



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

03/06/07

**CERTIFIED MAIL**

**RE: Preliminary Proposed Title V  
Chapter 3745-77 permit**

14-31-07-1395  
Childrens Hospital Medical Center  
Thomas E. Kinman  
3333 Burnet Avenue  
Cincinnati, OH 45229-3039

Dear Thomas E. Kinman:

Enclosed is the Ohio EPA Preliminary Proposed Title V permit that was issued in draft form on 10/31/06. The comment period for the Draft permit has ended. We are now ready to submit this permit to USEPA for approval.

We are submitting this for your review and comment. If you do not agree with the Preliminary Proposed Title V permit as written, you now have the opportunity to raise your concerns. **In order to facilitate our review of all the comments or concerns you may have with the enclosed preliminary proposed permit, please provide a hand marked-up copy of the permit showing the changes you think are necessary, along with any additional summary comments, within fourteen (14) days from your receipt of this letter to:**

**Andrew Hall  
Permit Review/Development Section  
Ohio EPA, Division of Air Pollution Control  
50 West Town Street, Suite 700  
P.O. Box 1049  
Columbus, Ohio 43215**

and

Hamilton County Dept. of Environmental Services  
250 William Howard Taft Rd  
Cincinnati, OH 45219-2660  
(513) 946-7777

Also, if you believe that it is necessary to have an informal conference with us, then, as part of your written comments, you should request a conference concerning the written comments.

If comments are not submitted within fourteen (14) days of your receipt of this letter, we will forward the proposed permit to USEPA for approval. All comments received will be carefully considered before proceeding to the proposed permit.

Sincerely,

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

cc: Hamilton County Dept. of Environmental Services  
File, DAPC PIER



State of Ohio Environmental Protection Agency

PRELIMINARY PROPOSED TITLE V PERMIT

Issue Date: 03/06/07

Effective Date: To be entered upon final issuance

Expiration Date: To be entered upon final issuance

This document constitutes issuance of a Title V permit for Facility ID: 14-31-07-1395 to:
Childrens Hospital Medical Center
3333 Burnet Avenue
Cincinnati, OH 45229-3039

Emissions Unit ID (Company ID)/Emissions Unit Activity Description

Table with 3 columns: Emissions Unit ID (Company ID), Emissions Unit Activity Description, and Emissions Unit Activity Description. Rows include B008, B009, B010, B011, B012, B013, B014, B015, B018, B019, B020, B021, P001, P002, P003, P004, and P005.

You will be contacted approximately eighteen (18) months prior to the expiration date regarding the renewal of this permit. If you are not contacted, please contact the appropriate Ohio EPA District Office or local air agency listed below. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above.

Described below is the current Ohio EPA District Office or local air agency that is responsible for processing and administering your Title V permit:

Hamilton County Dept. of Environmental Services
250 William Howard Taft Rd
Cincinnati, OH 45219-2660
(513) 946-7777

Ohio Environmental Protection Agency

Chris Korleski
Director

## PART I - GENERAL TERMS AND CONDITIONS

### A. State and Federally Enforceable Section

#### 1. 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, i.e., in Section A.III of Part III of this Title V permit, 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.  
(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))

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 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.

(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))

c. The permittee shall submit required reports in the following manner:

- i. **All reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations caused by malfunctions shall be submitted in the following manner:**

Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the OAC rule 3745-77-07(A)(3)(c) deviation reporting requirements for malfunctions, written reports that identify each malfunction that occurred during each calendar quarter (including each malfunction reported only verbally in accordance with OAC rule 3745-15-06) shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year in accordance with General Term and Condition A.1.c.ii below; and each report shall cover the previous calendar quarter (An exceedance of the visible emission limitations specified in OAC rule 3745-17-07(A)(1) that is caused by a malfunction is not a violation and does not need to be reported as a deviation if the owner or operator of the affected air contaminant source or air pollution control equipment complies with the requirements of OAC rule 3745-17-07(A)(3)(c)).

In accordance with OAC rule 3745-15-06, a malfunction reportable under OAC rule 3745-15-06(B) constitutes a violation of an emission limitation (or control requirement) and, therefore, is a deviation of the federally enforceable permit requirements. Even though verbal notifications and written reports are required for malfunctions pursuant to OAC rule 3745-15-06, the written reports required pursuant to this term must be submitted quarterly to satisfy the prompt reporting provision of OAC rule 3745-77-07(A)(3)(c).

In identifying each deviation caused by a malfunction, the permittee shall specify the emission limitation(s) (or control requirement(s)) for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Nevertheless, all malfunctions, including those

reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing on a quarterly basis.

Any scheduled maintenance, as referenced in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described above for malfunctions.

*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

- ii. **Except as may otherwise be provided in the terms and conditions for a specific emissions unit, i.e., in Section A.IV of Part III of this Title V permit or, in some cases, in Part II of this Title V permit, all reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations of the emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:**

Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. Except as provided below, the written reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

In identifying each deviation, the permittee shall specify the emission limitation(s), operational restriction(s), and/or control device operating parameter limitation(s) for which the deviation occurred, describe each deviation, and provide the estimated magnitude and duration of each deviation.

These written deviation reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations. Full compliance with OAC rule 3745-77-07(A)(3)(c) requires reporting of all other deviations of the federally enforceable requirements specified in the permit as required by such rule.

If an emissions unit has a deviation reporting requirement for a specific emission limitation, operational restriction, or control device operating parameter limitation that is not on a quarterly basis (e.g., within 30 days following the end of the calendar month, or within 30 or 45 days after the exceedance occurs), that deviation reporting requirement satisfies the reporting requirements specified in this General Term and Condition for that specific emission limitation, operational restriction, or control device parameter limitation. Following the provisions of that non-quarterly deviation reporting requirement will also satisfy (for the deviations so reported) the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations, and additional quarterly deviation reports for that specific emission limitation, operational restriction, or control device parameter limitation are not required pursuant to this General Term and Condition.

See B.6 below if no deviations occurred during the quarter.

*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

- iii. **All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) for other deviations of the federally enforceable permit requirements which are not reported in accordance with General Term and Condition A.1.c.ii above shall be submitted in the following manner:**

Unless otherwise specified by rule, written reports that identify deviations of the following federally enforceable requirements contained in this permit; General Terms and Conditions: A.2, A.3, A.4, A.6.e, A.7, A.12, A.14, A.18, A.19, A.20, and A.22 of Part I of this Title V permit, as well as any deviations from the requirements in Section A.V or A.VI of Part III of this Title V permit, and any monitoring, record keeping, and reporting requirements, which are not reported in accordance with General Term and Condition A.1.c.ii above shall be submitted (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency by January 31 and July 31 of each year; and each report shall cover the previous six calendar months. Unless otherwise specified by rule, all other deviations from federally enforceable requirements identified in this permit shall be submitted annually as part of the annual compliance certification, including deviations of federally enforceable requirements not specifically addressed by permit or rule for the insignificant activities or emissions levels (IEU) identified in Part II.A of this Title V

permit. Annual reporting of deviations is deemed adequate to meet the deviation reporting requirements for IEOs unless otherwise specified by permit or rule.

In identifying each deviation, the permittee shall specify the federally enforceable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation.

These semi-annual and annual written reports shall satisfy the reporting requirements of OAC rule 3745-77-07(A)(3)(c) for any deviations from the federally enforceable requirements contained in this permit that are not reported in accordance with General Term and Condition A.1.c.ii above.

If no such deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no such deviations occurred during that period.

*(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii) and OAC rule 3745-77-07(A)(13)(b))*

- iv. Each written report shall be signed by a responsible official certifying that, "based on information and belief formed after reasonable inquiry, the statements and information in the report (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete."

*(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))*

- v. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

## **2. Scheduled Maintenance**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. Except as provided in OAC rule 3745-15-06(A)(3), any scheduled maintenance necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s). Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described for malfunctions in General Term and Condition A.1.c.i above.

*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

## **3. Risk Management Plans**

If applicable, the permittee shall 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"); and, pursuant to 40 C.F.R. 68.215(a), the permittee shall submit either of the following:

- a. a compliance plan for meeting the requirements of 40 C.F.R. Part 68 by the date specified in 40 C.F.R. 68.10(a) and OAC 3745-104-05(A); or
- b. as part of the compliance certification submitted under 40 C.F.R. 70.6(c)(5), a certification statement that the source is in compliance with all requirements of 40 C.F.R. Part 68 and OAC Chapter 3745-104, including the registration and submission of the risk management plan.

*(Authority for term: OAC rule 3745-77-07(A)(4))*

## **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.

*(Authority for term: OAC rule 3745-77-07(A)(5))*

## **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.

*(Authority for term: OAC rule 3745-77-07(A)(6))*

## **6. General Requirements**

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with A.10 below. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.
- f. Except as otherwise indicated below, this Title V permit, or permit modification, is effective for five years from the original effective date specified in the permit. In the event that this facility becomes eligible for non-title V permits, this permit shall cease to be enforceable upon final issuance of all applicable OAC Chapter 3745-35 operating permits and/or registrations for all subject emissions units located at the facility and:
  - i. the permittee submits an approved facility-wide potential to emit analysis supporting a claim that the facility no longer meets the definition of a “major source” as defined in OAC rule 3745-77-01(W) based on the permanent shutdown and removal of one or more emissions units identified in this permit; or
  - ii. the permittee no longer meets the definition of a “major source” as defined in OAC rule 3745-77-01(W) based on obtaining restrictions on the facility-wide potential(s) to emit that are federally enforceable or legally and practically enforceable ; or
  - iii. a combination of i. and ii. above.

The permittee shall comply with any residual requirements, such as quarterly deviation reports, semi-annual deviation reports, and annual compliance certifications covering the period during which this Title V permit was enforceable. All records relating to this permit must be maintained in accordance with law.

*(Authority for term: OAC rule 3745-77-01(W), OAC rule 3745-77-07(A)(3)(b)(ii), OAC rule 3745-77(A)(7))*

**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.

*(Authority for term: OAC rule 3745-77-07(A)(8))*

**8. Marketable Permit Programs**

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.

*(Authority for term: OAC rule 3745-77-07(A)(9))*

**9. Reasonably Anticipated Operating Scenarios**

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these general terms and conditions shall apply to all operating scenarios authorized in this permit.

*(Authority for term: OAC rule 3745-77-07(A)(10))*

**10. Reopening for Cause**

This Title V permit will be reopened prior to its expiration date under the following conditions:

- a. Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.
- b. This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.
- c. The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.
- d. The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

*(Authority for term: OAC rules 3745-77-07(A)(12) and 3745-77-08(D))*

**11. Federal and State Enforceability**

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

*(Authority for term: OAC rule 3745-77-07(B))*

**12. Compliance Requirements**

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
  - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.
  - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
  - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

- ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.
- d. Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) and the Administrator of the U.S. EPA in the following manner and with the following content:
  - i. Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted (i.e., postmarked) on or before April 30th of each year during the permit term.
  - ii. Compliance certifications shall include the following:
    - (a) An identification of each term or condition of this permit that is the basis of the certification.
    - (b) The permittee's current compliance status.
    - (c) Whether compliance was continuous or intermittent.
    - (d) The method(s) used for determining the compliance status of the source currently and over the required reporting period.
    - (e) Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.
  - iii. Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

*(Authority for term: OAC rules 3745-77-07(C)(1),(2),(4) and (5) and ORC section 3704.03(L))*

**13. Permit Shield**

- a. Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.
  - b. This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.
- (Authority for term: OAC rule 3745-77-07(F))*

**14. Operational Flexibility**

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the appropriate Ohio EPA District Office or local air agency with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the appropriate District Office of the Ohio EPA or local air agency as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).

*(Authority for term: OAC rules 3745-77-07(H)(1) and (2))*

**15. Emergencies**

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met. This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.

*(Authority for term: OAC rule 3745-77-07(G))*

**16. Off-Permit Changes**

The owner or operator of a Title V source may make any change in its operations or emissions at the source that is not specifically addressed or prohibited in the Title V permit, without obtaining an amendment or modification of the permit, provided that the following conditions are met:

- a. The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.
- b. The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA, except that no such notice shall be required for changes that qualify as insignificant emissions levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.
- c. The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).
- d. The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.
- e. The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

Paragraph (I) of rule 3745-77-07 of the Administrative Code applies only to modification or amendment of the permittee's Title V permit. The change made may require a permit to install under Chapter 3745-31 of the Administrative Code if the change constitutes a modification as defined in that Chapter. Nothing in paragraph (I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.

*(Authority for term: OAC rule 3745-77-07(I))*

**17. Compliance Method Requirements**

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Fed. Reg. 8314, Feb. 24, 1997), in the context of any future proceeding.

*(This term is provided for informational purposes only.)*

**18. Insignificant Activities or Emissions Levels**

Each IEU that has one or more applicable requirements shall comply with those applicable requirements.

*(Authority for term: OAC rule 3745-77-07(A)(1))*

**19. Permit to Install Requirement**

Prior to the "installation" or "modification" of any "air contaminant source," as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.

*(Authority for term: OAC rule 3745-77-07(A)(1))*

**20. 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.

*(Authority for term: OAC rule 3745-77-07(A)(1))*

**21. Permanent Shutdown of an Emissions Unit**

The permittee may notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification from the responsible 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 responsible official that the emissions unit was permanently shut down.

After the date on which an emissions unit is permanently shut down (i.e., that 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 and therefore ceases to meet the definition of an "emissions unit" as defined in OAC rule 3745-77-01(O)), rendering existing permit terms and conditions irrelevant, the permittee shall not be required, after the date of the

certification and submission to Ohio EPA, to meet any Title V permit requirements applicable to that emissions unit, except for any residual requirements, such as the quarterly deviation reports, semi-annual deviation reports and annual compliance certification covering the period during which the emissions unit last operated. All records relating to the shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law.

No emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit to install pursuant to OAC Chapter 3745-31.  
*(Authority for term: OAC rule 3745-77-01)*

**22. Title VI Provisions**

If applicable, the permittee shall comply with the standards for recycling and reducing emissions of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 CFR 82.156.
- b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment specified in 40 CFR 82.158.
- c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

*(Authority for term: OAC rule 3745-77-01(H)(11))*

**B. State Only Enforceable Section**

**1. Reporting Requirements Related to Monitoring and Record Keeping Requirements**

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or record keeping 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 (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) 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. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. 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.)

