



3/20/2014

Mr. Thomas Euclide
 Kent State University Heating Plant
 P.O. Box 5190
 Kent, OH 44242-0001

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
 Facility ID: 1667040085
 Permit Number: P0116154
 Permit Type: Initial Installation
 County: Portage

Certified Mail

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

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/survey.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 by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Akron Regional Air Quality Management District at (330)3752480 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
ARAQMD; Pennsylvania; West Virginia; Canada



FINAL

**Division of Air Pollution Control
Permit-to-Install
for
Kent State University Heating Plant**

| | |
|----------------|----------------------|
| Facility ID: | 1667040085 |
| Permit Number: | P0116154 |
| Permit Type: | Initial Installation |
| Issued: | 3/20/2014 |
| Effective: | 3/20/2014 |



Division of Air Pollution Control
Permit-to-Install
for
Kent State University Heating Plant

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Final Permit-to-Install
Kent State University Heating Plant
Permit Number: P0116154
Facility ID: 1667040085
Effective Date: 3/20/2014

Authorization

Facility ID: 1667040085
Facility Description: Colleges, Universities, and Professional Schools.
Application Number(s): A0049805
Permit Number: P0116154
Permit Description: PTI for like-kind replacement of combustion turbine engine for GT-2 (B010). Same manufacturer and model number, only the serial number will differ. There will be no modification in operations or increase in emissions.
Permit Type: Initial Installation
Permit Fee: \$25.00
Issue Date: 3/20/2014
Effective Date: 3/20/2014

This document constitutes issuance to:

Kent State University Heating Plant
P.O. Box 5190
Kent, OH 44242-0001

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:

Akron Regional Air Quality Management District
146 South High Street, Room 904
Akron, OH 44308
(330)375-2480

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


Craig W. Butler
Director



Final Permit-to-Install
Kent State University Heating Plant
Permit Number: P0116154
Facility ID: 1667040085
Effective Date: 3/20/2014

Authorization (continued)

Permit Number: P0116154
Permit Description: PTI for like-kind replacement of combustion turbine engine for GT-2 (B010). Same manufacturer and model number, only the serial number will differ. There will be no modification in operations or increase in emissions.

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

| | |
|-----------------------------------|------------------------|
| Emissions Unit ID: | B010 |
| Company Equipment ID: | Solar Gas Turbine GT-2 |
| Superseded Permit Number: | |
| General Permit Category and Type: | Not Applicable |



Final Permit-to-Install
Kent State University Heating Plant
Permit Number: P0116154
Facility ID: 1667040085
Effective Date: 3/20/2014

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) 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 Akron Regional Air Quality Management District.



- (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 Akron Regional Air Quality Management District. 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 to the Akron Regional Air Quality Management District 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 Akron Regional Air Quality Management District 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) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the appropriate Ohio EPA District Office or contracted



local air agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the electronic signature date shall constitute the date that the required application, notification or report is considered to be "submitted". Any document requiring signature may be represented by entry of the personal identification number (PIN) by responsible official as part of the electronic submission process or by the scanned attestation document signed by the Authorized Representative that is attached to the electronically submitted written report.

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:
 - (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.
- c) The permittee shall submit progress reports to the Akron Regional Air Quality Management District 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 Akron Regional Air Quality Management District.
- 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 Akron Regional Air Quality Management District. 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, 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) not exempt from the requirement to obtain a Permit-to-Install.

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 permittee 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 "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update electronically will constitute notifying the Director 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.

Unless otherwise exempted, no emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31 and OAC Chapter 3745-77 if the restarted operation is subject to one or more applicable requirements.

- 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 operation of the proposed new or modified source(s) as authorized by this permit would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d) must be obtained before operating the source in a manner that would violate the existing Title V permit requirements.



