P291, and P292, combined, (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months). During the first 12 calendar months of operation, the permittee shall record the updated cumulative CO, VOC, SO<sub>2</sub>, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, and CO<sub>2e</sub> emissions, in tons, for each calendar month.
- (5) The permittee shall properly install, operate, and maintain equipment to continuously monitor the fuel flow for the emissions unit (in gallons per minute or cubic feet per minute) during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee. Fuel flow meters shall meet the requirements of 40 CFR Part 75, Appendix D, including the initial certification requirements in 2.1.5 and the quality assurance requirements in 2.1.6 of this appendix, or an equivalent approved method with calibration requirements.
- (6) The permittee shall maintain records of the total quantity of liquid fuel received and the permittee's or fuel supplier's analyses for sulfur content.

Analysis for sulfur content from a representative sample of each liquid fuel storage tank, which feeds this emissions unit, shall be performed by the permittee on a frequency of once per calendar month for each liquid fuel combusted in this emissions unit. Analysis shall be performed in accordance with the appropriate ASTM methods, such as D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods including D396-07.

Alternatively, the permittee shall maintain records of fuel supplier-provided analysis or certifications for each fuel shipment.

e) Reporting Requirements

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



- a. any exceedances of the sulfur content limitation specified in c)(1); and
- b. any exceedances of the rolling, 12-month emission limitations (or monthly cumulative emission limitations for the first 12 months of operation, if applicable) for NO<sub>x</sub>, CO, VOC, SO<sub>2</sub>, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, and CO<sub>2e</sub> specified in b)(2)a. and b)(2)b.

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

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

f) Testing Requirements

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

- a. Emission Limitations:

Carbon monoxide (CO) emissions shall not exceed 7.3 pounds per mmBtu of actual heat input.

Volatile organic compound (VOC) emissions shall not exceed 0.7 pound per mmBtu of actual heat input.

Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 0.11 pound per mmBtu of actual heat input.

Particulate matter (PM) emissions (filterable and condensable), particulate matter 10 microns and less in diameter (PM<sub>10</sub>) emissions (filterable and condensable), and particulate matter 2.5 microns and less in diameter (PM<sub>2.5</sub>) emissions shall not exceed 0.038 pound per mmBtu of actual heat input.

Nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 4.4 pounds per mmBtu of actual heat input and 80.0 tons per year (TPY), based upon a rolling, 12-month summation of the monthly emissions.

For emissions units B053, B054, B055, B056, P291, and P292, combined, emissions shall not exceed:

99.9 tons per year of CO, based upon a rolling, 12-month summation of the monthly emissions;

39.9 tons per year of VOC, based upon a rolling, 12-month summation of the monthly emissions;



9.9 tons per year of PM/PM10/PM2.5 (filterable and condensable), based upon a rolling, 12-month summation of the monthly emissions;

24.9 tons per year of SO<sub>2</sub>, based upon a rolling, 12-month summation of the monthly emissions; and

74,000 tons per year of carbon dioxide equivalent (CO<sub>2</sub>e), based upon a rolling, 12-month summation of the monthly emissions.

**Applicable Compliance Method:**

The pound per mmBtu emission limitations are based on the emissions unit's potential to emit. The pound per mmBtu emission limitations are based on the permittee-supplied emission factors submitted in the application for PTI P0112127.

The permittee shall develop an Emissions Protocol Document which shall be maintained at the facility and shall be made available to the appropriate Ohio EPA District Office or local air agency upon request. The Emissions Protocol Document shall define procedures for (a) developing emission factors; (b) calculating emission rates; and (c) conducting periodic audits of the procedure. The permittee has developed emission factors pursuant to protocols referenced in 40 CFR Part 87, ICAO Annex 16, AP-42, and 40 CFR Part 98 for use in the emissions tracking and record keeping for engines tested at this facility.

Emission factors shall be developed for NO<sub>x</sub>, CO, VOC, SO<sub>2</sub>, PM/PM10/PM2.5 (filterable and condensable), and CO<sub>2</sub>e for each new engine family to be tested at this facility. In the event that measured factors are not available, engineering judgment shall be used to develop estimated emission factors for each new engine family.

The filterable portion of the PM/PM10/PM2.5 emissions factor shall be developed from facility information. The condensable portion of the PM/PM10/PM2.5 emissions factor shall be developed by calculating the ratio of the filterable particulate AP-42 emissions factor to the condensable particulate AP-42 emissions factor and applying it to the facility-developed filterable portion of the emissions factor.