**2. Records Retention Requirements**

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

**3. Inspections and Information Requests**

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

**4. Scheduled Maintenance/Malfunction Reporting**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

**5. 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.

**6. 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 emission limitation (or control requirement), operational restriction and/or control device parameter limitation 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) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

The permittee is not required to submit a quarterly report which states that no deviations occurred during that quarter for the following situations:

- a. where an emissions unit has deviation reporting requirements for a specific emission limitation, operational restriction, or control device parameter limitation that override the deviation reporting requirements specified in General Term and Condition A.1.c.ii; or
- b. where an uncontrolled emissions unit has no monitoring, record keeping, or reporting requirements and the emissions unit's applicable emission limitations are established at the potentials to emit; or
- c. where the company's responsible official has certified that an emissions unit has been permanently shut down.

## **Part II - Specific Facility Terms and Conditions**

### **A. State and Federally Enforceable Section**

1. The following insignificant emissions units are located at this facility:

B016- 8.4 MMBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler (PTI 14-05630)  
B017- 8.4 MMBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler (PTI 14-05630)  
T001- 20,000 Gallon Underground Diesel Fuel Oil Storage Tank (PTI 14-05139)  
T002- 20,000 Gallon Underground Diesel Fuel Oil Storage Tank (PTI 14-05139)  
P008 - 1.5 MW Diesel Fired Emergency Back-up Generator  
P009 - 1.5 MW Diesel Fired Emergency Back-up Generator  
P010 - 0.25 MW Diesel Fired Emergency Back-up Generator  
P011 - 0.25 MW Diesel Fired Emergency Back-up Generator

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, and well as any emission limitations and/or control requirements contained within the identified permit to install for the emissions unit. Insignificant emissions units listed above that are not subject to specific permit to install requirements are subject to one or more applicable requirements contained in the SIP-approved versions of OAC Chapters 3745-17, 3745-18, and 3745-21.

### **B. State Only Enforceable Section**

1. The following insignificant emissions units located at this facility are exempt from permit requirements because they are not subject to any applicable requirements or because they meet the "de minimis" criteria established in OAC rule 3745-15-05:

T003- 5,000 No.2 Fuel Oil Fixed Roof Storage Tank  
T004- 5,000 No.2 Fuel Oil Fixed Roof Storage Tank  
T005- 5,000 No.2 Fuel Oil Fixed Roof Storage Tank  
T006- 5,000 No.2 Fuel Oil Fixed Roof Storage Tank

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** 25.2 mmBtu/hr BRYAN Boiler 1 of 3 (B008)

**Activity Description:** Natural Gas/No.2 fuel oil 25.2 mmBtu/hr BRYAN Boiler 1 of 3 located at CHR/IDR. Previously reported as Z025.

#### A. State and Federally Enforceable Section

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

- The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B008 - 25.2 mmBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	OAC rule 3745-31-05(A)(3) (PTI 14-05630)	When burning natural gas: Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /mmBtu of actual heat input.
		Sulfur Dioxide (SO2) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.
		Nitrogen Oxides (NOx) emissions shall not exceed 0.10 lb/mmBtu of actual heat input.
		Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.
		Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.
		When burning No. 2 fuel oil: Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.
		Sulfur Dioxide (SO2) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.
		Nitrogen Oxides (NOx) emissions shall not exceed 0.15 lb/mmBtu of actual heat input.
		Carbon Monoxide (CO) emissions

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
		shall not exceed 0.026 lb/mmBtu of actual heat input.
		Organic Compound (OC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input.
		See terms and conditions, A.I.2.b, and A.II.1 through A.II.3.
		The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), OAC rule 3745-21-08(B), and 40 CFR Part 60 Subpart Dc.
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-18-06	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	40 CFR Part 60 Subpart Dc	See term and condition A.III.2.
	OAC rule 3745-21-08(B)	See term and condition A.I.2.c.
	OAC rule 3745-31-13(D)(1)	See term and condition A.I.2.d.

**2. Additional Terms and Conditions**

- 2.a** The lb/mmBtu emission limitations outlined in term A.I.1, except for SO<sub>2</sub> when firing No. 2 fuel oil, are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these emission limits.
- 2.b** The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rates:
  - 2.04 TPY of particulate matter (PM) and PM<sub>10</sub>;
  - 2.95 TPY of sulfur dioxide (SO<sub>2</sub>);
  - 24.22 TPY of nitrogen oxides (NO<sub>x</sub>);
  - 15.41 TPY of carbon monoxide (CO); and
  - 1.98 TPY of organic compounds (OC).

## **2. Additional Terms and Conditions (continued)**

- 2.c** The permittee satisfies the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08 by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** As a non-profit health institution, the permittee requested and received a discretionary exemption from the Director in a letter dated January 6, 2005, to exempt this emissions unit from the PSD requirements contained in OAC rules 3745-31-10 through 3745-31-20.
- 2.e** The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.
- 2.f** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the visible emissions limitation, the mass emission limitations, the use of natural gas and/or ultra low sulfur (less than or equal to 0.05 weight percent sulfur) No. 2 fuel oil and the annual fuel usage restriction.

## **II. Operational Restrictions**

1. The permittee shall burn only natural gas and/or No. 2 fuel oil in this emissions unit.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))
2. The quality of No. 2 fuel oil received for burning in this emissions unit shall have a combination of sulfur content and heat content sufficient to comply with the allowable sulfur dioxide emission limitation of 0.052 lb/mmBtu of actual heat input and a sulfur content limit of less than or equal to 0.05 percent sulfur by weight.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))
3. The maximum combined fuel usage in emissions units B008 through B017 shall not exceed 320 million cubic feet of natural gas and 800,000 gallons of No. 2 fuel oil per year.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))

## **III. Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below.
  - a. Alternative 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

### III. Monitoring and/or Record Keeping Requirements (continued)

b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods, such as ASTM methods D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the director.

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

- a. the total amount of natural gas burned in this emissions unit, in cubic feet;
- b. the total amount of No. 2 fuel oil burned in this emissions unit, in gallons;
- c. the total combined monthly amount of natural gas burned, in cubic feet for emissions units B008 through B017;
- d. the total combined monthly amount of No. 2 fuel oil burned, in gallons for emissions units B008 through B017;
- e. the total combined calculated emissions of the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO and OC emissions in tons per year for emissions units B008 through B017; and
- f. the type and total amount of fuel, other than natural gas or No. 2 fuel oil, burned in this emissions unit.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install number 14-05630, issued on 4/19/05: A.III.1-A.III.2. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

### IV. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation and/or sulfur content limitation based upon the calculated sulfur dioxide emission rates from Section A.III.1 above. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

#### **IV. Reporting Requirements (continued)**

2. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas or No. 2 fuel oil. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. The permittee shall submit annual reports that specify the total particulate, PM10, SO<sub>2</sub>, VOC, NO<sub>x</sub>, and CO emissions for this emissions unit for the previous calendar year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

4. The permittee shall submit annual reports which identify the total amount of natural gas (in million cubic feet) and No. 2 fuel oil (in gallons) combusted in emissions units B008 - B017. These reports shall be submitted by January 31 of each year.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

5. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install number 14-05630, issued on 4/19/05: A.IV.1 - A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

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

1. Compliance with the emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined in accordance with Test Method 9, as set forth in "Appendix on Test Methods" in 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, except as specified by rule.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.b Emission Limitations:

When burning natural gas:

Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /mmBtu of actual heat input.

When burning No. 2 fuel oil:

Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

2.04 TPY of PE/PM10.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 7.6 lbs of total PM/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 2 lbs of PM/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 5.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.c Emission Limitations:

When burning natural gas:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

2.95 TPY.

### Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 0.6 lb of SO<sub>2</sub>/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No.2 fuel oil, the emission limitations were based upon the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.3, Table 1.3-1 (9/98). Compliance with the lb/mmBtu emission limitation shall be based upon the record keeping in term and condition A.III.1.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 6.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.d Emission Limitations:

When burning natural gas:

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.10 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.15 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

24.22 TPY.

### Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-1 (revised 7/98) emission factor of 100 lbs of NO<sub>x</sub>/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 20 lbs of NO<sub>x</sub> /1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 7.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.e Emission Limitations:

When burning natural gas:

Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Carbon Monoxide (CO) emissions shall not exceed 0.036 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

15.41 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-1 (revised 7/98) emission factor of 84 lbs of CO/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 5 lbs of CO /1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 10.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.f Emission Limitations:

When burning natural gas:

Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Organic Compound (OC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

1.98 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 11 lbs of OC/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-3 (revised 9/98) emission factor of 0.556 lb of OC/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 25.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

2. Compliance with the sulfur limitations in term and condition A.II.2 shall be demonstrated by the record keeping in term and condition A.III.1.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

3. Compliance with the fuel usage limitations in term and condition A.II.3 shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

4. Compliance with the fuel usage limitations in term and condition A.II.1 shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

5. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install number 14-05630, issued on 4/19/05: A.V.1.-A.V.4. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

## VI. Miscellaneous Requirements

**None**

**B. State Enforceable Section**

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B008 - 25.2 mmBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	None	None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** 25.2 mmBtu/hr BRYAN Boiler 2 of 3 (B009)

**Activity Description:** Natural Gas/No.2 fuel oil 25.2 mmBtu/hr BRYAN Boiler 2 of 3 located at CHR/IDR. Previously reported as Z026.

#### A. State and Federally Enforceable Section

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

- The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B009 - 25.2 mmBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	OAC rule 3745-31-05(A)(3) (PTI 14-05630)	When burning natural gas: Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /mmBtu of actual heat input.  Sulfur Dioxide (SO2) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.  Nitrogen Oxides (NOx) emissions shall not exceed 0.10 lb/mmBtu of actual heat input.  Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.  Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.
		When burning No. 2 fuel oil: Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.  Sulfur Dioxide (SO2) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.  Nitrogen Oxides (NOx) emissions shall not exceed 0.15 lb/mmBtu of actual heat input.  Carbon Monoxide (CO) emissions

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
		shall not exceed 0.026 lb/mmBtu of actual heat input.
		Organic Compound (OC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input.
		See terms and conditions, A.I.2.b, and A.II.1 through A.II.3.
		The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), OAC rule 3745-21-08(B), and 40 CFR Part 60 Subpart Dc.
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-18-06	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	40 CFR Part 60 Subpart Dc	See term and condition A.III.2.
	OAC rule 3745-21-08(B)	See term and condition A.I.2.c.
	OAC rule 3745-31-13(D)(1)	See term and condition A.I.2.d.

**2. Additional Terms and Conditions**

- 2.a** The lb/mmBtu emission limitations outlined in term A.I.1, except for SO<sub>2</sub> when firing No. 2 fuel oil, are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these emission limits.
- 2.b** The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rates:
  - 2.04 TPY of particulate matter (PM) and PM<sub>10</sub>;
  - 2.95 TPY of sulfur dioxide (SO<sub>2</sub>);
  - 24.22 TPY of nitrogen oxides (NO<sub>x</sub>);
  - 15.41 TPY of carbon monoxide (CO); and
  - 1.98 TPY of organic compounds (OC).

## **2. Additional Terms and Conditions (continued)**

- 2.c** The permittee satisfies the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08 by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** As a non-profit health institution, the permittee requested and received a discretionary exemption from the Director in a letter dated January 6, 2005, to exempt this emissions unit from the PSD requirements contained in OAC rules 3745-31-10 through 3745-31-20.
- 2.e** The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.
- 2.f** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the visible emissions limitation, the mass emission limitations, the use of natural gas and/or ultra low sulfur (less than or equal to 0.05 weight percent sulfur) No. 2 fuel oil and the annual fuel usage restriction.

## **II. Operational Restrictions**

1. The permittee shall burn only natural gas and/or No. 2 fuel oil in this emissions unit.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))
2. The quality of No. 2 fuel oil received for burning in this emissions unit shall have a combination of sulfur content and heat content sufficient to comply with the allowable sulfur dioxide emission limitation of 0.052 lb/mmBtu of actual heat input and a sulfur content limit of less than or equal to 0.05 percent sulfur by weight.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))
3. The maximum combined fuel usage in emissions units B008 through B017 shall not exceed 320 million cubic feet of natural gas and 800,000 gallons of No. 2 fuel oil per year.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))

## **III. Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below.
  - a. Alternative 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

### III. Monitoring and/or Record Keeping Requirements (continued)

b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods, such as ASTM methods D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the director.

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

- a. the total amount of natural gas burned in this emissions unit, in cubic feet;
- b. the total amount of No. 2 fuel oil burned in this emissions unit, in gallons;
- c. the total combined monthly amount of natural gas burned, in cubic feet for emissions units B008 through B017;
- d. the total combined monthly amount of No. 2 fuel oil burned, in gallons for emissions units B008 through B017;
- e. the total combined calculated emissions of the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO and OC emissions in tons per year for emissions units B008 through B017; and
- f. the type and total amount of fuel, other than natural gas or No. 2 fuel oil, burned in this emissions unit.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install number 14-05630, issued on 4/19/05: A.III.1-A.III.2. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

### IV. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation and/or sulfur content limitation based upon the calculated sulfur dioxide emission rates from Section A.III.1 above. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

#### **IV. Reporting Requirements (continued)**

2. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas or No. 2 fuel oil. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. The permittee shall submit annual reports that specify the total particulate, PM10, SO<sub>2</sub>, VOC, NO<sub>x</sub>, and CO emissions for this emissions unit for the previous calendar year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

4. The permittee shall submit annual reports which identify the total amount of natural gas (in million cubic feet) and No. 2 fuel oil (in gallons) combusted in emissions units B008 - B017. These reports shall be submitted by January 31 of each year.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

5. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install number 14-05630, issued on 4/19/05: A.IV.1 - A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

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

1. Compliance with the emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined in accordance with Test Method 9, as set forth in "Appendix on Test Methods" in 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, except as specified by rule.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.b Emission Limitations:

When burning natural gas:

Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /mmBtu of actual heat input.

When burning No. 2 fuel oil:

Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

2.04 TPY of PE/PM10.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 7.6 lbs of total PM/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 2 lbs of PM/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 5.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.c Emission Limitations:

When burning natural gas:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

2.95 TPY.

### Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 0.6 lb of SO<sub>2</sub>/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No.2 fuel oil, the emission limitations were based upon the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.3, Table 1.3-1 (9/98). Compliance with the lb/mmBtu emission limitation shall be based upon the record keeping in term and condition A.III.1.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 6.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.d Emission Limitations:

When burning natural gas:

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.10 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.15 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

24.22 TPY.

### Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-1 (revised 7/98) emission factor of 100 lbs of NO<sub>x</sub>/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 20 lbs of NO<sub>x</sub> /1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 7.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.e Emission Limitations:

When burning natural gas:

Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Carbon Monoxide (CO) emissions shall not exceed 0.036 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

15.41 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-1 (revised 7/98) emission factor of 84 lbs of CO/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 5 lbs of CO /1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 10.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.f Emission Limitations:

When burning natural gas:

Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Organic Compound (OC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

1.98 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 11 lbs of OC/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-3 (revised 9/98) emission factor of 0.556 lb of OC/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 25.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1) and 3745-31-05(A)(3))

2. Compliance with the sulfur limitations in term and condition A.II.2 shall be demonstrated by the record keeping in term and condition A.III.1.