13. Construction Compliance Certification

The applicant shall identify the following dates in the "Air Services" 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 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
Kent State University Heating Plant
Permit Number: P0116154
Facility ID: 1667040085
Effective Date: 3/20/2014

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. The following emissions unit contained in this permit is subject to 40 CFR Part 60, Subpart KKKK, Standards of Performance for New Stationary Sources (NSPS) Stationary Combustion Turbines: B010. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website <http://ecfr.gpoaccess.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 60, Subpart KKKK. The permittee shall also comply with all applicable requirements of 40 CFR Part 60, Subpart A (General Provisions).



Final Permit-to-Install
Kent State University Heating Plant
Permit Number: P0116154
Facility ID: 1667040085
Effective Date: 3/20/2014

C. Emissions Unit Terms and Conditions



1. B010, Solar Gas Turbine GT-2

Operations, Property and/or Equipment Description:

Like-kind replacement of combustion turbine engine for Solar Gas Turbine GT-2. Same engine manufacturer and model number, only the engine serial number will differ. No modification in operations or increase in emissions. This like-kind replacement of only the turbine engine component of Emissions Unit B010 has a capital cost that is less than 50% of a new complete natural gas cogeneration turbine system installation. The replacement cogeneration gas turbine engine will be identical in every respect, design and operation, as the engine being replaced, and, as with the engine being replaced, will burn only natural gas, with a rated heat input capacity of 76.0 million Btu per hour. As with the engine being replaced, power output from the replacement engine will drive a 7 MW rated electrical generator and a heat recovery steam generator (HRSG). As with the engine being replaced, the replacement engine will not include any add-on emissions control. Furthermore, manufacturer's emissions testing indicates the replacement engine has the same emissions profile as the engine being replaced. So there should be no change in emissions, on a pounds per million Btu heat input basis, from Emissions Unit B010 after engine replacement. Likewise, there are no plans to modify the method of operation for Emissions Unit B010 after engine replacement that would compromise the facility's current federally enforceable fuel usage restrictions and thus increase annual emissions. With that said, this permit will require Emissions Unit B010 after engine replacement to maintain compliance with the same emissions limits, as established pursuant to the best available technology (BAT) requirements and the federally enforceable synthetic minor strategy (to limit the annual potential to emit for Emissions Units B006 through B010 below major new source review thresholds), as specified in Permit to Install (PTI) 16-02332, issued final 5/11/2004, and incorporated into the current Title V permit. Since the replacement turbine engine will have design specifications and be operated in a manner identical to the engine being replaced, and this permit will use the same emissions limits specified in PTI 16-02332, this permit should be issued as a direct final action.

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. | OAC rule 3745-31-05(A)(3) Best Available Technology (BAT) | Particulate emissions (PE) shall not exceed 0.014 pound per million Btu heat input, and 4.7 tons per year. [Per the application, all PE is considered PM _{2.5}] |



| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|-------------------------------|---|
| | | <p>Carbon monoxide (CO) emissions shall not exceed 0.13 pound per million Btu heat input, and 43.3 tons per year.</p> <p>Nitrogen oxides (NO_x) emissions shall not exceed 0.10 pound per million Btu heat input, and 33.3 tons per year</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 0.034 pound per million Btu heat input, and 11.3 tons per year.</p> <p>Organic compound (OC) emissions shall not exceed 0.035 pound per million Btu heat input, and 11.7 tons per year.</p> <p>Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average.</p> <p>The BAT control requirement for this emissions unit has been determined to be the use of natural gas as fuel.</p> <p>The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-18-06(A), 40 CFR Part 60, Subpart A and 40 CFR Part 60, Subpart KKKK.</p> |
| b. | OAC rule 3745-18-06(A) | Fuel burning equipment, stationary gas turbines, jet engine test stands and stationary internal combustion engines are exempt from paragraphs (D), (F) and (G) of this rule and from rules 3745-18-07 to 3745-18-94 of the Administrative Code during any calendar day in which natural gas is the only fuel burned. |
| c. | OAC Chapter 3745-103 | Exempt. See b)(2)c. |
| d. | 40 CFR Part 75 | See b)(2)d. |
| e. | 40 CFR Part 60, Subpart KKKK | Per § 60.4300, this subpart establishes emission standards and compliance schedules for the control of emissions from stationary combustion turbines that commenced construction, modification or reconstruction after February 18, 2005. |



| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|--|---|
| | | <p>Per § 60.4305(a), this subpart is applicable to any stationary combustion turbine with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour, based on the higher heating value of the fuel, which commenced construction, modification, or reconstruction after February 18, 2005. Only heat input to the combustion turbine should be included when determining whether or not this subpart is applicable to your turbine. Any additional heat input to associated heat recovery steam generators (HRSG) or duct burners should not be included when determining your peak heat input. However, this subpart does apply to emissions from any associated HRSG and duct burners.</p> <p>The permittee shall comply with all applicable requirements of 40 CFR Part 60, Subpart KKKK.</p> |
| f. | 40 CFR Part 60, Subpart A | The permittee shall comply with all applicable requirements of 40 CFR Part 60, Subpart A (General Provisions). |
| g. | 40 CFR Part 60, Subpart GG | Exempt. Per § 60.4305(b), stationary combustion turbines regulated under 40 CFR Part 60, Subpart KKKK are exempt from the requirements of subpart GG of this part. Heat recovery steam generators and duct burners regulated under this subpart are exempted from the requirements of subparts Da, Db, and Dc of this part. |
| h. | 40 CFR Part 63, Subpart YYYY | Exempt. This stationary combustion turbine is not located at a major source of HAP emissions. |
| i. | OAC rule 3745-17-07(A) OAC rule 3745-17-11(B)(4) OAC rule 3745-110-03(E)(2)(b) | The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3). |

(2) Additional Terms and Conditions



- a. The PE, NO_x, CO, SO₂ and OC emissions limits established pursuant to OAC rule 3745-31-05(A)(3) are equal to or greater than the potential to emit for this emissions unit. Therefore, no monitoring, record keeping, or reporting requirements are necessary to ensure ongoing compliance with these emissions limits.
- b. The permittee shall apply for and, if required, obtain a modification to this permit or obtain a new final Permit-to-Install (PTI) prior to making any change to equipment, change in fuels burned, change in the method of operation or any other change to this emissions unit that results in an increase in the allowable emissions or results in an increase in emissions of greater than the de minimis levels in OAC rule 3745-15-05 for any type of air contaminant not previously emitted.
- c. This emissions unit is exempt from the acid rain program requirements in OAC Chapter 3745-103 pursuant to the gross electric sales exemption threshold for a cogeneration facility specified in OAC rule 3745-103-02(B)(4)(b). The permittee shall maintain records as specified in e)(2) to demonstrate compliance with the following exemption threshold:
 - i. average annual electric sales to the utility power distribution system shall not exceed more than one-third of potential electrical output capacity; or
 - ii. actual electric output (on a gross basis) shall not exceed 219,000 MWehours.
- d. If the permittee is subject to the requirements of 40 CFR Part 72 and 75 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.
- e. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.
- f. On July 6, 2010, US EPA announced the proposed CAIR replacement rule, the "Transport Rule" as required by the original court vacatur of the federal CAIR program in July 2008. The permittee shall comply with any applicable federally mandated programs that may replace the CAIR program affecting electric generating facilities.
- g. Per § 60.4320(a), the permittee must meet the emission limits for NO_x specified in Table 1 to Subpart KKKK. The permittee meets the applicable emission limit with the NO_x emission limit established pursuant to BAT requirements in b)(1)(a).
- h. Per § 60.4330(a), the permittee must comply with either paragraph (a)(1), (a)(2), or (a)(3) of this section to meet the emission limit for SO₂. The permittee meets



the applicable emission limit with the SO₂ emission limit established pursuant to BAT requirements in b)(1)(a).

