

Synthetic Minor Determination and/or Netting Determination

Permit To Install: "14-05933"

A. Source Description

GE Aircraft Engines (GEAE) is a major manufacturer of aircraft engines (military and commercial) and a mega-site Title V facility located in Hamilton County, Ohio. The facility is a major source of multiple criteria pollutants from operations such as fuel-burning sources (boilers, preheaters), engine test cells, and engine part coating operations. GE's Title V operating permit was issued 5/24/2004, and expires on 5/24/2009. This air permit to install (PTI) modification is to increase short-term emission rates on two existing engine test cells, emission unit (EU) F014 and F015, to accommodate potential new engine programs and designs.

EUs F014 and F015 were originally grouped in a 1996 Test Program Project that included two new boilers (EU B039 and B040), one new preheater (EU B041) and the existing test cells (F014 and F015), under a synthetic minor PTI 14-04156, issued December 10, 1996. The Test Program Project PTI 14-04156 established synthetic minor operational and emission limit restrictions to avoid major modification new source review for the existing test cells, new preheater, and new boilers combined through a netting determination. This emissions netting determination has been carried forward into this permitting action with no change to the original project permit to install (PTI) 12-month rolling emission limitations. The original project preheater (B041) and boilers (B039 and B040) have been shutdown and removed from the facility. The remaining existing test cells (F014 and F015) will still be subject to the original project PTI 12-month rolling emission limitations in this permitting action to ensure the remaining EUs do not trigger major New Source Review (NSR) for any criteria pollutant.

B. Facility Emissions and Attainment Status

The facility is located in Hamilton County which is currently non-attainment for 8-hour ozone standard (VOC and NOx), non-attainment for particulate matter 2.5 microns and less in diameter (PM2.5), and attainment for all other criteria pollutants.

The facility is a major source of nitrogen oxides (NOx), carbon monoxide (CO), sulfur dioxide (SO2), organic compounds (OC), and hazardous air pollutants (HAP) from existing gas/oil-fired boilers, gas-fired preheaters, engine test cells, and engine part coating operations.

The permittee has requested that this permit be issued with federally enforceable emission limitations (synthetic minor) on all criteria pollutants to avoid triggering a major modification under NSR. This permit continues to maintain emission limitations consistent with the original 1996 Test Program Project to ensure the original project does not trigger a major modification at the facility.

C. Source Emissions

The following table summarizes the original 1996 Test Program Project netting determination contained in synthetic minor PTI 14-04156 and carried into this permitting action, PTI 14-05933, and the major NSR threshold levels for each pollutant:

	PE	PM10	SO2	NOx	OC	CO
Baseline Actual Emissions PTI 14-04156 F014 and F015 (TPY)	0.375	0.375	0.56	4.32	0.105	0.3
Potential Project Emissions PTI 14-04156 and PTI 14-05933 B039, B040, B041, F014, and F015 combined (TPY)	3.88*	3.88*	7.57*	44.27*	2.06*	11.27*
Net Project Increase/(Decrease) (TPY)	3.51	3.51	7.01	39.95	1.96	10.97
Major NSR Threshold	25	15	40	40	40	100

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

The emission limitations carried forward into this PTI will still ensure that the original 1996 Test Program Project permitting action involving these emission units avoids major NSR. The permittee has proposed emission record

keeping for the test cells to demonstrate compliance with the emission limitations. Without the federally enforceable emission limitations in the PTI, potential uncontrolled emissions at 8,760 operating hours per year are above 1000 TPY for each criteria pollutant (both EUs combined).

D. Conclusion

The permittee has proposed to comply with the existing federally enforceable emission limitations of 44.27 TPY of NO_x, 11.27 TPY of CO, 2.06 TPY of OC, 3.88 TPY of PE/PM₁₀, and 7.57 TPY of SO₂ as 12-month rolling summations; has proposed associated operational and emission record keeping and reporting to demonstrate compliance with these limitations; and, has accepted the terms and conditions of this permit which will limit emissions of the criteria pollutants as a synthetic minor so that the overall impact of the project carried forward from the original PTI 14-04156 will not trigger non-attainment NSR and Prevention of Significant Deterioration (PSD) for any of the criteria pollutants. The facility will maintain records and be subject to reporting as outlined in the permit to ensure compliance with the voluntary synthetic minor emissions limitations.