(Authority for term: OAC rule 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. Compliance with the fuel usage limitations in term and condition A.II.3 shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1) and 3745-31-05(A)(3))

4. Compliance with the fuel usage limitations in term and condition A.II.1 shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1) and 3745-31-05(A)(3))

5. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install number 14-05630, issued on 4/19/05: A.V.1.-A.V.4. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

## VI. Miscellaneous Requirements

**None**

**B. State Enforceable Section**

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B009 - 25.2 mmBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	None	None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** 25.2 mmBtu/hr BRYAN Boiler 3 of 3 (B010)

**Activity Description:** Natural Gas/No.2 fuel oil 25.2 mmBtu/hr BRYAN Boiler 3 of 3 located at CHRF/IDR. Previously reported as Z027.

#### A. State and Federally Enforceable Section

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

- The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B010 - 25.2 mmBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	OAC rule 3745-31-05(A)(3) (PTI 14-05630)	When burning natural gas: Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /mmBtu of actual heat input.
		Sulfur Dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.
		Nitrogen Oxides (NO <sub>x</sub> ) emissions shall not exceed 0.10 lb/mmBtu of actual heat input.
		Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.
		Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.
		When burning No. 2 fuel oil: Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.
		Sulfur Dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.
		Nitrogen Oxides (NO <sub>x</sub> ) emissions shall not exceed 0.15 lb/mmBtu of actual heat input.
		Carbon Monoxide (CO) emissions

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
		shall not exceed 0.026 lb/mmBtu of actual heat input.
		Organic Compound (OC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input.
		See terms and conditions, A.I.2.b, and A.II.1 through A.II.3.
		The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), OAC rule 3745-21-08(B), and 40 CFR Part 60 Subpart Dc.
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-18-06	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	40 CFR Part 60 Subpart Dc	See term and condition A.III.2.
	OAC rule 3745-21-08(B)	See term and condition A.I.2.c.
	OAC rule 3745-31-13(D)(1)	See term and condition A.I.2.d.

**2. Additional Terms and Conditions**

- 2.a** The lb/mmBtu emission limitations outlined in term A.I.1, except for SO<sub>2</sub> when firing No. 2 fuel oil, are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these emission limits.
- 2.b** The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rates:
  - 2.04 TPY of particulate matter (PM) and PM<sub>10</sub>;
  - 2.95 TPY of sulfur dioxide (SO<sub>2</sub>);
  - 24.22 TPY of nitrogen oxides (NO<sub>x</sub>);
  - 15.41 TPY of carbon monoxide (CO); and
  - 1.98 TPY of organic compounds (OC).

## **2. Additional Terms and Conditions (continued)**

- 2.c** The permittee satisfies the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08 by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** As a non-profit health institution, the permittee requested and received a discretionary exemption from the Director in a letter dated January 6, 2005, to exempt this emissions unit from the PSD requirements contained in OAC rules 3745-31-10 through 3745-31-20.
- 2.e** The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.
- 2.f** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the visible emissions limitation, the mass emission limitations, the use of natural gas and/or ultra low sulfur (less than or equal to 0.05 weight percent sulfur) No. 2 fuel oil and the annual fuel usage restriction.

## **II. Operational Restrictions**

1. The permittee shall burn only natural gas and/or No. 2 fuel oil in this emissions unit.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))
2. The quality of No. 2 fuel oil received for burning in this emissions unit shall have a combination of sulfur content and heat content sufficient to comply with the allowable sulfur dioxide emission limitation of 0.052 lb/mmBtu of actual heat input and a sulfur content limit of less than or equal to 0.05 percent sulfur by weight.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))
3. The maximum combined fuel usage in emissions units B008 through B017 shall not exceed 320 million cubic feet of natural gas and 800,000 gallons of No. 2 fuel oil per year.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))

## **III. Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below.
  - a. Alternative 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

### III. Monitoring and/or Record Keeping Requirements (continued)

b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods, such as ASTM methods D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the director.

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

- a. the total amount of natural gas burned in this emissions unit, in cubic feet;
- b. the total amount of No. 2 fuel oil burned in this emissions unit, in gallons;
- c. the total combined monthly amount of natural gas burned, in cubic feet for emissions units B008 through B017;
- d. the total combined monthly amount of No. 2 fuel oil burned, in gallons for emissions units B008 through B017;
- e. the total combined calculated emissions of the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO and OC emissions in tons per year for emissions units B008 through B017; and
- f. the type and total amount of fuel, other than natural gas or No. 2 fuel oil, burned in this emissions unit.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install number 14-05630, issued on 4/19/05: A.III.1-A.III.2. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

### IV. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation and/or sulfur content limitation based upon the calculated sulfur dioxide emission rates from Section A.III.1 above. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

#### **IV. Reporting Requirements (continued)**

2. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas or No. 2 fuel oil. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. The permittee shall submit annual reports that specify the total particulate, PM10, SO<sub>2</sub>, VOC, NO<sub>x</sub>, and CO emissions for this emissions unit for the previous calendar year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

4. The permittee shall submit annual reports which identify the total amount of natural gas (in million cubic feet) and No. 2 fuel oil (in gallons) combusted in emissions units B008 - B017. These reports shall be submitted by January 31 of each year.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

5. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install number 14-05630, issued on 4/19/05: A.IV.1 - A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

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

1. Compliance with the emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined in accordance with Test Method 9, as set forth in "Appendix on Test Methods" in 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, except as specified by rule.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.b Emission Limitations:

When burning natural gas:

Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /mmBtu of actual heat input.

When burning No. 2 fuel oil:

Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

2.04 TPY of PE/PM10.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 7.6 lbs of total PM/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 2 lbs of PM/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 5.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.c Emission Limitations:

When burning natural gas:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

2.95 TPY.

### Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 0.6 lb of SO<sub>2</sub>/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No.2 fuel oil, the emission limitations were based upon the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.3, Table 1.3-1 (9/98). Compliance with the lb/mmBtu emission limitation shall be based upon the record keeping in term and condition A.III.1.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 6.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.d Emission Limitations:

When burning natural gas:

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.10 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.15 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

24.22 TPY.

### Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-1 (revised 7/98) emission factor of 100 lbs of NO<sub>x</sub>/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 20 lbs of NO<sub>x</sub> /1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 7.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.e Emission Limitations:

When burning natural gas:

Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Carbon Monoxide (CO) emissions shall not exceed 0.036 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

15.41 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-1 (revised 7/98) emission factor of 84 lbs of CO/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 5 lbs of CO /1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 10.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.f Emission Limitations:

When burning natural gas:

Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Organic Compound (OC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

1.98 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 11 lbs of OC/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-3 (revised 9/98) emission factor of 0.556 lb of OC/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 25.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

2. Compliance with the sulfur limitations in term and condition A.II.2 shall be demonstrated by the record keeping in term and condition A.III.1.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

3. Compliance with the fuel usage limitations in term and condition A.II.3 shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

4. Compliance with the fuel usage limitations in term and condition A.II.1 shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

5. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install number 14-05630, issued on 4/19/05: A.V.1.-A.V.4. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

## VI. Miscellaneous Requirements

**None**

**B. State Enforceable Section**

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B010 - 25.2 mmBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	None	None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** 12 mmBtu/hr UNILUX Boiler 1 of 3 (B011)

**Activity Description:** Natural Gas/No.2 fuel oil 12 mmBtu/hr UNILUX Boiler 1 of 3 located at Pavilion. Previously reported as Z028.

#### A. State and Federally Enforceable Section

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

- The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B011 - 12.0 mmBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	OAC rule 3745-31-05(A)(3) (PTI 14-05630)	<p>When burning natural gas:            Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /mmBtu of actual heat input.</p> <p>Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.</p> <p>Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.10 lb/mmBtu of actual heat input.</p> <p>Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.</p> <p>Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.</p> <p>When burning No. 2 fuel oil:            Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.</p> <p>Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.</p> <p>Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.15 lb/mmBtu of actual heat input.</p> <p>Carbon Monoxide (CO) emissions</p>

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
		shall not exceed 0.026 lb/mmBtu of actual heat input.
		Organic Compound (OC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input.
		See terms and conditions, A.I.2.b, and A.II.1 through A.II.3.
		The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), OAC rule 3745-21-08(B), and 40 CFR Part 60 Subpart Dc.
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-18-06	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	40 CFR Part 60 Subpart Dc	See term and condition A.III.2.
	OAC rule 3745-21-08(B)	See term and condition A.I.2.c.
	OAC rule 3745-31-13(D)(1)	See term and condition A.I.2.d.

**2. Additional Terms and Conditions**

- 2.a** The lb/mmBtu emission limitations outlined in term A.I.1, except for SO<sub>2</sub> when firing No. 2 fuel oil, are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these emission limits.
- 2.b** The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rates:
  - 2.04 TPY of particulate matter (PM) and PM<sub>10</sub>;
  - 2.95 TPY of sulfur dioxide (SO<sub>2</sub>);
  - 24.22 TPY of nitrogen oxides (NO<sub>x</sub>);
  - 15.41 TPY of carbon monoxide (CO); and
  - 1.98 TPY of organic compounds (OC).

## **2. Additional Terms and Conditions (continued)**

- 2.c** The permittee satisfies the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08 by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** As a non-profit health institution, the permittee requested and received a discretionary exemption from the Director in a letter dated January 6, 2005, to exempt this emissions unit from the PSD requirements contained in OAC rules 3745-31-10 through 3745-31-20.
- 2.e** The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.
- 2.f** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the visible emissions limitation, the mass emission limitations, the use of natural gas and/or ultra low sulfur (less than or equal to 0.05 weight percent sulfur) No. 2 fuel oil and the annual fuel usage restriction.

## **II. Operational Restrictions**

1. The permittee shall burn only natural gas and/or No. 2 fuel oil in this emissions unit.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))
2. The quality of No. 2 fuel oil received for burning in this emissions unit shall have a combination of sulfur content and heat content sufficient to comply with the allowable sulfur dioxide emission limitation of 0.052 lb/mmBtu of actual heat input and a sulfur content limit of less than or equal to 0.05 percent sulfur by weight.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))
3. The maximum combined fuel usage in emissions units B008 through B017 shall not exceed 320 million cubic feet of natural gas and 800,000 gallons of No. 2 fuel oil per year.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))

## **III. Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below.
  - a. Alternative 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

### III. Monitoring and/or Record Keeping Requirements (continued)

b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods, such as ASTM methods D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the director.

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

- a. the total amount of natural gas burned in this emissions unit, in cubic feet;
- b. the total amount of No. 2 fuel oil burned in this emissions unit, in gallons;
- c. the total combined monthly amount of natural gas burned, in cubic feet for emissions units B008 through B017;
- d. the total combined monthly amount of No. 2 fuel oil burned, in gallons for emissions units B008 through B017;
- e. the total combined calculated emissions of the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO and OC emissions in tons per year for emissions units B008 through B017; and
- f. the type and total amount of fuel, other than natural gas or No. 2 fuel oil, burned in this emissions unit.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install number 14-05630, issued on 4/19/05: A.III.1-A.III.2. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

### IV. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation and/or sulfur content limitation based upon the calculated sulfur dioxide emission rates from Section A.III.1 above. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

#### **IV. Reporting Requirements (continued)**

2. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas or No. 2 fuel oil. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. The permittee shall submit annual reports that specify the total particulate, PM10, SO2, VOC, NOx, and CO emissions for this emissions unit for the previous calendar year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

4. The permittee shall submit annual reports which identify the total amount of natural gas (in million cubic feet) and No. 2 fuel oil (in gallons) combusted in emissions units B008 - B017. These reports shall be submitted by January 31 of each year.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

5. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install number 14-05630, issued on 4/19/05: A.IV.1 - A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

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

1. Compliance with the emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined in accordance with Test Method 9, as set forth in "Appendix on Test Methods" in 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, except as specified by rule.

(Authority for term: OAC rule 3745-77-07(C)(1) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.b Emission Limitations:

When burning natural gas:

Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /mmBtu of actual heat input.

When burning No. 2 fuel oil:

Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

2.04 TPY of PE/PM10.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 7.6 lbs of total PM/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 2 lbs of PM/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 5.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.c Emission Limitations:

When burning natural gas:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

2.95 TPY.

### Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 0.6 lb of SO<sub>2</sub>/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No.2 fuel oil, the emission limitations were based upon the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.3, Table 1.3-1 (9/98). Compliance with the lb/mmBtu emission limitation shall be based upon the record keeping in term and condition A.III.1.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 6.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.d Emission Limitations:

When burning natural gas:

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.10 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.15 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

24.22 TPY.

### Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-1 (revised 7/98) emission factor of 100 lbs of NO<sub>x</sub>/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 20 lbs of NO<sub>x</sub> /1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 7.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.e Emission Limitations:

When burning natural gas:

Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Carbon Monoxide (CO) emissions shall not exceed 0.036 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

15.41 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-1 (revised 7/98) emission factor of 84 lbs of CO/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 5 lbs of CO /1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 10.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.f Emission Limitations:

When burning natural gas:

Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Organic Compound (OC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

1.98 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 11 lbs of OC/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-3 (revised 9/98) emission factor of 0.556 lb of OC/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 25.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

2. Compliance with the sulfur limitations in term and condition A.II.2 shall be demonstrated by the record keeping in term and condition A.III.1.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

3. Compliance with the fuel usage limitations in term and condition A.II.3 shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

4. Compliance with the fuel usage limitations in term and condition A.II.1 shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

5. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install number 14-05630, issued on 4/19/05: A.V.1.-A.V.4. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

## VI. Miscellaneous Requirements

**None**

**B. State Enforceable Section**

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B011 - 12.0 mmBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	None	None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** 12 mmBtu/hr UNILUX Boiler 2 of 3 (B012)

**Activity Description:** Natural Gas/No.2 fuel oil 12 mmBtu/hr UNILUX Boiler 2 of 3 located at Pavilion. Previously reported as Z029.