Compliance with the annual emission limitations, in tons per year, shall be demonstrated by the record keeping requirements specified in d)(1) through d)(4). The permittee shall calculate the emission rates using the emission factors and the automated instantaneous fuel flow tracking required in d)(2)e. for emissions units P291 and P292, and fuel flow meters for emissions units B053, B054, B055, and B056.

The permittee shall conduct periodic audits to ensure continued operation of the emission tracking system. The permittee shall retain records to document the results of the periodic audits.



The permittee shall make provisions for the Ohio EPA and/or the Southwest Ohio Air Quality Agency to execute the same audit procedure at any time during normal business hours.

- (2) Compliance with the sulfur content of the liquid fuel restriction in c)(1) for this emissions unit shall be based upon the record keeping requirements as specified in d)(6).

g) Miscellaneous Requirements

- (1) None.



**3. Emissions Unit Group -Preheaters A - D: B053,B054,B055,B056,**

EU ID	Operations, Property and/or Equipment Description
B053	43 mmBtu/hr Natural Gas, Indirect-Fired Air Preheater A
B054	43 mmBtu/hr Natural Gas, Indirect-Fired Air Preheater B
B055	43 mmBtu/hr Natural Gas, Indirect-Fired Air Preheater C
B056	43 mmBtu/hr Natural Gas, Indirect-Fired Air Preheater D

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)  <i>Best Available Technology (BAT)</i>	Carbon monoxide (CO) emissions shall not exceed 0.15 pound per mmBtu of actual heat input.  See b)(2)g.  The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-10 through -27 for nitrogen oxides (NOx) emissions.
b.	OAC rules 3745-31-21 through -27  <i>Nonattainment New Source Review</i>	Nitrogen oxides (NOx) emissions shall not exceed 0.14 pound per mmBtu of actual heat input, when operating at 60% to 100% of capacity.  Nitrogen oxides (NOx) emissions shall not exceed 0.03 pound per mmBtu of actual heat input, when operating at 0% to 60% of capacity.  See b)(2)a., b)(2)e., and b)(2)g.
c.	OAC rules 3745-31-10 through -20  <i>Prevention of Significant Deterioration</i>	Nitrogen oxides (NOx) emissions shall not exceed 0.14 pound per mmBtu of actual heat input, when operating at 60% to 100% of capacity.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>Nitrogen oxides (NOx) emissions shall not exceed 0.03 pound per mmBtu of actual heat input, when operating at 0% to 60% of capacity.</p> <p>See b)(2)a., b)(2)f., and b)(2)g.</p>
d.	<p>OAC rule 3745-31-05(A)(3), as effective 11/30/2001</p>	<p>Volatile organic compound (VOC) emissions shall not exceed 0.005 pound per mmBtu of actual heat input.</p> <p>Particulate matter (PM) emissions (filterable and condensable), particulate matter 10 microns and less in diameter (PM10) emissions (filterable and condensable), and particulate matter 2.5 microns and less in diameter (PM2.5) emissions shall not exceed 0.007 pound per mmBtu of actual heat input.</p> <p>Sulfur dioxide (SO2) emissions shall not exceed 0.001 pound per mmBtu of actual heat input.</p> <p>See b)(2)c. and b)(2)g.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D) for VOC, PM/PM10/PM2.5, and SO2 emissions.</p>
e.	<p>OAC rule 3745-31-05(A)(3)(b), as effective 12/1/2006</p>	<p>See b)(2)d.</p>
f.	<p>OAC rule 3745-31-05(D)</p> <p><i>Synthetic Minor to Avoid New Source Review</i></p>	<p>See b)(2)b.</p>
g.	<p>OAC rule 3745-17-10(B)(1)</p>	<p>Particulate emissions (PE) shall not exceed 0.020 pound per mmBtu of actual heat input.</p>
h.	<p>OAC rule 3745-17-07(A)(1)</p>	<p>Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.</p>
i.	<p>40 CFR Part 63, Subpart DDDDD (40 CFR 63.7480-7575)</p>	<p>Table 3 to 40 CFR Part 63, Subpart DDDDD – Work Practice Standards [40 CFR 63.7500].</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	[In accordance with 63.7490 and 63.7499, the emissions units are new process heaters designed to burn gas 1 fuels and are subject to the work practice standards specified in this rule.]	Pursuant to 40 CFR 63.7495(a), the permittee shall comply with this subpart upon startup of the process heater(s).
j.	40 CFR Part 63, Subpart A (40 CFR 63.7505)	Table 10 to 40 CFR Part 63, Subpart DDDDD – Applicability of General Provisions (Subpart A) to Subpart DDDDD shows which parts of the General Provisions in 40 CFR Part 63.1-15 apply.