State of Ohio Environmental Protection Agency

Street Address:

Lazarus Gov. Center
50 West Town Street, Suite 700
Columbus, OH 43215

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

Mailing Address:

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

CERTIFIED MAIL

RE: DRAFT PERMIT TO INSTALL

HAMILTON COUNTY

Application No: 14-05933

Fac ID: 1431150060

	TOXIC REVIEW
	PSD
Y	SYNTHETIC MINOR
	CEMS
PPPPP	MACT
	NSPS
	NESHAPS
Y	NETTING
	MAJOR NON-ATTAINMENT
	MODELING SUBMITTED
	GASOLINE DISPENSING FACILITY

DATE: 5/8/2007

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

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43216-1049.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$400** will be due. Please do not submit any payment now.

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

Sincerely,

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

HAMILTON COUNTY

PUBLIC NOTICE

**ISSUANCE OF DRAFT PERMIT TO INSTALL 14-05933 FOR AN AIR CONTAMINANT SOURCE
FOR **General Electric Aircraft Engines****

On 5/8/2007 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **General Electric Aircraft Engines**, located at **1 Neumann Way, Cincinnati, Ohio**.

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 14-05933:

Modification of Existing Test Cells A-02 and A-03 to Increase Engine Testing Capabilities.

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

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



**Permit To Install
Terms and Conditions**

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

DRAFT PERMIT TO INSTALL 14-05933

Application Number: 14-05933
Facility ID: 1431150060
Permit Fee: **To be entered upon final issuance**
Name of Facility: General Electric Aircraft Engines
Person to Contact: Robert Drexelius
Address: 1 Neumann Way Mail Drop N123
Cincinnati, OH 45215

Location of proposed air contaminant source(s) [emissions unit(s)]:
**1 Neumann Way
Cincinnati, Ohio**

Description of proposed emissions unit(s):
Modification of Existing Test Cells A-02 and A-03 to Increase Engine Testing Capabilities.

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Chris Korleski
Director

Part I - GENERAL TERMS AND CONDITIONS

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

1. Monitoring and Related Recordkeeping and Reporting Requirements

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

Ohio EPA District Office or local air agency. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.9 below if no deviations occurred during the quarter.

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

2. Scheduled Maintenance/Malfunction Reporting

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

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

3. Risk Management Plans

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

4. Title IV Provisions

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

5. Severability Clause

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

6. General Requirements

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

7. Fees

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

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

9. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

10. Permit-To-Operate Application

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

11. Best Available Technology

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

12. Air Pollution Nuisance

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

13. Permit-To-Install

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

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

1. Compliance Requirements

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

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

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

3. Permit Transfers

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

4. Authorization To Install or Modify

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

5. Construction of New Sources(s)

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

6. Public Disclosure

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

7. Applicability

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

8. Construction Compliance Certification

If applicable, the applicant shall provide Ohio EPA with a written certification (see enclosed form if applicable) that the facility has been constructed in accordance with the permit-to-install application and the terms and conditions of the permit-to-install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

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

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

C. Permit-To-Install Summary of Allowable Emissions

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
NOx	44.27
CO	11.27
OC	2.06
PE/PM10	3.88
SO2	7.57

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

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

None

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

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (F014) - Engine and Component Test Cell A-02 (EA-235) - Modification