#### A. State and Federally Enforceable Section

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

- The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B012 - 12.0 mmBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	OAC rule 3745-31-05(A)(3) (PTI 14-05630)	When burning natural gas: Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /mmBtu of actual heat input.  Sulfur Dioxide (SO2) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.  Nitrogen Oxides (NOx) emissions shall not exceed 0.10 lb/mmBtu of actual heat input.  Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.  Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.
		When burning No. 2 fuel oil: Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.  Sulfur Dioxide (SO2) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.  Nitrogen Oxides (NOx) emissions shall not exceed 0.15 lb/mmBtu of actual heat input.  Carbon Monoxide (CO) emissions

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
		shall not exceed 0.026 lb/mmBtu of actual heat input.
		Organic Compound (OC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input.
		See terms and conditions, A.I.2.b, and A.II.1 through A.II.3.
		The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), OAC rule 3745-21-08(B), and 40 CFR Part 60 Subpart Dc.
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-18-06	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	40 CFR Part 60 Subpart Dc	See term and condition A.III.2.
	OAC rule 3745-21-08(B)	See term and condition A.I.2.c.
	OAC rule 3745-31-13(D)(1)	See term and condition A.I.2.d.

**2. Additional Terms and Conditions**

- 2.a** The lb/mmBtu emission limitations outlined in term A.I.1, except for SO<sub>2</sub> when firing No. 2 fuel oil, are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these emission limits.
- 2.b** The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rates:
  - 2.04 TPY of particulate matter (PM) and PM<sub>10</sub>;
  - 2.95 TPY of sulfur dioxide (SO<sub>2</sub>);
  - 24.22 TPY of nitrogen oxides (NO<sub>x</sub>);
  - 15.41 TPY of carbon monoxide (CO); and
  - 1.98 TPY of organic compounds (OC).

## **2. Additional Terms and Conditions (continued)**

- 2.c** The permittee satisfies the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08 by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** As a non-profit health institution, the permittee requested and received a discretionary exemption from the Director in a letter dated January 6, 2005, to exempt this emissions unit from the PSD requirements contained in OAC rules 3745-31-10 through 3745-31-20.
- 2.e** The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.
- 2.f** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the visible emissions limitation, the mass emission limitations, the use of natural gas and/or ultra low sulfur (less than or equal to 0.05 weight percent sulfur) No. 2 fuel oil and the annual fuel usage restriction.

## **II. Operational Restrictions**

1. The permittee shall burn only natural gas and/or No. 2 fuel oil in this emissions unit.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))
2. The quality of No. 2 fuel oil received for burning in this emissions unit shall have a combination of sulfur content and heat content sufficient to comply with the allowable sulfur dioxide emission limitation of 0.052 lb/mmBtu of actual heat input and a sulfur content limit of less than or equal to 0.05 percent sulfur by weight.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))
3. The maximum combined fuel usage in emissions units B008 through B017 shall not exceed 320 million cubic feet of natural gas and 800,000 gallons of No. 2 fuel oil per year.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))

## **III. Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below.
  - a. Alternative 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

### III. Monitoring and/or Record Keeping Requirements (continued)

b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods, such as ASTM methods D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the director.

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

- a. the total amount of natural gas burned in this emissions unit, in cubic feet;
- b. the total amount of No. 2 fuel oil burned in this emissions unit, in gallons;
- c. the total combined monthly amount of natural gas burned, in cubic feet for emissions units B008 through B017;
- d. the total combined monthly amount of No. 2 fuel oil burned, in gallons for emissions units B008 through B017;
- e. the total combined calculated emissions of the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO and OC emissions in tons per year for emissions units B008 through B017; and
- f. the type and total amount of fuel, other than natural gas or No. 2 fuel oil, burned in this emissions unit.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install number 14-05630, issued on 4/19/05: A.III.1-A.III.2. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

### IV. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation and/or sulfur content limitation based upon the calculated sulfur dioxide emission rates from Section A.III.1 above. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

#### **IV. Reporting Requirements (continued)**

2. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas or No. 2 fuel oil. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. The permittee shall submit annual reports that specify the total particulate, PM10, SO2, VOC, NOx, and CO emissions for this emissions unit for the previous calendar year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

4. The permittee shall submit annual reports which identify the total amount of natural gas (in million cubic feet) and No. 2 fuel oil (in gallons) combusted in emissions units B008 - B017. These reports shall be submitted by January 31 of each year.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

5. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install number 14-05630, issued on 4/19/05: A.IV.1 - A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

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

1. Compliance with the emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined in accordance with Test Method 9, as set forth in "Appendix on Test Methods" in 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, except as specified by rule.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.b Emission Limitations:

When burning natural gas:

Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /mmBtu of actual heat input.

When burning No. 2 fuel oil:

Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

2.04 TPY of PE/PM10.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 7.6 lbs of total PM/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 2 lbs of PM/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 5.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.c Emission Limitations:

When burning natural gas:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

2.95 TPY.

### Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 0.6 lb of SO<sub>2</sub>/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No.2 fuel oil, the emission limitations were based upon the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.3, Table 1.3-1 (9/98). Compliance with the lb/mmBtu emission limitation shall be based upon the record keeping in term and condition A.III.1.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 6.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.d Emission Limitations:

When burning natural gas:

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.10 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.15 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

24.22 TPY.

### Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-1 (revised 7/98) emission factor of 100 lbs of NO<sub>x</sub>/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 20 lbs of NO<sub>x</sub> /1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 7.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.e Emission Limitations:

When burning natural gas:

Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Carbon Monoxide (CO) emissions shall not exceed 0.036 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

15.41 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-1 (revised 7/98) emission factor of 84 lbs of CO/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 5 lbs of CO /1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 10.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.f Emission Limitations:

When burning natural gas:

Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Organic Compound (OC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

1.98 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 11 lbs of OC/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-3 (revised 9/98) emission factor of 0.556 lb of OC/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 25.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1) and 3745-31-05(A)(3))

2. Compliance with the sulfur limitations in term and condition A.II.2 shall be demonstrated by the record keeping in term and condition A.III.1.

(Authority for term: OAC rule 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. Compliance with the fuel usage limitations in term and condition A.II.3 shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1) and 3745-31-05(A)(3))

4. Compliance with the fuel usage limitations in term and condition A.II.1 shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1) and 3745-31-05(A)(3))

5. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install number 14-05630, issued on 4/19/05: A.V.1.-A.V.4. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

## VI. Miscellaneous Requirements

**None**

**B. State Enforceable Section**

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B012 - 12.0 mmBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	None	None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** 12 mmBtu/hr UNILUX Boiler 3 of 3 (B013)

**Activity Description:** Natural Gas/No.2 fuel oil 12 mmBtu/hr UNILUX Boiler 3 of 3 located at Pavilion. Previously reported as Z030.

#### A. State and Federally Enforceable Section

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

- The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B013 - 12.0 mmBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	OAC rule 3745-31-05(A)(3) (PTI 14-05630)	<p>When burning natural gas:            Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /mmBtu of actual heat input.</p> <p>Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.</p> <p>Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.10 lb/mmBtu of actual heat input.</p> <p>Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.</p> <p>Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.</p> <p>When burning No. 2 fuel oil:            Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.</p> <p>Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.</p> <p>Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.15 lb/mmBtu of actual heat input.</p> <p>Carbon Monoxide (CO) emissions</p>

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
		shall not exceed 0.026 lb/mmBtu of actual heat input.
		Organic Compound (OC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input.
		See terms and conditions, A.I.2.b, and A.II.1 through A.II.3.
		The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), OAC rule 3745-21-08(B), and 40 CFR Part 60 Subpart Dc.
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-18-06	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	40 CFR Part 60 Subpart Dc	See term and condition A.III.2.
	OAC rule 3745-21-08(B)	See term and condition A.I.2.c.
	OAC rule 3745-31-13(D)(1)	See term and condition A.I.2.d.

**2. Additional Terms and Conditions**

- 2.a** The lb/mmBtu emission limitations outlined in term A.I.1, except for SO<sub>2</sub> when firing No. 2 fuel oil, are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these emission limits.
- 2.b** The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rates:
  - 2.04 TPY of particulate matter (PM) and PM<sub>10</sub>;
  - 2.95 TPY of sulfur dioxide (SO<sub>2</sub>);
  - 24.22 TPY of nitrogen oxides (NO<sub>x</sub>);
  - 15.41 TPY of carbon monoxide (CO); and
  - 1.98 TPY of organic compounds (OC).

## **2. Additional Terms and Conditions (continued)**

- 2.c** The permittee satisfies the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08 by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** As a non-profit health institution, the permittee requested and received a discretionary exemption from the Director in a letter dated January 6, 2005, to exempt this emissions unit from the PSD requirements contained in OAC rules 3745-31-10 through 3745-31-20.
- 2.e** The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.
- 2.f** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the visible emissions limitation, the mass emission limitations, the use of natural gas and/or ultra low sulfur (less than or equal to 0.05 weight percent sulfur) No. 2 fuel oil and the annual fuel usage restriction.

## **II. Operational Restrictions**

1. The permittee shall burn only natural gas and/or No. 2 fuel oil in this emissions unit.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))
2. The quality of No. 2 fuel oil received for burning in this emissions unit shall have a combination of sulfur content and heat content sufficient to comply with the allowable sulfur dioxide emission limitation of 0.052 lb/mmBtu of actual heat input and a sulfur content limit of less than or equal to 0.05 percent sulfur by weight.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))
3. The maximum combined fuel usage in emissions units B008 through B017 shall not exceed 320 million cubic feet of natural gas and 800,000 gallons of No. 2 fuel oil per year.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))

## **III. Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below.
  - a. Alternative 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

### III. Monitoring and/or Record Keeping Requirements (continued)

b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods, such as ASTM methods D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the director.

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

- a. the total amount of natural gas burned in this emissions unit, in cubic feet;
- b. the total amount of No. 2 fuel oil burned in this emissions unit, in gallons;
- c. the total combined monthly amount of natural gas burned, in cubic feet for emissions units B008 through B017;
- d. the total combined monthly amount of No. 2 fuel oil burned, in gallons for emissions units B008 through B017;
- e. the total combined calculated emissions of the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO and OC emissions in tons per year for emissions units B008 through B017; and
- f. the type and total amount of fuel, other than natural gas or No. 2 fuel oil, burned in this emissions unit.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install number 14-05630, issued on 4/19/05: A.III.1-A.III.2. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

### IV. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation and/or sulfur content limitation based upon the calculated sulfur dioxide emission rates from Section A.III.1 above. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

#### **IV. Reporting Requirements (continued)**

2. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas or No. 2 fuel oil. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. The permittee shall submit annual reports that specify the total particulate, PM10, SO<sub>2</sub>, VOC, NO<sub>x</sub>, and CO emissions for this emissions unit for the previous calendar year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

4. The permittee shall submit annual reports which identify the total amount of natural gas (in million cubic feet) and No. 2 fuel oil (in gallons) combusted in emissions units B008 - B017. These reports shall be submitted by January 31 of each year.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

5. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install number 14-05630, issued on 4/19/05: A.IV.1 - A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

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

1. Compliance with the emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined in accordance with Test Method 9, as set forth in "Appendix on Test Methods" in 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, except as specified by rule.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.b Emission Limitations:

When burning natural gas:

Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /mmBtu of actual heat input.

When burning No. 2 fuel oil:

Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

2.04 TPY of PE/PM10.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 7.6 lbs of total PM/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 2 lbs of PM/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 5.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.c Emission Limitations:

When burning natural gas:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

2.95 TPY.

### Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 0.6 lb of SO<sub>2</sub>/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No.2 fuel oil, the emission limitations were based upon the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.3, Table 1.3-1 (9/98). Compliance with the lb/mmBtu emission limitation shall be based upon the record keeping in term and condition A.III.1.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 6.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.d Emission Limitations:

When burning natural gas:

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.10 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.15 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

24.22 TPY.

### Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-1 (revised 7/98) emission factor of 100 lbs of NO<sub>x</sub>/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 20 lbs of NO<sub>x</sub> /1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 7.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.e Emission Limitations:

When burning natural gas:

Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Carbon Monoxide (CO) emissions shall not exceed 0.036 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

15.41 TPY.

### Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-1 (revised 7/98) emission factor of 84 lbs of CO/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 5 lbs of CO /1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 10.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.f Emission Limitations:

When burning natural gas:

Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Organic Compound (OC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

1.98 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 11 lbs of OC/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-3 (revised 9/98) emission factor of 0.556 lb of OC/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 25.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1) and 3745-31-05(A)(3))

2. Compliance with the sulfur limitations in term and condition A.II.2 shall be demonstrated by the record keeping in term and condition A.III.1.

(Authority for term: OAC rule 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. Compliance with the fuel usage limitations in term and condition A.II.3 shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1) and 3745-31-05(A)(3))

4. Compliance with the fuel usage limitations in term and condition A.II.1 shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1) and 3745-31-05(A)(3))

5. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install number 14-05630, issued on 4/19/05: A.V.1.-A.V.4. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

## VI. Miscellaneous Requirements

**None**

**B. State Enforceable Section**

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B013 - 12.0 mmBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	None	None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** 33.6 mmBtu/hr UNILUX Boiler 1 of 2 (B014)  
**Activity Description:** Natural Gas/No.2 fuel oil 33.6 mmBtu/hr UNILUX Boiler 1 of 2 at Location A. Previously reported as Z031.

#### A. State and Federally Enforceable Section

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B014 - 33.6 mmBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	OAC rule 3745-31-05(A)(3) (PTI 14-05630)	<p>When burning natural gas:            Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /mmBtu of actual heat input.</p> <p>Sulfur Dioxide (SO2) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.</p> <p>Nitrogen Oxides (NOx) emissions shall not exceed 0.10 lb/mmBtu of actual heat input.</p> <p>Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.</p> <p>Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.</p> <p>When burning No. 2 fuel oil:            Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.</p> <p>Sulfur Dioxide (SO2) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.</p> <p>Nitrogen Oxides (NOx) emissions shall not exceed 0.15 lb/mmBtu of actual heat input.</p> <p>Carbon Monoxide (CO) emissions</p>

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
		shall not exceed 0.026 lb/mmBtu of actual heat input.
		Organic Compound (OC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input.
		See terms and conditions, A.I.2.b, and A.II.1 through A.II.3.
		The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-08(B), and 40 CFR Part 60 Subpart Dc.
	OAC rule 3745-17-07(A)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to 40 CFR 60 Subpart Dc.
	OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-18-06	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	40 CFR Part 60 Subpart Dc	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except for one 6-minute period per hour not more than 27 percent opacity.
		See term and condition A.III.2.
	OAC rule 3745-21-08(B)	See term and condition A.I.2.c.
	OAC rule 3745-31-13(D)(1)	See term and condition A.I.2.d.