- i. Per § 60.4333(a), the permittee must operate and maintain the stationary combustion turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.
- j. The permittee shall maintain compliance with all terms and conditions and all other requirements in Permit to Install (PTI) 16-02332, issued final 5/11/2004, and incorporated into the current Title V permit, that are applicable to Emissions Unit B010. This permit, P0108448, shall not supersede any facility-wide (Emissions Units B006 through B010) terms and conditions, including federally enforceable emissions limitations and/or the federally enforceable synthetic minor strategy established in PTI 16-02332, and incorporated into the current Title V permit, to limit the annual potential to emit for Emissions Units B006 through B010 below major new source review thresholds.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas in this emissions unit.
- (2) The permittee shall comply with all applicable operational requirements under 40 CFR Part 60, Subpart KKKK (40 CFR 60.4300-4420).

d) Monitoring and/or Recordkeeping Requirements

- (1) 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.
- (2) The permittee shall comply with all applicable monitoring requirements under 40 CFR Part 60, Subpart KKKK (40 CFR 60.4300-4420).
- (3) Per § 60.4340(a), for this emissions unit that does not use water or steam injection to control NO_x emissions, the permittee must perform annual performance tests in accordance with §60.4400 to demonstrate continuous compliance. If the NO_x emission result from the performance test is less than or equal to 75 percent of the NO_x emission limit for the turbine, you may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75 percent of the NO_x emission limit for the turbine, you must resume annual performance tests.
- (4) Per § 60.4340(b), as an alternative to § 60.4340(a), the permittee may install, calibrate, maintain and operate one of the following continuous monitoring systems:
 - a. Continuous emission monitoring as described in §§60.4335(b), 60.4345 and 60.4350, or
 - b. Continuous parameter monitoring, per § 60.4355, and as follows:



- i. For a diffusion flame turbine without add-on selective catalytic reduction (SCR) controls, you must define parameters indicative of the unit's NO_x formation characteristics, and you must monitor these parameters continuously.
 - ii. For any lean premix stationary combustion turbine, you must continuously monitor the appropriate parameters to determine whether the unit is operating in low-NO_x mode.
 - iii. For any turbine that uses SCR to reduce NO_x emissions, you must continuously monitor appropriate parameters to verify the proper operation of the emission controls.
 - iv. For affected units that are also regulated under part 75 of this chapter, with state approval you can monitor the NO_x emission rate using the methodology in appendix E to part 75 of this chapter, or the low mass emissions methodology in §75.19, the requirements of this paragraph (b) may be met by performing the parametric monitoring described in section 2.3 of part 75 appendix E or in §75.19(c)(1)(iv)(H).
- (5) Per § 60.4360, the permittee must monitor the total sulfur content of the fuel being fired in the turbine, except as provided in §60.4365. The sulfur content of the fuel must be determined using total sulfur methods described in §60.4415. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than half the applicable limit, ASTM D4084, D4810, D5504, or D6228, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see §60.17), which measure the major sulfur compounds, may be used.
- (6) Per § 60.4365, the permittee may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for units located in continental areas and 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for units located in noncontinental areas or a continental area that the Administrator determines does not have access to natural gas and that the removal of sulfur compounds would cause more environmental harm than benefit. You must use one of the following sources of information to make the required demonstration:
- a. The fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content for oil use in continental areas is 0.05 weight percent (500 ppmw) or less and 0.4 weight percent (4,000 ppmw) or less for noncontinental areas, the total sulfur content for natural gas use in continental areas is 20 grains of sulfur or less per 100 standard cubic feet and 140 grains of sulfur or less per 100 standard cubic feet for noncontinental areas, has potential sulfur emissions of less than less than 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for continental areas and has potential sulfur emissions of less than less than 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for noncontinental areas; or
 - b. Representative fuel sampling data which show that the sulfur content of the fuel does not exceed 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for continental



areas or 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for noncontinental areas. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of appendix D to part 75 of this chapter is required.