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
<p>OAC rule 3745-31-05(A)(3)</p>	<p>Nitrogen Oxides (NOx) emissions shall not exceed 5.0 pounds per mmBtu of actual heat input*.</p> <p>Carbon Monoxide (CO) emissions shall not exceed 7.40 pounds per mmBtu of actual heat input*.</p> <p>Organic Compounds (OC) emissions shall not exceed 3.13 pounds per mmBtu of actual heat input*.</p> <p>Particulate emissions (PE) and particulate matter emissions 10 microns and less in diameter (PM10) shall not exceed 0.71 pound per mmBtu of actual heat input*.</p> <p>Sulfur dioxide (SO2) emissions shall not exceed 0.44 pound per mmBtu of actual heat input*.</p> <p>*The emission limitations outlined above are based on the emission unit's potential to emit (PTE). Therefore, no records are required to demonstrate compliance with these limitations.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C) and 40 CFR Part 63 Subpart P. </p> <p>See term and condition A.II.1.</p>
<p>OAC rule 3745-31-05(C) (Synthetic Minor to Avoid Prevention of Significant Deterioration and Non-Attainment New Source Review)</p>	<p>See term and condition A.I.2.a.</p>

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
40 CFR Part 63, Subpart P P P P P	See term and condition A.I.2.b.

2. Additional Terms and Conditions

- 2.a** The maximum total annual emissions from emissions units F014 and F015, combined, shall not exceed the following emission limitations based upon a rolling, 12-month summation:

44.27 tons per year of NO_x;
 11.27 tons per year of CO;
 2.06 tons per year of OC;
 3.88 tons per year of PE/PM₁₀;and
 7.57 tons per year of SO₂.

The annual emission limitations specified in this permit are based on the permittee's projected needs for testing engines in various ranges of operation. The permittee may adjust the number of hours of testing and fuel amounts used as long as the rolling 12-month emission limitations specified in this permit are not exceeded.

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

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

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

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

II. Operational Restrictions

1. Emissions unit F014 (Test Cell A-02) and emissions unit F015 (Test Cell A-03) shall not operate simultaneously.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall calculate the NO_x, CO, OC, SO₂, and PE/PM₁₀ emissions from each engine test in this emissions unit by employing either the "Fuel Flow or Time at 3-Band Throttle Settings" method or the "Instantaneous Emissions Tracking" method developed by General Electric Aircraft Engines as described in Permit To Install application 14-05794, submitted December 12, 2005 for engine test cells.
2. The permittee shall collect and record the following information monthly when the "Fuel Flow or Time at 3-Band Throttle Settings" methods for calculating NO_x, CO, OC, SO₂, and PE/PM₁₀ emissions from an engine test are used:
 - a. the date each engine test was performed;
 - b. the type of engine that was tested;
 - c. the type(s) and amount(s) of fuel used during each test;
 - d. the total hours of engine testing;
 - e. the total NO_x, CO, OC, SO₂, and PE/PM₁₀ emitted during each test (by employing the predefined emission curves for the type of engine being tested); and
 - f. the total monthly NO_x, CO, OC, SO₂, and PE/PM₁₀ emissions, in tons (the summation of the emission totals contained in line e for all tests performed during the month).
3. The permittee shall collect and record the following information when the "Instantaneous Emissions Tracking" system for calculating NO_x, CO, OC, SO₂, and PE/PM₁₀ emissions from an engine test is used:
 - a. the date each engine test was performed;
 - b. the type of engine that was tested;
 - c. the type(s) and amount(s) of fuel used during each test;
 - d. the total hours of engine testing;
 - e. the total NO_x, CO, OC, SO₂, and PE/PM₁₀ emitted during each test (by employing the predefined emission curves for the type of engine being tested); and

- f. the total monthly NO_x, CO, OC, SO₂, and PE/PM₁₀ emissions, in tons (the summation of the emission totals contained in line e for all tests performed during the month).
4. The permittee shall maintain monthly records of the following information in order to monitor compliance with the rolling, 12-month summation emission limitations:
 - a. the total emissions, in tons, for NO_x, CO, OC, PE/PM₁₀, and SO₂, for this emissions unit,
 - b. the total emissions, in tons, for NO_x, CO, OC, PE/PM₁₀, and SO₂, for emission units F014 and F015, combined, and
 - c. the updated rolling, 12-month summation emissions total, in tons, for NO_x, CO, OC, PE/PM₁₀, and SO₂ for emission units F014 and F015, combined (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).
5. The permittee shall maintain monthly records of the individual operating hours for emissions unit F014 and emissions unit F015 (i.e. the specific hours of the month that each emissions unit operated during the month) in order to demonstrate that the emission units did not operate simultaneously as specified in Section A.II.1.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods of time when emissions unit F014 and emissions unit F015 operated simultaneously. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall notify the Hamilton County Department of Environmental Services of any exceedance of the rolling, 12-month emission limitations for NO_x, CO, OC, PE/PM₁₀, and SO₂ for emission units F014 and F015, combined. If no exceedances occurred, the permittee shall state so in the report. The reports shall be submitted by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters (October through December, January through March, April through June and July through September, respectively.)