**2. Additional Terms and Conditions**

- 2.a** The lb/mmBtu emission limitations outlined in term A.I.1, except for SO2 when firing No. 2 fuel oil, are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these emission limits.
- 2.b** The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rates:
  - 2.04 TPY of particulate matter (PM) and PM10;
  - 2.95 TPY of sulfur dioxide (SO2);
  - 24.22 TPY of nitrogen oxides (NOx);
  - 15.41 TPY of carbon monoxide (CO); and
  - 1.98 TPY of organic compounds (OC).

## **2. Additional Terms and Conditions (continued)**

- 2.c** The permittee satisfies the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08 by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** As a non-profit health institution, the permittee requested and received a discretionary exemption from the Director in a letter dated January 6, 2005, to exempt this emissions unit from the PSD requirements contained in OAC rules 3745-31-10 through 3745-31-20.
- 2.e** The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.
- 2.f** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the visible emissions limitation, the mass emission limitations, the use of natural gas and/or ultra low sulfur (less than or equal to 0.05 weight percent sulfur) No. 2 fuel oil and the annual fuel usage restriction.

## **II. Operational Restrictions**

1. The permittee shall burn only natural gas and/or No. 2 fuel oil in this emissions unit.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))
2. The quality of No. 2 fuel oil received for burning in this emissions unit shall have a combination of sulfur content and heat content sufficient to comply with the allowable sulfur dioxide emission limitation of 0.052 lb/mmBtu of actual heat input and a sulfur content limit of less than or equal to 0.05 percent sulfur by weight.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))
3. The maximum combined fuel usage in emissions units B008 through B017 shall not exceed 320 million cubic feet of natural gas and 800,000 gallons of No. 2 fuel oil per year.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))

## **III. Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below.
  - a. Alternative 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

### III. Monitoring and/or Record Keeping Requirements (continued)

b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods, such as ASTM methods D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the director.

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

- a. the total amount of natural gas burned in this emissions unit, in cubic feet;
- b. the total amount of No. 2 fuel oil burned in this emissions unit, in gallons;
- c. the total combined monthly amount of natural gas burned, in cubic feet for emissions units B008 through B017;
- d. the total combined monthly amount of No. 2 fuel oil burned, in gallons for emissions units B008 through B017;
- e. the total combined calculated emissions of the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO and OC emissions in tons per year for emissions units B008 through B017; and
- f. the type and total amount of fuel, other than natural gas or No. 2 fuel oil, burned in this emissions unit.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install number 14-05630, issued on 4/19/05: A.III.1-A.III.2. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

### IV. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation and/or sulfur content limitation based upon the calculated sulfur dioxide emission rates from Section A.III.1 above. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

#### **IV. Reporting Requirements (continued)**

2. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas or No. 2 fuel oil. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. The permittee shall submit annual reports that specify the total particulate, PM10, SO<sub>2</sub>, VOC, NO<sub>x</sub>, and CO emissions for this emissions unit for the previous calendar year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

4. The permittee shall submit annual reports which identify the total amount of natural gas (in million cubic feet) and No. 2 fuel oil (in gallons) combusted in emissions units B008 - B017. These reports shall be submitted by January 31 of each year.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

5. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install number 14-05630, issued on 4/19/05: A.IV.1 - A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

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

1. Compliance with the emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation:

Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except for one 6-minute period per hour not more than 27 percent opacity.

Applicable Compliance Method:

If required, compliance shall be determined in accordance with Test Method 9, as set forth in "Appendix on Test Methods" in 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, except as specified by rule.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.b Emission Limitations:

When burning natural gas:

Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /mmBtu of actual heat input.

When burning No. 2 fuel oil:

Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

2.04 TPY of PE/PM10.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 7.6 lbs of total PM/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 2 lbs of PM/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 5.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.c Emission Limitations:

When burning natural gas:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

2.95 TPY.

### Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 0.6 lb of SO<sub>2</sub>/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No.2 fuel oil, the emission limitations were based upon the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.3, Table 1.3-1 (9/98). Compliance with the lb/mmBtu emission limitation shall be based upon the record keeping in term and condition A.III.1.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 6.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.d Emission Limitations:

When burning natural gas:

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.10 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.15 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

24.22 TPY.

### Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-1 (revised 7/98) emission factor of 100 lbs of NO<sub>x</sub>/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 20 lbs of NO<sub>x</sub> /1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 7.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.e Emission Limitations:

When burning natural gas:

Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Carbon Monoxide (CO) emissions shall not exceed 0.036 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

15.41 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-1 (revised 7/98) emission factor of 84 lbs of CO/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 5 lbs of CO /1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 10.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.f Emission Limitations:

When burning natural gas:

Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Organic Compound (OC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

1.98 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 11 lbs of OC/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-3 (revised 9/98) emission factor of 0.556 lb of OC/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 25.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1) and 3745-31-05(A)(3))

2. Compliance with the sulfur limitations in term and condition A.II.2 shall be demonstrated by the record keeping in term and condition A.III.1.

(Authority for term: OAC rule 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. Compliance with the fuel usage limitations in term and condition A.II.3 shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1) and 3745-31-05(A)(3))

4. Compliance with the fuel usage limitations in term and condition A.II.1 shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1) and 3745-31-05(A)(3))

5. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install number 14-05630, issued on 4/19/05: A.V.1.-A.V.4 The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

## VI. Miscellaneous Requirements

**None**

**B. State Enforceable Section**

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B014 - 33.6 mmBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	None	None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** 33.6 mmBtu/hr UNILUX Boiler 2 of 2 (B015)  
**Activity Description:** Natural Gas/No.2 fuel oil 33.6 mmBtu/hr UNILUX Boiler 2 of 2 at Location A. Previously reported as Z032.

#### A. State and Federally Enforceable Section

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

- The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B015 - 33.6 mmBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	OAC rule 3745-31-05(A)(3) (PTI 14-05630)	When burning natural gas: Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /mmBtu of actual heat input.  Sulfur Dioxide (SO2) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.  Nitrogen Oxides (NOx) emissions shall not exceed 0.10 lb/mmBtu of actual heat input.  Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.  Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.
		When burning No. 2 fuel oil: Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.  Sulfur Dioxide (SO2) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.  Nitrogen Oxides (NOx) emissions shall not exceed 0.15 lb/mmBtu of actual heat input.  Carbon Monoxide (CO) emissions

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
		shall not exceed 0.026 lb/mmBtu of actual heat input.
		Organic Compound (OC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input.
		See terms and conditions, A.I.2.b, and A.II.1 through A.II.3.
		The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-08(B), and 40 CFR Part 60 Subpart Dc.
	OAC rule 3745-17-07(A)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to 40 CFR 60 Subpart Dc.
	OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-18-06	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	40 CFR Part 60 Subpart Dc	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except for one 6-minute period per hour not more than 27 percent opacity.
		See term and condition A.III.2.
	OAC rule 3745-21-08(B)	See term and condition A.I.2.c.
	OAC rule 3745-31-13(D)(1)	See term and condition A.I.2.d.

**2. Additional Terms and Conditions**

- 2.a** The lb/mmBtu emission limitations outlined in term A.I.1, except for SO2 when firing No. 2 fuel oil, are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these emission limits.
- 2.b** The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rates:
  - 2.04 TPY of particulate matter (PM) and PM10;
  - 2.95 TPY of sulfur dioxide (SO2);
  - 24.22 TPY of nitrogen oxides (NOx);
  - 15.41 TPY of carbon monoxide (CO); and
  - 1.98 TPY of organic compounds (OC).

## **2. Additional Terms and Conditions (continued)**

- 2.c** The permittee satisfies the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08 by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** As a non-profit health institution, the permittee requested and received a discretionary exemption from the Director in a letter dated January 6, 2005, to exempt this emissions unit from the PSD requirements contained in OAC rules 3745-31-10 through 3745-31-20.
- 2.e** The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.
- 2.f** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the visible emissions limitation, the mass emission limitations, the use of natural gas and/or ultra low sulfur (less than or equal to 0.05 weight percent sulfur) No. 2 fuel oil and the annual fuel usage restriction.

## **II. Operational Restrictions**

1. The permittee shall burn only natural gas and/or No. 2 fuel oil in this emissions unit.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))
2. The quality of No. 2 fuel oil received for burning in this emissions unit shall have a combination of sulfur content and heat content sufficient to comply with the allowable sulfur dioxide emission limitation of 0.052 lb/mmBtu of actual heat input and a sulfur content limit of less than or equal to 0.05 percent sulfur by weight.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))
3. The maximum combined fuel usage in emissions units B008 through B017 shall not exceed 320 million cubic feet of natural gas and 800,000 gallons of No. 2 fuel oil per year.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))

## **III. Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below.
  - a. Alternative 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

### III. Monitoring and/or Record Keeping Requirements (continued)

b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods, such as ASTM methods D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the director.

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

- a. the total amount of natural gas burned in this emissions unit, in cubic feet;
- b. the total amount of No. 2 fuel oil burned in this emissions unit, in gallons;
- c. the total combined monthly amount of natural gas burned, in cubic feet for emissions units B008 through B017;
- d. the total combined monthly amount of No. 2 fuel oil burned, in gallons for emissions units B008 through B017;
- e. the total combined calculated emissions of the PM/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO and OC emissions in tons per year for emissions units B008 through B017; and
- f. the type and total amount of fuel, other than natural gas or No. 2 fuel oil, burned in this emissions unit.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install number 14-05630, issued on 4/19/05: A.III.1-A.III.2. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

### IV. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation and/or sulfur content limitation based upon the calculated sulfur dioxide emission rates from Section A.III.1 above. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

#### **IV. Reporting Requirements (continued)**

2. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas or No. 2 fuel oil. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. The permittee shall submit annual reports that specify the total particulate, PM10, SO<sub>2</sub>, VOC, NO<sub>x</sub>, and CO emissions for this emissions unit for the previous calendar year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

4. The permittee shall submit annual reports which identify the total amount of natural gas (in million cubic feet) and No. 2 fuel oil (in gallons) combusted in emissions units B008 - B017. These reports shall be submitted by January 31 of each year.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

5. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install number 14-05630, issued on 4/19/05: A.IV.1 - A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

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

1. Compliance with the emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation:

Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except for one 6-minute period per hour not more than 27 percent opacity.

Applicable Compliance Method:

If required, compliance shall be determined in accordance with Test Method 9, as set forth in "Appendix on Test Methods" in 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, except as specified by rule.

(Authority for term: OAC rule 3745-77-07(C)(1) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.b Emission Limitations:

When burning natural gas:

Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /mmBtu of actual heat input.

When burning No. 2 fuel oil:

Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

2.04 TPY of PE/PM10.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 7.6 lbs of total PM/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 2 lbs of PM/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 5.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.c Emission Limitations:

When burning natural gas:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

2.95 TPY.

### Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 0.6 lb of SO<sub>2</sub>/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No.2 fuel oil, the emission limitations were based upon the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.3, Table 1.3-1 (9/98). Compliance with the lb/mmBtu emission limitation shall be based upon the record keeping in term and condition A.III.1.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 6.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.d Emission Limitations:

When burning natural gas:

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.10 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.15 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

24.22 TPY.

### Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-1 (revised 7/98) emission factor of 100 lbs of NO<sub>x</sub>/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 20 lbs of NO<sub>x</sub> /1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 7.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.e Emission Limitations:

When burning natural gas:

Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Carbon Monoxide (CO) emissions shall not exceed 0.036 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

15.41 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-1 (revised 7/98) emission factor of 84 lbs of CO/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 5 lbs of CO /1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 10.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.f Emission Limitations:

When burning natural gas:

Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Organic Compound (OC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B008 through B017 shall not exceed the following rate:

1.98 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 11 lbs of OC/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-3 (revised 9/98) emission factor of 0.556 lb of OC/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 25.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emissions units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1) and 3745-31-05(A)(3))

2. Compliance with the sulfur limitations in term and condition A.II.2 shall be demonstrated by the record keeping in term and condition A.III.1.

(Authority for term: OAC rule 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. Compliance with the fuel usage limitations in term and condition A.II.3 shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1) and 3745-31-05(A)(3))

4. Compliance with the fuel usage limitations in term and condition A.II.1 shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1) and 3745-31-05(A)(3))

5. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install number 14-05630, issued on 4/19/05: A.V.1.-A.V.4 The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

## VI. Miscellaneous Requirements

**None**

**B. State Enforceable Section**

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B015 - 33.6 mmBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	None	None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** 25.86 mmBtu/hr Thermogenics Boiler 1 of 4 (B018)

**Activity Description:** Natural Gas/No. 2 fuel oil 25.86 mmBtu/hr Thermogenics Boiler 1 of 4 located at Central Plant.

#### A. State and Federally Enforceable Section

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

- The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B018- 25.86 mmBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	OAC rule 3745-31-05(A)(3) (PTI 14-05718)	When burning natural gas: Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb/mmBtu of actual heat input.
		Sulfur Dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.
		Nitrogen Oxides (NO <sub>x</sub> ) emissions shall not exceed 0.08 lb/mmBtu of actual heat input.
		Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.
		Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.
		When burning No. 2 fuel oil: Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.
		Sulfur Dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.
		Nitrogen Oxides (NO <sub>x</sub> ) emissions shall not exceed 0.16 lb/mmBtu of actual heat input.
		Carbon Monoxide (CO) emissions

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
		shall not exceed 0.026 lb/mmBtu of actual heat input.
		Organic Compound (OC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input.
		See terms and conditions, A.I.2.b, A.II.1 and A.II.2.
		The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), OAC rule 3745-21-08(B), OAC rule 3745-31-05(C), and 40 CFR Part 60 Subpart Dc.
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-18-06	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	40 CFR Part 60 Subpart Dc	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-21-08(B)	See term and condition A.I.2.c.
	OAC rule 3745-31-05(C) Synthetic Minor to avoid Major Modification New Source Review	See term and condition A.I.2.f and A.II.3.

**2. Additional Terms and Conditions**

- 2.a** The lb/mmBtu emission limitations outlined in term A.I.1, except for SO2 when firing No. 2 fuel oil, are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these emission limits.
- 2.b** The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rates based on a rolling 12-month summation:
  - 3.74 TPY of particulate matter (PM) and PM10;
  - 12.97 TPY of sulfur dioxide (SO2);
  - 38.06 TPY of carbon monoxide (CO); and
  - 4.98 TPY of organic compounds (OC).