(2) Additional Terms and Conditions

- a. The emissions of nitrogen oxides (NOx) from emissions units B053 (43 mmBtu/hr Natural Gas, Indirect-Fired Air Preheater A), B054 (43 mmBtu/hr Natural Gas, Indirect-Fired Air Preheater B), B055 (43 mmBtu/hr Natural Gas, Indirect-Fired Air Preheater C), and B056 (43 mmBtu/hr Natural Gas, Indirect-Fired Air Preheater D), combined, shall not exceed 3.9 tons per year, based upon a rolling, 12-month summation of the monthly emissions.
- b. The emissions from emissions units B053, B054, B055, B056, P291 (Production Test Cell 1 for Engines/Turbines fueled by Liquid Fuels (e.g. Diesel Fuel, Jet Fuel, Biofuels) or Gaseous Fuels), and P292 (Engine Component Test Cell A20 for Engine Components fueled by Liquid Fuels (e.g. Diesel Fuel, Jet Fuel, Biofuels) or Gaseous Fuels), combined, shall not exceed:
  - i. 99.9 tons per year of CO, based upon a rolling, 12-month summation of the monthly emissions;
  - ii. 39.9 tons per year of VOC, based upon a rolling, 12-month summation of the monthly emissions;
  - iii. 9.9 tons per year of PM/PM10/PM2.5 (filterable and condensable), based upon a rolling, 12-month summation of the monthly emissions;
  - iv. 24.9 tons per year of SO2, based upon a rolling, 12-month summation of the monthly emissions; and
  - v. 74,000 tons per year of carbon dioxide equivalent (CO2e), based upon a rolling, 12-month summation of the monthly emissions.

To ensure enforceability during the first 12 calendar months of operation, the permittee shall not exceed the combined emission levels for the above-listed emissions units specified in the following table:



Month(s)	Maximum Allowable Cumulative Emissions of CO (tons)	Maximum Allowable Cumulative Emissions of VOC (tons)	Maximum Allowable Cumulative Emissions of PM/PM10/PM2.5 (tons)	Maximum Allowable Cumulative Emissions of SO2 (tons)	Maximum Allowable Cumulative Emissions of CO2e (tons)
1	24.99	9.99	2.49	6.24	18,500
1-2	34.98	13.98	3.48	8.73	25,900
1-3	44.97	17.97	4.47	11.22	33,300
1-4	49.96	19.96	4.96	12.46	37,000
1-5	54.95	21.95	5.45	13.7	40,700
1-6	59.94	23.94	5.94	14.94	44,400
1-7	69.93	27.93	6.93	17.43	51,800
1-8	79.92	31.92	7.92	19.92	59,200
1-9	89.91	35.91	8.91	22.41	66,600
1-10	99.9	39.9	9.9	24.9	74,000
1-11	99.9	39.9	9.9	24.9	74,000
1-12	99.9	39.9	9.9	24.9	74,000

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



The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the volatile organic compound (VOC), particulate matter (PM) (filterable and condensable), particulate matter 10 microns and less in diameter (PM10) (filterable and condensable), particulate matter 2.5 microns and less in diameter (PM2.5), and sulfur dioxide (SO<sub>2</sub>) emissions from this air contaminant source since the uncontrolled potential to emit for VOC, PM/PM10/PM2.5, and SO<sub>2</sub> is each less than 10 tons per year.