The quarterly deviation reports shall be submitted in accordance with the reporting requirements of the General terms and Conditions of this permit.

3. The permittee shall submit annual reports that list the monthly emission totals and the rolling, 12-month summations for NO_x, CO, OC, PE/PM₁₀, and SO₂ for emission units F014 and F015, combined. These reports shall be submitted by January 31 of each year and cover the previous calendar year's operation.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitations:
 - 5.0 pounds of NO_x per mmBtu;
 - 7.40 pounds of CO per mmBtu;
 - 3.13 pounds of OC per mmBtu;
 - 0.71 pound of PE/PM₁₀ per mmBtu; and
 - 0.44 pound of SO₂ per mmBtu.

Applicable Compliance Method:

The emission limitations specified above are based upon the emissions unit's potential to emit, the permittee-supplied emission factors, and the operational parameters as provided in the PTI application 14-05933, submitted March 16, 2007.

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

- b. Emission Limitations:
 - The total annual emissions from emissions units F014 and F015, combined, as rolling, 12-month summations:
 - 44.27 tons per year of NO_x;
 - 11.27 tons per year of CO;
 - 2.06 tons per year of OC;
 - 3.88 tons per year of PE/PM₁₀; and
 - 7.57 tons per year of SO₂.

Applicable Compliance Method:

Compliance with the emission limitations specified above shall be determined by the record keeping requirements specified in Section A.III.1 and A.III.4.

VI. Miscellaneous Requirements

1. The terms and conditions in this permit to install shall supercede the terms and conditions for emissions unit F014 contained in permit to install 14-04156, issued on December 10, 1996.
2. The previous synthetic minor permit to install 14-04156 was issued for a Test Program Project that included modification of two existing sources (emissions unit F014 and F015) and the installation of three new sources (emission units B039, B040, and B041). Permit to install 14-04156, issued 12/10/1996, included a netting determination to

ensure emissions from the Project did not trigger Prevention of Significant Deterioration (PSD) or Non-Attainment New Source Review as follows:

	PE	PM10	SO2	NOx	OC	CO
Baseline Actual Emissions PTI 14-04156 F014 and F015 (TPY)	0.375	0.375	0.56	4.32	0.105	0.3
Potential Project Emissions PTI 14-04156 and PTI 14-05933 B039, B040, B041, F014, and F015 combined (TPY)	3.88	3.88	7.57	44.27	2.06	11.27
Net Project Increase/(Decrease) (TPY)	3.51	3.51	7.01	39.95	1.96	10.97
Major NSR Threshold	25	15	40	40	40	100

Emission units B039, B040, and B041 have been shut down and removed from the facility by the permittee. Therefore, the remaining emission units F014 and F015 included in the original Project will continue to be subject to the Project synthetic minor limitations established in the original permitting action as noted above to ensure continued avoidance of PSD and Non-Attainment New Source Review.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (F014) - Engine and Component Test Cell A-02 (EA-235) - Modification

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
None	None

2. **Additional Terms and Conditions**

- 2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA’s “Air Toxic Policy” was not necessary because the emissions unit’s maximum annual emissions for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a “modification” as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (F015) - Engine and Component Test Cell A-03 (EA-221) - Modification