## **2. Additional Terms and Conditions (continued)**

- 2.c** The permittee satisfies the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08 by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** 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.
- 2.e** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the visible emissions limitation, the mass emission limitations, the use of natural gas and/or ultra low sulfur (less than or equal to 0.05 weight percent sulfur) No. 2 fuel oil and the annual fuel usage restriction.
- 2.f** The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rates based on a rolling-12month summation:

39.90 TPY of nitrogen oxides (NO<sub>x</sub>).

## **II. Operational Restrictions**

1. The permittee shall burn only natural gas and/or No. 2 fuel oil in this emissions unit.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))
2. The quality of No. 2 fuel oil received for burning in this emissions unit shall have a combination of sulfur content and heat content sufficient to comply with the allowable sulfur dioxide emission limitation of 0.052 lb/mmBtu of actual heat input and a sulfur content limit of less than or equal to 0.05 percent sulfur by weight.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))
3. The maximum annual number 2 fuel oil usage in emissions units B018 through B021, combined shall not exceed 3,512,300 gallons based upon a rolling, 12-month summation of the monthly oil usage rates.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(C))

## **III. Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below.
  - a. Alternative 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

### III. Monitoring and/or Record Keeping Requirements (continued)

b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods, such as ASTM methods D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the director.

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

- a. the total combined amount of natural gas burned in emissions units B018 through B021, in cubic feet;
- b. the total combined amount of No. 2 fuel oil burned in emissions units B018 through B021, in gallons;
- c. the rolling, 12-month summation for the combined amount of natural gas burned, recorded in cubic feet, for emissions units B018 through B021;
- d. the rolling, 12-month summation for the combined amount of No.2 fuel oil burned, recorded in gallons, for emissions units B018 through B021;
- e. the rolling, 12-monthly summation emissions total, in tons, for PE/PM10, SO2, NOx, CO, and OC when burning any combination of fuels (the total amount of emissions calculated for the current month plus the total amount of emissions for the previous eleven calendar months), and
- f. the type and total amount of fuel, other than natural gas or No. 2 fuel oil, burned in this emissions unit.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05)

3. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install # 14-05718, issued on 8/16/05: A.III.1-A.III.2. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

### IV. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation and/or sulfur content limitation based upon the calculated sulfur dioxide emission rates from Section A.III.1 above. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

#### **IV. Reporting Requirements (continued)**

2. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas or No. 2 fuel oil. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. The permittee shall submit annual reports that specify the total particulate, PM10, SO<sub>2</sub>, OC, NO<sub>x</sub>, and CO emissions for this emissions unit for the previous calendar year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05)

4. The permittee shall submit annual reports which identify the total amount of natural gas (in million cubic feet) and No. 2 fuel oil (in gallons) combusted in emissions units B018 - B021. These reports shall be submitted by January 31 of each year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05)

5. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install number 14-05718, issued on 8/16/05: A.IV.1 - A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

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

1. Compliance with the emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined in accordance with Test Method 9, as set forth in "Appendix on Test Methods" in 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, except as specified by rule.

(Authority for term: OAC rule 3745-77-07(C)(1) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.b Emission Limitations:

When burning natural gas:

Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /mmBtu of actual heat input.

When burning No. 2 fuel oil:

Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rate:

3.74 TPY of PE/PM10.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (MM cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 7.6 lbs total PM/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 2 lbs PM/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 5.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018 through B021, combined, shall be summed over the rolling 12-month period to determine compliance with the annual emission limitation

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.c Emission Limitations:

When burning natural gas:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rate:

12.97 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 0.6 lbs SO<sub>2</sub>/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No.2 fuel oil, the emission limitations were based upon the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.3, Table 1.3-1 (9/98). Compliance with the lb/mmBtu emission limitation shall be based upon the record keeping in term and condition A.III.1.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 6.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018 through B021, combined, shall be summed over the rolling 12-month period to determine compliance with the annual emission limitation

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.d Emission Limitations:

When burning natural gas:

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.08 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.16 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rate:

39.90 TPY.

For the use of natural gas, the short term emissions limitation is based upon the emission unit's potential to emit and the manufacturer's guaranteed emissions data as provided in PTI application 14-05718 submitted on April 29, 2005.

For the use of number 2 fuel oil, the short term emissions limitation is based upon the emission unit's potential to emit and the manufacturer's guaranteed emissions data as provided in PTI application 14-05718 submitted on April 29, 2005.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 7.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018, B019, B020 and B021, combined, shall be summed over the rolling 12 month period to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(C))

## V. Testing Requirements (continued)

### 1.e Emission Limitations:

When burning natural gas:

Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Carbon Monoxide (CO) emissions shall not exceed 0.036 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rate:

38.06 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-1 (revised 7/98) emission factor of 84 lbs of CO/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 5 lbs of CO /1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 10.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018 through B021, combined, shall be summed over the rolling 12-month period to determine compliance with the annual emission limitation

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.f Emission Limitations:

When burning natural gas:

Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Organic Compound (OC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rate:

4.98 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 11 lbs of OC/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-3 (revised 9/98) emission factor of 0.556 lb of OC/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 25.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018 through B021, combined, shall be summed over the rolling 12-month period to determine compliance with the annual emission limitation

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

2. Compliance with the sulfur limitations in term and condition A.II.2. shall be demonstrated by the record keeping in term and condition A.III.1.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

3. Compliance with the fuel usage limitations in term and condition A.II.3. shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

4. Compliance with the fuel usage limitations in term and condition A.II.1. shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

5. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install number 14-05718, issued on 8/16/05: A.V.1.-A.V.4 The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

## VI. Miscellaneous Requirements

**None**

**B. State Enforceable Section**

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B018- 25.86 mmBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	None	None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** 25.86 mmBtu/hr Thermogenics Boiler 2 of 4 (B019)

**Activity Description:** Natural Gas/No. 2 fuel oil 25.86 mmBtu/hr Thermogenics Boiler 2 of 4 located at Central Plant.

#### A. State and Federally Enforceable Section

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

- The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B019- 25.86 mmBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	OAC rule 3745-31-05(A)(3) (PTI 14-05718)	<p>When burning natural gas:            Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb/mmBtu of actual heat input.</p> <p>Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.</p> <p>Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.08 lb/mmBtu of actual heat input.</p> <p>Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.</p> <p>Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.</p> <p>When burning No. 2 fuel oil:            Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.</p> <p>Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.</p> <p>Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.16 lb/mmBtu of actual heat input.</p> <p>Carbon Monoxide (CO) emissions</p>

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
		shall not exceed 0.026 lb/mmBtu of actual heat input.
		Organic Compound (OC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input.
		See terms and conditions, A.I.2.b, A.II.1 and A.II.2.
		The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), OAC rule 3745-21-08(B), OAC rule 3745-31-05(C), and 40 CFR Part 60 Subpart Dc.
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-18-06	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	40 CFR Part 60 Subpart Dc	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-21-08(B)	See term and condition A.I.2.c.
	OAC rule 3745-31-05(C) Synthetic Minor to avoid Major Modification New Source Review	See term and condition A.I.2.f and A.II.3.

**2. Additional Terms and Conditions**

- 2.a** The lb/mmBtu emission limitations outlined in term A.I.1, except for SO2 when firing No. 2 fuel oil, are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these emission limits.
- 2.b** The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rates based on a rolling 12-month summation:
  - 3.74 TPY of particulate matter (PM) and PM10;
  - 12.97 TPY of sulfur dioxide (SO2);
  - 38.06 TPY of carbon monoxide (CO); and
  - 4.98 TPY of organic compounds (OC).

## **2. Additional Terms and Conditions (continued)**

- 2.c** The permittee satisfies the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08 by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** 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.
- 2.e** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the visible emissions limitation, the mass emission limitations, the use of natural gas and/or ultra low sulfur (less than or equal to 0.05 weight percent sulfur) No. 2 fuel oil and the annual fuel usage restriction.
- 2.f** The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rates based on a rolling-12month summation:

39.90 TPY of nitrogen oxides (NO<sub>x</sub>).

## **II. Operational Restrictions**

1. The permittee shall burn only natural gas and/or No. 2 fuel oil in this emissions unit.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))
2. The quality of No. 2 fuel oil received for burning in this emissions unit shall have a combination of sulfur content and heat content sufficient to comply with the allowable sulfur dioxide emission limitation of 0.052 lb/mmBtu of actual heat input and a sulfur content limit of less than or equal to 0.05 percent sulfur by weight.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))
3. The maximum annual number 2 fuel oil usage in emissions units B018 through B021, combined shall not exceed 3,512,300 gallons based upon a rolling, 12-month summation of the monthly oil usage rates.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(C))

## **III. Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below.
  - a. Alternative 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

### III. Monitoring and/or Record Keeping Requirements (continued)

b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods, such as ASTM methods D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the director.

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

- a. the total combined amount of natural gas burned in emissions units B018 through B021, in cubic feet;
- b. the total combined amount of No. 2 fuel oil burned in emissions units B018 through B021, in gallons;
- c. the rolling, 12-month summation for the combined amount of natural gas burned, recorded in cubic feet, for emissions units B018 through B021;
- d. the rolling, 12-month summation for the combined amount of No.2 fuel oil burned, recorded in gallons, for emissions units B018 through B021;
- e. the rolling, 12-monthly summation emissions total, in tons, for PE/PM10, SO2, NOx, CO, and OC when burning any combination of fuels (the total amount of emissions calculated for the current month plus the total amount of emissions for the previous eleven calendar months), and
- f. the type and total amount of fuel, other than natural gas or No. 2 fuel oil, burned in this emissions unit.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05)

3. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install number 14-05718, issued on 8/16/05: A.III.1-A.III.2. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

### IV. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation and/or sulfur content limitation based upon the calculated sulfur dioxide emission rates from Section A.III.1 above. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

#### **IV. Reporting Requirements (continued)**

2. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas or No. 2 fuel oil. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. The permittee shall submit annual reports that specify the total particulate, PM10, SO2, OC, NOx, and CO emissions for this emissions unit for the previous calendar year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05)

4. The permittee shall submit annual reports which identify the total amount of natural gas (in million cubic feet) and No. 2 fuel oil (in gallons) combusted in emissions units B018 - B021. These reports shall be submitted by January 31 of each year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05)

5. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install number 14-05718, issued on 8/16/05: A.IV.1 - A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

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

1. Compliance with the emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined in accordance with Test Method 9, as set forth in "Appendix on Test Methods" in 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, except as specified by rule.

(Authority for term: OAC rule 3745-77-07(C)(1) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.b Emission Limitations:

When burning natural gas:

Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /mmBtu of actual heat input.

When burning No. 2 fuel oil:

Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rate:

3.74 TPY of PE/PM10.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (MM cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 7.6 lbs total PM/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 2 lbs PM/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 5.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018 through B021, combined, shall be summed over the rolling 12-month period to determine compliance with the annual emission limitation

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.c Emission Limitations:

When burning natural gas:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rate:

12.97 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 0.6 lbs SO<sub>2</sub>/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No.2 fuel oil, the emission limitations were based upon the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.3, Table 1.3-1 (9/98). Compliance with the lb/mmBtu emission limitation shall be based upon the record keeping in term and condition A.III.1.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 6.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018 through B021, combined, shall be summed over the rolling 12-month period to determine compliance with the annual emission limitation

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.d Emission Limitations:

When burning natural gas:

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.08 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.16 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rate:

39.90 TPY.

For the use of natural gas, the short term emissions limitation is based upon the emission unit's potential to emit and the manufacturer's guaranteed emissions data as provided in PTI application 14-05718 submitted on April 29, 2005.

For the use of number 2 fuel oil, the short term emissions limitation is based upon the emission unit's potential to emit and the manufacturer's guaranteed emissions data as provided in PTI application 14-05718 submitted on April 29, 2005.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 7.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018, B019, B020 and B021, combined, shall be summed over the rolling 12 month period to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(C))

## V. Testing Requirements (continued)

### 1.e Emission Limitations:

When burning natural gas:

Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Carbon Monoxide (CO) emissions shall not exceed 0.036 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rate:

38.06 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-1 (revised 7/98) emission factor of 84 lbs of CO/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 5 lbs of CO /1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 10.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018 through B021, combined, shall be summed over the rolling 12-month period to determine compliance with the annual emission limitation

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.f Emission Limitations:

When burning natural gas:

Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Organic Compound (OC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rate:

4.98 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 11 lbs of OC/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-3 (revised 9/98) emission factor of 0.556 lb of OC/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 25.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018 through B021, combined, shall be summed over the rolling 12-month period to determine compliance with the annual emission limitation

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

2. Compliance with the sulfur limitations in term and condition A.II.2. shall be demonstrated by the record keeping in term and condition A.III.1.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

3. Compliance with the fuel usage limitations in term and condition A.II.3. shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

4. Compliance with the fuel usage limitations in term and condition A.II.1. shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

5. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install number 14-05718, issued on 8/16/05: A.V.1.-A.V.4 The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

## VI. Miscellaneous Requirements

**None**

**B. State Enforceable Section**

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B019- 25.86 mmBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	None	None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** 25.86 mmBtu/hr Thermogenics Boiler 3 of 4 (B020)

**Activity Description:** Natural Gas/No. 2 fuel oil 25.86 mmBtu/hr Thermogenics Boiler 3 of 4 located at Central Plant.

#### A. State and Federally Enforceable Section

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

- The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B020- 25.86 mmBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	OAC rule 3745-31-05(A)(3) (PTI 14-05718)	When burning natural gas: Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb/mmBtu of actual heat input.
		Sulfur Dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.
		Nitrogen Oxides (NO <sub>x</sub> ) emissions shall not exceed 0.08 lb/mmBtu of actual heat input.
		Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.
		Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.
		When burning No. 2 fuel oil: Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.
		Sulfur Dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.
		Nitrogen Oxides (NO <sub>x</sub> ) emissions shall not exceed 0.16 lb/mmBtu of actual heat input.
		Carbon Monoxide (CO) emissions

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
		shall not exceed 0.026 lb/mmBtu of actual heat input.
		Organic Compound (OC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input.
		See terms and conditions, A.I.2.b, A.II.1 and A.II.2.
		The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), OAC rule 3745-21-08(B), OAC rule 3745-31-05(C), and 40 CFR Part 60 Subpart Dc.
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-18-06	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	40 CFR Part 60 Subpart Dc	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-21-08(B)	See term and condition A.I.2.c.
	OAC rule 3745-31-05(C) Synthetic Minor to avoid Major Modification New Source Review	See term and condition A.I.2.f and A.II.3.

**2. Additional Terms and Conditions**

- 2.a** The lb/mmBtu emission limitations outlined in term A.I.1, except for SO2 when firing No. 2 fuel oil, are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these emission limits.
- 2.b** The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rates based on a rolling 12-month summation:
  - 3.74 TPY of particulate matter (PM) and PM10;
  - 12.97 TPY of sulfur dioxide (SO2);
  - 38.06 TPY of carbon monoxide (CO); and
  - 4.98 TPY of organic compounds (OC).