- (7) Per § 60.4370, the permittee shall refer to this section to determine how often the sulfur content of the fuel must be demonstrated.

e) Reporting Requirements

- (1) 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.
- (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) The permittee shall comply with all applicable reporting requirements under 40 CFR Part 60, Subpart KKKK (40 CFR 60.4300-4420).
- (4) Per § 60.4375, the permittee must submit reports according to following requirements:
 - a. For each affected unit required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content under this subpart, you must submit reports of excess emissions and monitor downtime, in accordance with §60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction.
 - b. For each affected unit that performs annual performance tests in accordance with §60.4340(a), you must submit a written report of the results of each performance test before the close of business on the 60th day following the completion of the performance test.
- (5) Per § 60.4395, all reports required under §60.7(c) must be postmarked by the 30th day following the end of each 6-month period.
- (6) The permittee shall maintain annual records, on a calendar year basis, of the following information to demonstrate that this emissions unit is not an affected unit under the acid rain program:
 - a. the potential electrical output capacity of this emissions unit;
 - b. the average electric sales to the utility power distribution system;
 - c. the percentage of average electric sales as compared to the potential electrical output capacity; and
 - d. the total actual electric output (on a gross basis), in MWe-hours.



- (7) Pursuant to 40 CFR Part 60.7, the permittee shall submit notification of:
- a. the date construction or reconstruction of the emissions unit is commenced, no later than 30 days after such date; and
 - b. the actual date of initial startup, submitted within 15 days after such date.

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:

Particulate emissions (PE) shall not exceed 0.014 pound per million Btu heat input, and 4.7 tons per year;

Carbon monoxide (CO) emissions shall not exceed 0.13 pound per million Btu heat input, and 43.3 tons per year;

Nitrogen oxides (NO_x) emissions shall not exceed 0.10 pound per million Btu heat input, and 33.3 tons per year;

Sulfur dioxide (SO₂) emissions shall not exceed 0.034 pound per million Btu heat input, and 11.3 tons per year; and

Organic compound (OC) emissions shall not exceed 0.035 pound per million Btu heat input, and 11.7 tons per year.

Applicable Compliance Methods:

The NO_x, OC and CO emission limitations above are based upon the manufacturer's performance guarantee emission factors at the maximum design specification of this emissions unit as provided in the application. Compliance with the NO_x, OC, CO, PE and SO₂ emission limitations shall be demonstrated by the emission testing required in f)(3) below and any other applicable compliance demonstrations for NO_x emissions required pursuant to 40 CFR Part 60, Subpart KKKK [See 60.4400 and 60.4405].

b. Emission Limitation:

Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average.

Applicable Compliance Method:

If required, compliance with this limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.



- (2) The permittee shall comply with all applicable performance testing requirements under 40 CFR Part 60, Subpart KKKK (40 CFR 60.4300-4420).
- (3) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. the emission testing shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of the emissions unit;
 - b. the emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for NO_x, OC, CO, PE and SO₂ when combusting natural gas in this emissions unit, as specified in b)(1)a and c)(1);
 - c. the following test methods shall be employed to demonstrate compliance with the allowable mass emission rates:
 - i. 40 CFR Part 60, Appendix A, Methods 1 through 4;
 - ii. 40 CFR Part 60, Appendix A, Method 5 and the procedures specified in OAC rule 3745-17-03(B)(9) for PE;
 - iii. 40 CFR Part 60, Appendix A, Method 7E for NO_x;
 - iv. 40 CFR Part 60, Appendix A, Method 10 for CO;
 - v. 40 CFR Part 60, Appendix A, Method 6 or 6C for SO₂; and
 - vi. 40 CFR Part 60, Appendix A, Method 18 or 25A for OC.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by Ohio EPA.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Akron Regional AQMD. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA's refusal to accept the results of the emission tests.
- f. Personnel from the Ohio EPA/Akron Regional AQMD shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.



- g. A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Akron Regional AQMD within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Akron Regional AQMD.

g) **Miscellaneous Requirements**

- (1) Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified Permit-to-Install (PTI) 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 toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.