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
<p>OAC rule 3745-31-05(A)(3)</p>	<p>Nitrogen Oxides (NOx) emissions shall not exceed 5.0 pounds per mmBtu of actual heat input*.</p> <p>Carbon Monoxide (CO) emissions shall not exceed 7.40 pounds per mmBtu of actual heat input*.</p> <p>Organic Compounds (OC) emissions shall not exceed 3.13 pounds per mmBtu of actual heat input*.</p> <p>Particulate emissions (PE) and particulate matter 10 microns and less in diameter (PM10) shall not exceed 0.71 pound per mmBtu of actual heat input*.</p> <p>Sulfur dioxide (SO2) emissions shall not exceed 0.44 pound per mmBtu of actual heat input*.</p> <p>*The emission limitations outlined above are based on the emission unit's potential to emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C) and 40 CFR Part 63 Subpart P. </p> <p>See term and condition A.II.1.</p>
<p>OAC rule 3745-31-05(C) (Synthetic Minor to Avoid Prevention of Significant Deterioration and Non-Attainment New Source Review)</p>	<p>See term and condition A.I.2.a.</p>

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
40 CFR Part 63, Subpart P P P P P	See term and condition A.I.2.b.

2. Additional Terms and Conditions

- 2.a** The maximum total annual emissions from emissions units F014 and F015, combined, shall not exceed the following emission limitations based upon a rolling, 12-month summation:

44.27 tons per year of NO_x;
 11.27 tons per year of CO;
 2.06 tons per year of OC;
 3.88 tons per year of PE/PM₁₀;and
 7.57 tons per year of SO₂.

The annual emission limitations specified in this permit are based on the permittee's projected needs for testing engines in various ranges of operation. The permittee may adjust the number of hours of testing and fuel amounts used as long as the rolling 12-month emission limitations specified in this permit are not exceeded.

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

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

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

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

II. Operational Restrictions

1. Emissions unit F014 (Test Cell A-02) and emissions unit F015 (Test Cell A-03) shall not operate simultaneously.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall calculate the NO_x, CO, OC, SO₂, and PE/PM₁₀ emissions from each engine test in this emissions unit by employing either the "Fuel Flow or Time at 3-Band Throttle Settings" method or the "Instantaneous Emissions Tracking" method developed by General Electric Aircraft Engines as described in Permit To Install application 14-05794, submitted December 12, 2005 for engine test cells.
2. The permittee shall collect and record the following information monthly when the "Fuel Flow or Time at 3-Band Throttle Settings" methods for calculating NO_x, CO, OC, SO₂, and PE/PM₁₀ emissions from an engine test are used:
 - a. the date each engine test was performed;
 - b. the type of engine that was tested;
 - c. the type(s) and amount(s) of fuel used during each test;
 - d. the total hours of engine testing;
 - e. the total NO_x, CO, OC, SO₂, and PE/PM₁₀ emitted during each test (by employing the predefined emission curves for the type of engine being tested); and
 - f. the total monthly NO_x, CO, OC, SO₂, and PE/PM₁₀ emissions, in tons (the summation of the emission totals contained in line e for all tests performed during the month).
3. The permittee shall collect and record the following information when the "Instantaneous Emissions Tracking" system for calculating NO_x, CO, OC, SO₂, and PE/PM₁₀ emissions from an engine test is used:
 - a. the date each engine test was performed;
 - b. the type of engine that was tested;
 - c. the type(s) and amount(s) of fuel used during each test;
 - d. the total hours of engine testing;
 - e. the total NO_x, CO, OC, SO₂, and PE/PM₁₀ emitted during each test (by employing the predefined emission curves for the type of engine being tested); and