## **2. Additional Terms and Conditions (continued)**

- 2.c** The permittee satisfies the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08 by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** 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.
- 2.e** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the visible emissions limitation, the mass emission limitations, the use of natural gas and/or ultra low sulfur (less than or equal to 0.05 weight percent sulfur) No. 2 fuel oil and the annual fuel usage restriction.
- 2.f** The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rates based on a rolling-12month summation:

39.90 TPY of nitrogen oxides (NO<sub>x</sub>).

## **II. Operational Restrictions**

1. The permittee shall burn only natural gas and/or No. 2 fuel oil in this emissions unit.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))
2. The quality of No. 2 fuel oil received for burning in this emissions unit shall have a combination of sulfur content and heat content sufficient to comply with the allowable sulfur dioxide emission limitation of 0.052 lb/mmBtu of actual heat input and a sulfur content limit of less than or equal to 0.05 percent sulfur by weight.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))
3. The maximum annual number 2 fuel oil usage in emissions units B018 through B021, combined shall not exceed 3,512,300 gallons based upon a rolling, 12-month summation of the monthly oil usage rates.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(C))

## **III. Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below.
  - a. Alternative 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

### III. Monitoring and/or Record Keeping Requirements (continued)

b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods, such as ASTM methods D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the director.

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

- a. the total combined amount of natural gas burned in emissions units B018 through B021, in cubic feet;
- b. the total combined amount of No. 2 fuel oil burned in emissions units B018 through B021, in gallons;
- c. the rolling, 12-month summation for the combined amount of natural gas burned, recorded in cubic feet, for emissions units B018 through B021;
- d. the rolling, 12-month summation for the combined amount of No.2 fuel oil burned, recorded in gallons, for emissions units B018 through B021;
- e. the rolling, 12-monthly summation emissions total, in tons, for PE/PM10, SO2, NOx, CO, and OC when burning any combination of fuels (the total amount of emissions calculated for the current month plus the total amount of emissions for the previous eleven calendar months), and
- f. the type and total amount of fuel, other than natural gas or No. 2 fuel oil, burned in this emissions unit.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05)

3. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install number 14-05718, issued on 8/16/05: A.III.1-A.III.2. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

### IV. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation and/or sulfur content limitation based upon the calculated sulfur dioxide emission rates from Section A.III.1 above. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

#### **IV. Reporting Requirements (continued)**

2. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas or No. 2 fuel oil. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. The permittee shall submit annual reports that specify the total particulate, PM10, SO<sub>2</sub>, OC, NO<sub>x</sub>, and CO emissions for this emissions unit for the previous calendar year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05)

4. The permittee shall submit annual reports which identify the total amount of natural gas (in million cubic feet) and No. 2 fuel oil (in gallons) combusted in emissions units B018 - B021. These reports shall be submitted by January 31 of each year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05)

5. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install number 14-05718, issued on 8/16/05: A.IV.1 - A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

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

1. Compliance with the emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined in accordance with Test Method 9, as set forth in "Appendix on Test Methods" in 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, except as specified by rule.

(Authority for term: OAC rule 3745-77-07(C)(1) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.b Emission Limitations:

When burning natural gas:

Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /mmBtu of actual heat input.

When burning No. 2 fuel oil:

Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rate:

3.74 TPY of PE/PM10.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (MM cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 7.6 lbs total PM/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 2 lbs PM/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 5.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018 through B021, combined, shall be summed over the rolling 12-month period to determine compliance with the annual emission limitation

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.c Emission Limitations:

When burning natural gas:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rate:

12.97 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 0.6 lbs SO<sub>2</sub>/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No.2 fuel oil, the emission limitations were based upon the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.3, Table 1.3-1 (9/98). Compliance with the lb/mmBtu emission limitation shall be based upon the record keeping in term and condition A.III.1.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 6.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018 through B021, combined, shall be summed over the rolling 12-month period to determine compliance with the annual emission limitation

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.d Emission Limitations:

When burning natural gas:

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.08 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.16 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rate:

39.90 TPY.

For the use of natural gas, the short term emissions limitation is based upon the emission unit's potential to emit and the manufacturer's guaranteed emissions data as provided in PTI application 14-05718 submitted on April 29, 2005.

For the use of number 2 fuel oil, the short term emissions limitation is based upon the emission unit's potential to emit and the manufacturer's guaranteed emissions data as provided in PTI application 14-05718 submitted on April 29, 2005.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 7.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018, B019, B020 and B021, combined, shall be summed over the rolling 12 month period to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(C))

## V. Testing Requirements (continued)

### 1.e Emission Limitations:

When burning natural gas:

Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Carbon Monoxide (CO) emissions shall not exceed 0.036 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rate:

38.06 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-1 (revised 7/98) emission factor of 84 lbs of CO/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 5 lbs of CO /1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 10.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018 through B021, combined, shall be summed over the rolling 12-month period to determine compliance with the annual emission limitation

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.f Emission Limitations:

When burning natural gas:

Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Organic Compound (OC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rate:

4.98 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 11 lbs of OC/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-3 (revised 9/98) emission factor of 0.556 lb of OC/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 25.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018 through B021, combined, shall be summed over the rolling 12-month period to determine compliance with the annual emission limitation

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

2. Compliance with the sulfur limitations in term and condition A.II.2. shall be demonstrated by the record keeping in term and condition A.III.1.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

3. Compliance with the fuel usage limitations in term and condition A.II.3. shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

4. Compliance with the fuel usage limitations in term and condition A.II.1. shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

5. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install number 14-05718, issued on 8/16/05: A.V.1.-A.V.4 The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

## VI. Miscellaneous Requirements

**None**

**B. State Enforceable Section**

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B020- 25.86 mmBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	None	None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** 25.86 mmBtu/hr Thermogenics Boiler 4 of 4 (B021)

**Activity Description:** Natural Gas/No. 2 fuel oil 25.86 mmBtu/hr Thermogenics Boiler 4 of 4 located at Central Plant.

#### A. State and Federally Enforceable Section

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

- The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B021- 25.86 mmBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	OAC rule 3745-31-05(A)(3) (PTI 14-05718)	<p>When burning natural gas:            Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb/mmBtu of actual heat input.</p> <p>Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.</p> <p>Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.08 lb/mmBtu of actual heat input.</p> <p>Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.</p> <p>Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.</p> <p>When burning No. 2 fuel oil:            Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.</p> <p>Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.</p> <p>Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.16 lb/mmBtu of actual heat input.</p> <p>Carbon Monoxide (CO) emissions</p>

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
		shall not exceed 0.026 lb/mmBtu of actual heat input.
		Organic Compound (OC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input.
		See terms and conditions, A.I.2.b, A.II.1 and A.II.2.
		The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), OAC rule 3745-21-08(B), OAC rule 3745-31-05(C), and 40 CFR Part 60 Subpart Dc.
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-18-06	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	40 CFR Part 60 Subpart Dc	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-21-08(B)	See term and condition A.I.2.c.
	OAC rule 3745-31-05(C) Synthetic Minor to avoid Major Modification New Source Review	See term and condition A.I.2.f and A.II.3.

**2. Additional Terms and Conditions**

- 2.a** The lb/mmBtu emission limitations outlined in term A.I.1, except for SO2 when firing No. 2 fuel oil, are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these emission limits.
- 2.b** The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rates based on a rolling 12-month summation:
  - 3.74 TPY of particulate matter (PM) and PM10;
  - 12.97 TPY of sulfur dioxide (SO2);
  - 38.06 TPY of carbon monoxide (CO); and
  - 4.98 TPY of organic compounds (OC).

## **2. Additional Terms and Conditions (continued)**

- 2.c** The permittee satisfies the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08 by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** 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.
- 2.e** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the visible emissions limitation, the mass emission limitations, the use of natural gas and/or ultra low sulfur (less than or equal to 0.05 weight percent sulfur) No. 2 fuel oil and the annual fuel usage restriction.
- 2.f** The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rates based on a rolling-12month summation:

39.90 TPY of nitrogen oxides (NO<sub>x</sub>).

## **II. Operational Restrictions**

1. The permittee shall burn only natural gas and/or No. 2 fuel oil in this emissions unit.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))
2. The quality of No. 2 fuel oil received for burning in this emissions unit shall have a combination of sulfur content and heat content sufficient to comply with the allowable sulfur dioxide emission limitation of 0.052 lb/mmBtu of actual heat input and a sulfur content limit of less than or equal to 0.05 percent sulfur by weight.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))
3. The maximum annual number 2 fuel oil usage in emissions units B018 through B021, combined shall not exceed 3,512,300 gallons based upon a rolling, 12-month summation of the monthly oil usage rates.  
  
(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(C))

## **III. Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below.
  - a. Alternative 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

### III. Monitoring and/or Record Keeping Requirements (continued)

b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods, such as ASTM methods D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the director.

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

- a. the total combined amount of natural gas burned in emissions units B018 through B021, in cubic feet;
- b. the total combined amount of No. 2 fuel oil burned in emissions units B018 through B021, in gallons;
- c. the rolling, 12-month summation for the combined amount of natural gas burned, recorded in cubic feet, for emissions units B018 through B021;
- d. the rolling, 12-month summation for the combined amount of No.2 fuel oil burned, recorded in gallons, for emissions units B018 through B021;
- e. the rolling, 12-monthly summation emissions total, in tons, for PE/PM10, SO2, NOx, CO, and OC when burning any combination of fuels (the total amount of emissions calculated for the current month plus the total amount of emissions for the previous eleven calendar months), and
- f. the type and total amount of fuel, other than natural gas or No. 2 fuel oil, burned in this emissions unit.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05)

3. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install number 14-05718, issued on 8/16/05: A.III.1-A.III.2. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

### IV. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation and/or sulfur content limitation based upon the calculated sulfur dioxide emission rates from Section A.III.1 above. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

#### **IV. Reporting Requirements (continued)**

2. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas or No. 2 fuel oil. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. The permittee shall submit annual reports that specify the total particulate, PM10, SO2, OC, NOx, and CO emissions for this emissions unit for the previous calendar year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05)

4. The permittee shall submit annual reports which identify the total amount of natural gas (in million cubic feet) and No. 2 fuel oil (in gallons) combusted in emissions units B018 - B021. These reports shall be submitted by January 31 of each year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05)

5. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install number 14-05718, issued on 8/16/05: A.IV.1 - A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

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

1. Compliance with the emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined in accordance with Test Method 9, as set forth in "Appendix on Test Methods" in 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, except as specified by rule.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.b Emission Limitations:

When burning natural gas:

Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /mmBtu of actual heat input.

When burning No. 2 fuel oil:

Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rate:

3.74 TPY of PE/PM10.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (MM cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 7.6 lbs total PM/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 2 lbs PM/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 5.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018 through B021, combined, shall be summed over the rolling 12-month period to determine compliance with the annual emission limitation

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.c Emission Limitations:

When burning natural gas:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rate:

12.97 TPY.

### Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 0.6 lbs SO<sub>2</sub>/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No.2 fuel oil, the emission limitations were based upon the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.3, Table 1.3-1 (9/98). Compliance with the lb/mmBtu emission limitation shall be based upon the record keeping in term and condition A.III.1.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 6.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018 through B021, combined, shall be summed over the rolling 12-month period to determine compliance with the annual emission limitation

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.d Emission Limitations:

When burning natural gas:

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.08 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.16 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rate:

39.90 TPY.

For the use of natural gas, the short term emissions limitation is based upon the emission unit's potential to emit and the manufacturer's guaranteed emissions data as provided in PTI application 14-05718 submitted on April 29, 2005.

For the use of number 2 fuel oil, the short term emissions limitation is based upon the emission unit's potential to emit and the manufacturer's guaranteed emissions data as provided in PTI application 14-05718 submitted on April 29, 2005.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 7.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018, B019, B020 and B021, combined, shall be summed over the rolling 12 month period to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(C))

## V. Testing Requirements (continued)

### 1.e Emission Limitations:

When burning natural gas:

Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Carbon Monoxide (CO) emissions shall not exceed 0.036 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rate:

38.06 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-1 (revised 7/98) emission factor of 84 lbs of CO/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 5 lbs of CO /1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 10.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018 through B021, combined, shall be summed over the rolling 12-month period to determine compliance with the annual emission limitation

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.f Emission Limitations:

When burning natural gas:

Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.

When burning No. 2 fuel oil:

Organic Compound (OC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units B018 through B021 shall not exceed the following rate:

4.98 TPY.

Applicable Compliance Methods:

For the use of natural gas, compliance may be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 11 lbs of OC/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of No. 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-3 (revised 9/98) emission factor of 0.556 lb of OC/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 25.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018 through B021, combined, shall be summed over the rolling 12-month period to determine compliance with the annual emission limitation

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

2. Compliance with the sulfur limitations in term and condition A.II.2. shall be demonstrated by the record keeping in term and condition A.III.1.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

3. Compliance with the fuel usage limitations in term and condition A.II.3. shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

4. Compliance with the fuel usage limitations in term and condition A.II.1. shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

5. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install number 14-05718, issued on 8/16/05: A.V.1.-A.V.4 The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

## VI. Miscellaneous Requirements

**None**

**B. State Enforceable Section**

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B021- 25.86 mmBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	None	None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** 2.2 Megawatt Peaking Diesel Generator (P001)

**Activity Description:** Unit 1 of 3 Central Garage - 2.2 MW Package Generator Set consisting of diesel engine driven generator for peaking duty.

#### A. State and Federally Enforceable Section

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

- The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P001-2.2 Megawatt No.2 Fuel Oil (Diesel) fired Generator	OAC rule 3745-31-05(A)(3) (PTI 14-05139)	<p>Particulate Matter less than 10 microns (PM10) shall not exceed 0.026 lb /mmBtu of actual heat input.</p> <p>Sulfur Dioxide (SO2) emissions shall not exceed 0.051 lb/mmBtu of actual heat input.</p> <p>Nitrogen Oxides (NOx) emissions shall not exceed 61.62 lbs per hour.</p> <p>Carbon Monoxide (CO) emissions shall not exceed 2.2 lbs per hour.</p> <p>Organic Compound (OC) emissions shall not exceed 0.98 lb per hour.</p>
	OAC rule 3745-17-07(A)(1)	<p>See term and conditions A.I.2.a, A.I.2.b, and A.II.1-A.II.3.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), OAC rule 3745-21-08(B), OAC rule 3745-23-06(B), and OAC rule 3745-17-11(B)(5)(b).</p> <p>Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except as specified by rule.</p>
	OAC rule 3745-17-11(B)(5)(b)	0.062 lb particulate emissions (PE)/mmBtu of actual heat input.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC rule 3745-18-06(D)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-21-08(B)	See term and condition A.I.2.c.
	OAC rule 3745-31-13(D)(1)	See term and condition A.I.2.d.