- e. The permittee has performed a Lowest Achievable Emission Rate (LAER) review for NO<sub>x</sub>. The emission limitations based on the LAER requirements are listed under OAC rules 3745-31-21 through -27 in b)(1)b. above. It has been determined that emission limitations alone constitute LAER for this emissions unit.
  - f. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), BACT for NO<sub>x</sub> has been determined to be no control and is based upon design emissions levels. Compliance with BACT has been determined to be compliance with the emissions limitations established pursuant to OAC rules 3745-31-10 through -20 in b)(1)c. above.
  - g. The pound per mmBtu emission limitations for NO<sub>x</sub>, CO, VOC, SO<sub>2</sub>, and PM/PM10/PM2.5 are based upon the emissions unit's potential to emit. Therefore, no additional monitoring, recordkeeping, or reporting are required to demonstrate compliance with these limitations.
  - h. Compliance with ORC 3704.03(T) shall be demonstrated by the emission limitations and compliance with applicable LAER/BACT requirements, record keeping, reporting, and emissions testing required by this permit that are associated with the above ORC 3704.03(T) limitations and requirements.
- c) **Operational Restrictions**
- (1) The permittee shall burn only natural gas in this emissions unit.
  - (2) See 40 CFR Part 63, Subpart DDDDD (40 CFR 63.7480-7575) for applicable operating restrictions and work practices.
- d) **Monitoring and/or Recordkeeping Requirements**
- (1) The permittee shall record the following information monthly for this emissions unit:
    - a. the hours of operation and amount of natural gas used, as determined by the fuel flow meter, while operating at 0% to 60% of capacity;
    - b. the hours of operation and amount of natural gas used, as determined by the fuel flow meter, while operating at 60% to 100% of capacity (Note: The emission rate of NO<sub>x</sub> varies from 60% to 100% capacity, in accordance with a curve provided by the preheater manufacturer. The permittee may compute actual capacity, fuel used at that capacity, and NO<sub>x</sub> emissions at that capacity.);



- c. the total hours of operation and amount of natural gas used, as determined by the fuel flow meter; and
  - d. the monthly NO<sub>x</sub>, CO, VOC, SO<sub>2</sub>, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, and CO<sub>2e</sub> emissions, in tons.
- (2) The permittee shall maintain monthly records of the following information in order to demonstrate compliance with the rolling, 12-month summation emission limitation:
- a. the total monthly emissions, in tons, of NO<sub>x</sub> for emissions units B053, B054, B055, and B056, combined; and
  - b. the updated rolling, 12-month summation of NO<sub>x</sub> emissions, in tons, for emissions units B053, B054, B055, and B056, combined (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).
- (3) The permittee shall maintain monthly records of the following information in order to demonstrate compliance with the rolling, 12-month summation emission limitations:
- a. the total monthly emissions, in tons, of CO, VOC, SO<sub>2</sub>, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, and CO<sub>2e</sub> for emissions units B053, B054, B055, B056, P291, and P292, combined; and
  - b. the updated rolling, 12-month summation of CO, VOC, SO<sub>2</sub>, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, and CO<sub>2e</sub> emissions, in tons, for emissions units B053, B054, B055, B056, P291, and P292, combined, (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months). During the first 12 calendar months of operation, the permittee shall record the updated cumulative CO, VOC, SO<sub>2</sub>, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, and CO<sub>2e</sub> emissions, in tons, for each calendar month.
- (4) The permittee shall properly install, operate, and maintain equipment to continuously monitor the fuel flow for the emissions unit (cubic feet per minute) during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee. Fuel flow meters shall meet the requirements of 40 CFR Part 75, Appendix D, including the initial certification requirements in 2.1.5 and the quality assurance requirements in 2.1.6 of this appendix, or an equivalent approved method with calibration requirements.
- (5) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (6) See 40 CFR Part 63, Subpart DDDDD (40 CFR 63.7480-7575) for applicable monitoring and record keeping requirements.



e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
  - a. any exceedances of the rolling, 12-month emission limitations (or monthly cumulative emission limitations for the first 12 months of operation, if applicable) for NO<sub>x</sub>, CO, VOC, SO<sub>2</sub>, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, and CO<sub>2e</sub> specified in b)(2)a. and b)(2)b.

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

- (2) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
- (3) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (4) See 40 CFR Part 63, Subpart DDDDD (40 CFR 63.7480-7575) for applicable reporting requirements.

f) Testing Requirements

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

a. Emission Limitations:

Carbon monoxide (CO) emissions shall not exceed 0.15 pound per mmBtu of actual heat input.

Volatile organic compound (VOC) emissions shall not exceed 0.005 pound per mmBtu of actual heat input.

Particulate matter (PM) emissions (filterable and condensable), particulate matter 10 microns and less in diameter (PM<sub>10</sub>) emissions (filterable and condensable), and particulate matter 2.5 microns and less in diameter (PM<sub>2.5</sub>) emissions shall not exceed 0.007 pound per mmBtu of actual heat input.

Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 0.001 pound per mmBtu of actual heat input.

Nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 0.14 pound per mmBtu of actual heat input, when operating at 60% to 100% of capacity.

Nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 0.03 pound per mmBtu of actual heat input, when operating at 0% to 60% of capacity.



Applicable Compliance Method:

The pound per mmBtu emission limitations are based on the emissions unit's potential to emit. The pound per mmBtu emission limitations are based on the permittee-supplied emission factors submitted in the application for PTI P0112127.

The pound per mmBtuNO<sub>x</sub> and CO emissions limitations are based upon the manufacturer guaranteed emissions factors for this emissions unit.

The pound per mmBtu VOC, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, and SO<sub>2</sub> emissions limitations are based upon the emissions factors and following equation from AP-42 Chapter 1.4 Natural Gas Combustion:

$(\text{EF in lb of pollutant per million standard cubic feet of natural gas fired; AP-42 Table 1.4-2, dtd. 7/1998}) / (1020 \text{ mmBtu per million standard cubic feet of natural gas; AP-42 Table 1.4-2, dtd. 7/1998}) = \text{lb of pollutant per mmBtu.}$

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, or other U.S. EPA recognized test methods, with prior approval from the Ohio EPA.

b. Emission Limitations:

For emissions units B053, B054, B055, and B056, combined, NO<sub>x</sub> emissions shall not exceed 3.9 tons per year, based upon a rolling, 12-month summation of the monthly emissions.

For emissions units B053, B054, B055, B056, P291, and P292, combined, emissions shall not exceed:

99.9 tons per year of CO, based upon a rolling, 12-month summation of the monthly emissions;

39.9 tons per year of VOC, based upon a rolling, 12-month summation of the monthly emissions;

9.9 tons per year of PM/PM<sub>10</sub>/PM<sub>2.5</sub> (filterable and condensable), based upon a rolling, 12-month summation of the monthly emissions;

24.9 tons per year of SO<sub>2</sub>, based upon a rolling, 12-month summation of the monthly emissions; and

74,000 tons per year of carbon dioxide equivalent (CO<sub>2</sub>e), based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

The permittee shall develop an Emissions Protocol Document which shall be maintained at the facility and shall be made available to the appropriate Ohio



EPA District Office or local air agency upon request. The Emissions Protocol Document shall define procedures for (a) developing emission factors; (b) calculating emission rates; and (c) conducting periodic audits of the procedure. The permittee has developed emission factors pursuant to protocols referenced in 40 CFR Part 87, ICAO Annex 16, AP-42, and 40 CFR Part 98 for use in the emissions tracking and record keeping for engines tested at this facility.

Emission factors shall be developed for NO<sub>x</sub>, CO, VOC, SO<sub>2</sub>, PM/PM<sub>10</sub>/PM<sub>2.5</sub> (filterable and condensable), and CO<sub>2e</sub> for each new engine family to be tested at this facility. In the event that measured factors are not available, engineering judgment shall be used to develop estimated emission factors for each new engine family.

The filterable portion of the PM/PM<sub>10</sub>/PM<sub>2.5</sub> emissions factor shall be developed from facility information. The condensable portion of the PM/PM<sub>10</sub>/PM<sub>2.5</sub> emissions factor shall be developed by calculating the ratio of the filterable particulate AP-42 emissions factor to the condensable particulate AP-42 emissions factor and applying it to the facility-developed filterable portion of the emissions factor.

Compliance with the annual emission limitations, in tons per year, shall be demonstrated by the record keeping requirements specified in d)(1) through d)(3). The permittee shall calculate the emission rates using the emission factors and the automated instantaneous fuel flow tracking required for emissions units P291 and P292, and fuel flow meters for emissions units B053, B054, B055, and B056.

The permittee shall conduct periodic audits to ensure continued operation of the emission tracking system. The permittee shall retain records to document the results of the periodic audits.

The permittee shall make provisions for the Ohio EPA and/or the Southwest Ohio Air Quality Agency to execute the same audit procedure at any time during normal business hours.

c. Emission Limitation:

Particulate emissions (PE) shall not exceed 0.020 pound per mmBtu of actual heat input.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the pound per mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and procedures specified in OAC rule 3745-17-03(B)(9).



d. Emission Limitation:

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

Applicable Compliance Method:

Compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9, 40 CFR Part 60, Appendix A.

No visible emissions observations are specifically required to demonstrate compliance with this emission limitation but, if appropriate, may be required pursuant to OAC rule 3745-15-04(A).

g) Miscellaneous Requirements

- (1) None.