- f. the total monthly NO_x, CO, OC, SO₂, and PE/PM₁₀ emissions, in tons (the summation of the emission totals contained in line e for all tests performed during the month).
4. The permittee shall maintain monthly records of the following information in order to monitor compliance with the rolling, 12-month summation emission limitations:
 - a. the total emissions, in tons, for NO_x, CO, OC, PE/PM₁₀, and SO₂, for this emissions unit,
 - b. the total emissions, in tons, for NO_x, CO, OC, PE/PM₁₀, and SO₂, for emission units F014 and F015, combined, and
 - c. the updated rolling, 12-month summation emissions total, in tons, for NO_x, CO, OC, PE/PM₁₀, and SO₂ for emission units F014 and F015, combined (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).
5. The permittee shall maintain monthly records of the individual operating hours for emissions unit F014 and emissions unit F015 (i.e. the specific hours of the month that each emissions unit operated during the month) in order to demonstrate that the emission units did not operate simultaneously as specified in Section A.II.1.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods of time when emissions unit F014 and emissions unit F015 operated simultaneously. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall notify the Hamilton County Department of Environmental Services of any exceedance of the rolling, 12-month emission limitations for NO_x, CO, OC, PE/PM₁₀, and SO₂ for emission units F014 and F015, combined. If no exceedances occurred, the permittee shall state so in the report. The reports shall be submitted by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters (October through December, January through March, April through June and July through September, respectively.)

The quarterly deviation reports shall be submitted in accordance with the reporting requirements of the General terms and Conditions of this permit.

3. The permittee shall submit annual reports that list the monthly emission totals and the rolling, 12-month summations for NO_x, CO, OC, PE/PM₁₀, and SO₂ for emission units F014 and F015, combined. These reports shall be submitted by January 31 of each year and cover the previous calendar year's operation.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitations:
 - 5.0 pounds of NO_x per mmBtu;
 - 7.40 pounds of CO per mmBtu;
 - 3.13 pounds of OC per mmBtu;
 - 0.71 pound of PE/PM₁₀ per mmBtu; and
 - 0.44 pound SO₂ per mmBtu.

Applicable Compliance Method:

The emission limitations specified above are based upon the emissions unit's potential to emit, the permittee-supplied emission factors, and the operational parameters as provided in the PTI application 14-05933, submitted March 16, 2007.

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

- b. Emission Limitations:
 - The total annual emissions from emissions units F014 and F015, combined, as rolling, 12-month summations:

- 44.27 tons per year of NO_x;
- 11.27 tons per year of CO;
- 2.06 tons per year of OC;
- 3.88 tons per year of PE/PM₁₀; and
- 7.57 tons per year of SO₂.

Applicable Compliance Method:

Compliance with the emission limitations specified above shall be determined by the record keeping requirements specified in Section A.III.1 and A.III.4.

VI. Miscellaneous Requirements

1. The terms and conditions in this permit to install shall supercede the terms and conditions for emissions unit F014 contained in permit to install 14-04156, issued on December 10, 1996.
2. The previous synthetic minor permit to install 14-04156 was issued for a Test Program Project that included modification of two existing sources (emissions unit F014 and F015) and the installation of three new sources (emission units B039, B040, and B041). Permit to install 14-04156, issued 12/10/1996, included a netting determination to

ensure emissions from the Project did not trigger Prevention of Significant Deterioration (PSD) or Non-Attainment New Source Review as follows:

	PE	PM10	SO2	NOx	OC	CO
Baseline Actual Emissions PTI 14-04156 F014 and F015 (TPY)	0.375	0.375	0.56	4.32	0.105	0.3
Potential Project Emissions PTI 14-04156 and PTI 14-05933 B039, B040, B041, F014, and F015 combined (TPY)	3.88	3.88	7.57	44.27	2.06	11.27
Net Project Increase/(Decrease) (TPY)	3.51	3.51	7.01	39.95	1.96	10.97
Major NSR Threshold	25	15	40	40	40	100

Emissions units B039, B040, and B041 have been shut down and removed from the facility by the permittee. Therefore, the remaining emissions units F014 and F015 included in the original Project will continue to be subject to the Project synthetic minor limitations established in the original permitting action as noted above to ensure continued avoidance of PSD and Non-Attainment New Source Review.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (F015) - Engine and Component Test Cell A-03 (EA-221) - Modification

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
None	None

2. **Additional Terms and Conditions**

None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA’s “Air Toxic Policy” was not necessary because the emissions unit’s maximum annual emissions for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a “modification” as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.