**2. Additional Terms and Conditions**

**2.a** The lbs/hr and lb/mmBtu emission limitations outlined in term A.I.1, except for SO<sub>2</sub>, are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these emission limits.

**2.b** The maximum total annual emissions from emissions units P001 through P003 shall not exceed the following rates:

1.5 TPY of particulate emissions (PE);

0.63 TPY of PM<sub>10</sub>;

1.21 TPY of sulfur dioxide (SO<sub>2</sub>);

70.24 TPY of nitrogen oxides (NO<sub>x</sub>);

6.40 TPY of carbon monoxide (CO); and

2.61 TPY of organic compounds (OC).

**2.c** The permittee satisfies the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08 by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

**2.d** As a non-profit health institution, the permittee requested and received a discretionary exemption from the Director in a letter dated January 6, 2005, to exempt this emissions unit from the PSD requirements contained in OAC rules 3745-31-10 through 3745-31-20.

**II. Operational Restrictions**

**1.** The permittee shall burn only No. 2 fuel oil in this emissions unit.

(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))

**2.** The quality of No. 2 fuel oil received for burning in this emissions unit shall have a combination of sulfur content and heat content sufficient to comply with the allowable sulfur dioxide emission limitation of 0.051 lb/mmBtu of actual heat input and a sulfur content limit of less than or equal to 0.05 percent sulfur by weight.

(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))

## II. Operational Restrictions (continued)

3. The maximum combined No. 2 fuel usage in emissions units P001 through P003 shall not exceed 350,000 gallons per year.

(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))

## III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below.

- a. Alternative 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

- b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods, such as ASTM methods D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the director.

2. The permittee shall maintain monthly records of the following information:
  - a. the total amount of No. 2 fuel oil burned in this emissions unit, recorded in gallons;
  - b. the total combined monthly amount of No. 2 fuel oil burned, recorded in gallons, for emissions units P001 through P003;
  - c. the total combined calculated emissions of the PE/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO and OC emissions, recorded in tons per year for emissions units P001 through P003; and
  - d. the type and total amount of fuel, other than No. 2 fuel oil, burned in this emissions unit.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

### III. Monitoring and/or Record Keeping Requirements (continued)

3. The permittee shall perform daily checks, when the emissions unit is in operation in peaking mode operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emission incident; and
  - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

4. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install number 14-05139, issued on 4/19/05: A.III.1-A.III.3. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

### IV. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation and/or sulfur content limitation based upon the calculated sulfur dioxide emission rates from Section A.III.1 above. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

2. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas or No. 2 fuel oil. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. The permittee shall submit annual reports that specify the total particulate, PM10, SO2, OC, NOx, and CO emissions for this emissions unit for the previous calendar year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

#### **IV. Reporting Requirements (continued)**

4. The permittee shall submit annual reports which identify the total amount of No. 2 fuel oil (in gallons) combusted in emissions units P001 - P003. These reports shall be submitted by January 31 of each year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

5. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month periods.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

6. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install # 14-05139, issued on 4/19/05: A.IV.1 - A.IV.5. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

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

1. Compliance with the emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined in accordance with Test Method 9, as set forth in "Appendix on Test Methods" in 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, except as specified by rule.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.b Emission Limitations:

Particulate Matter less than 10 microns (PM<sub>10</sub>) shall not exceed 0.026 lb/mmBtu of actual heat input.

Particulate Emissions (PE) shall not exceed 0.062 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units P001 through P003 shall not exceed the following rates:

1.5 TPY of PE; and  
0.63 TPY of PM<sub>10</sub>.

Applicable Compliance Method:

Compliance with the PE/PM<sub>10</sub> emissions limitations shall be demonstrated by the emission factors, and the operational parameters as submitted in PTI application 14-05139 submitted April 17, 2001 and revised on October 15, 2004.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 5 for PE, and Methods 1-4, 201 and 202 for PM<sub>10</sub>.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units P001 through P003 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

### 1.c Emission Limitations:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.051 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units P001 through P003 shall not exceed the following rate:

1.21 TPY SO<sub>2</sub>.

Applicable Compliance Methods:

Compliance with the SO<sub>2</sub> emissions limitations shall be demonstrated by the emission factors, and the operational parameters as submitted in PTI application 14-05139 submitted April 17, 2001 and revised on October 15, 2004. Compliance with the lb/mmBtu emission limitation shall be based upon the record keeping in term and condition A.III.1.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 6.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units P001-P003 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

**V. Testing Requirements (continued)**

**1.d** Emission Limitations:

Nitrogen Oxide (NO<sub>x</sub>) emissions shall not exceed 61.62 lbs of NO<sub>x</sub>/hr .

The maximum total annual emissions from emissions units P001 through P003 shall not exceed the following rate:

70.24 TPY NO<sub>x</sub>.

Applicable Compliance Methods:

Compliance with the NO<sub>x</sub> emissions limitations shall be demonstrated by the emission factors, and the operational parameters as submitted in PTI application 14-05139 submitted April 17, 2001 and revised on October 15, 2004.

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 7.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units P001-P003 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

**1.e** Emission Limitations:

Carbon Monoxide (CO) emissions shall not exceed 2.2 lbs of CO/hr .

The maximum total annual emissions from emissions units P001 through P003 shall not exceed the following rate:

6.40 TPY CO.

Applicable Compliance Methods:

Compliance with the CO emissions limitations shall be demonstrated by the emission factors, and the operational parameters as submitted in PTI application 14-05139 submitted April 17, 2001 and revised on October 15, 2004.

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 10.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units P001-P003 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.f Emission Limitations:

Organic Compound (OC) emissions shall not exceed 0.98 lb of OC/hr.

The maximum total annual emissions from emissions units P001 through P003 shall not exceed the following rate:

2.61 TPY OC.

Applicable Compliance Methods:

Compliance with the OC emissions limitations shall be demonstrated by the emission factors, and the operational parameters as submitted in PTI application 14-05139 submitted April 17, 2001 and revised on October 15, 2004.

If required, the permittee shall demonstrate compliance with the lb/hr emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 25.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units P001-P003 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

2. Compliance with the sulfur limitations in term and condition A.II.2 shall be demonstrated by the record keeping in term and condition A.III.1.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

3. Compliance with the fuel usage limitations in term and condition A.II.3. shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

4. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install number 14-05139, issued on 4/19/05: A.V.1.-A.V.3. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

## VI. Miscellaneous Requirements

**None**

**B. State Enforceable Section**

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P001-2.2 Megawatt No.2 Fuel Oil (Diesel) fired Generator	None	None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** 2.2 Megawatt Peaking Diesel Generator (P002)

**Activity Description:** Unit 2 of 3 Central Garage - 2.2 MW Package Generator Set consisting of diesel engine driven generator for peaking duty.

#### A. State and Federally Enforceable Section

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

- The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P002-2.2 Megawatt No.2 Fuel Oil (Diesel) fired Generator	OAC rule 3745-31-05(A)(3) (PTI 14-05139)	<p>Particulate Matter less than 10 microns (PM10) shall not exceed 0.026 lb /mmBtu of actual heat input.</p> <p>Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.051 lb/mmBtu of actual heat input.</p> <p>Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 61.62 lbs per hour.</p> <p>Carbon Monoxide (CO) emissions shall not exceed 2.2 lbs per hour.</p> <p>Organic Compound (OC) emissions shall not exceed 0.98 lb per hour.</p> <p>See term and conditions A.I.2.a, A.I.2.b, and A.II.1-A.II.3.</p>
	OAC rule 3745-17-07(A)(1)	<p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), OAC rule 3745-21-08(B), OAC rule 3745-23-06(B), and OAC rule 3745-17-11(B)(5)(b).</p> <p>Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except as specified by rule.</p>
	OAC rule 3745-17-11(B)(5)(b)	0.062 lb particulate emissions (PE)/mmBtu of actual heat input.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC rule 3745-18-06(D)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-21-08(B)	See term and condition A.I.2.c.
	OAC rule 3745-31-13(D)(1)	See term and condition A.I.2.d.

**2. Additional Terms and Conditions**

**2.a** The lbs/hr and lb/mmBtu emission limitations outlined in term A.I.1, except for SO<sub>2</sub>, are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these emission limits.

**2.b** The maximum total annual emissions from emissions units P001 through P003 shall not exceed the following rates:

1.5 TPY of particulate emissions (PE);

0.63 TPY of PM<sub>10</sub>;

1.21 TPY of sulfur dioxide (SO<sub>2</sub>);

70.24 TPY of nitrogen oxides (NO<sub>x</sub>);

6.40 TPY of carbon monoxide (CO); and

2.61 TPY of organic compounds (OC).

**2.c** The permittee satisfies the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08 by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

**2.d** As a non-profit health institution, the permittee requested and received a discretionary exemption from the Director in a letter dated January 6, 2005, to exempt this emissions unit from the PSD requirements contained in OAC rules 3745-31-10 through 3745-31-20.

**II. Operational Restrictions**

**1.** The permittee shall burn only No. 2 fuel oil in this emissions unit.

(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))

**2.** The quality of No. 2 fuel oil received for burning in this emissions unit shall have a combination of sulfur content and heat content sufficient to comply with the allowable sulfur dioxide emission limitation of 0.051 lb/mmBtu of actual heat input and a sulfur content limit of less than or equal to 0.05 percent sulfur by weight.

(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))

## II. Operational Restrictions (continued)

3. The maximum combined No. 2 fuel usage in emissions units P001 through P003 shall not exceed 350,000 gallons per year.

(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))

## III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below.

- a. Alternative 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

- b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods, such as ASTM methods D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the director.

2. The permittee shall maintain monthly records of the following information:
  - a. the total amount of No. 2 fuel oil burned in this emissions unit, recorded in gallons;
  - b. the total combined monthly amount of No. 2 fuel oil burned, recorded in gallons, for emissions units P001 through P003;
  - c. the total combined calculated emissions of the PE/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO and OC emissions, recorded in tons per year for emissions units P001 through P003; and
  - d. the type and total amount of fuel, other than No. 2 fuel oil, burned in this emissions unit.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

### III. Monitoring and/or Record Keeping Requirements (continued)

3. The permittee shall perform daily checks, when the emissions unit is in operation in peaking mode operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emission incident; and
  - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

4. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install number 14-05139, issued on 4/19/05: A.III.1-A.III.3. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

### IV. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation and/or sulfur content limitation based upon the calculated sulfur dioxide emission rates from Section A.III.1 above. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

2. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas or No. 2 fuel oil. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. The permittee shall submit annual reports that specify the total particulate, PM10, SO<sub>2</sub>, OC, NO<sub>x</sub>, and CO emissions for this emissions unit for the previous calendar year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

#### **IV. Reporting Requirements (continued)**

4. The permittee shall submit annual reports which identify the total amount of No. 2 fuel oil (in gallons) combusted in emissions units P001 - P003. These reports shall be submitted by January 31 of each year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

5. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month periods.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

6. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install # 14-05139, issued on 4/19/05: A.IV.1 - A.IV.5. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

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

1. Compliance with the emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined in accordance with Test Method 9, as set forth in "Appendix on Test Methods" in 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, except as specified by rule.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.b Emission Limitations:

Particulate Matter less than 10 microns (PM10) shall not exceed 0.026 lb/mmBtu of actual heat input.

Particulate Emissions (PE) shall not exceed 0.062 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units P001 through P003 shall not exceed the following rates:

1.5 TPY of PE; and  
0.63 TPY of PM10.

Applicable Compliance Method:

Compliance with the PE/PM10 emissions limitations shall be demonstrated by the emission factors, and the operational parameters as submitted in PTI application 14-05139 submitted April 17, 2001 and revised on October 15, 2004.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 5 for PE, and Methods 1-4, 201 and 202 for PM10.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units P001 through P003 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

### 1.c Emission Limitations:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.051 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units P001 through P003 shall not exceed the following rate:

1.21 TPY SO<sub>2</sub>.

Applicable Compliance Methods:

Compliance with the SO<sub>2</sub> emissions limitations shall be demonstrated by the emission factors, and the operational parameters as submitted in PTI application 14-05139 submitted April 17, 2001 and revised on October 15, 2004. Compliance with the lb/mmBtu emission limitation shall be based upon the record keeping in term and condition A.III.1.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 6.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units P001-P003 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

**V. Testing Requirements (continued)**

**1.d** Emission Limitations:

Nitrogen Oxide (NO<sub>x</sub>) emissions shall not exceed 61.62 lbs of NO<sub>x</sub>/hr .

The maximum total annual emissions from emissions units P001 through P003 shall not exceed the following rate:

70.24 TPY NO<sub>x</sub>.

Applicable Compliance Methods:

Compliance with the NO<sub>x</sub> emissions limitations shall be demonstrated by the emission factors, and the operational parameters as submitted in PTI application 14-05139 submitted April 17, 2001 and revised on October 15, 2004.

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 7.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units P001-P003 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

**1.e** Emission Limitations:

Carbon Monoxide (CO) emissions shall not exceed 2.2 lbs of CO/hr .

The maximum total annual emissions from emissions units P001 through P003 shall not exceed the following rate:

6.40 TPY CO.

Applicable Compliance Methods:

Compliance with the CO emissions limitations shall be demonstrated by the emission factors, and the operational parameters as submitted in PTI application 14-05139 submitted April 17, 2001 and revised on October 15, 2004.

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 10.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units P001-P003 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.f Emission Limitations:

Organic Compound (OC) emissions shall not exceed 0.98 lb of OC/hr.

The maximum total annual emissions from emissions units P001 through P003 shall not exceed the following rate:

2.61 TPY OC.

### Applicable Compliance Methods:

Compliance with the OC emissions limitations shall be demonstrated by the emission factors, and the operational parameters as submitted in PTI application 14-05139 submitted April 17, 2001 and revised on October 15, 2004.

If required, the permittee shall demonstrate compliance with the lb/hr emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 25.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units P001-P003 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

2. Compliance with the sulfur limitations in term and condition A.II.2 shall be demonstrated by the record keeping in term and condition A.III.1.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

3. Compliance with the fuel usage limitations in term and condition A.II.3. shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

4. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install number 14-05139, issued on 4/19/05: A.V.1.-A.V.3. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

## VI. Miscellaneous Requirements

**None**

**B. State Enforceable Section**

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P002-2.2 Megawatt No.2 Fuel Oil (Diesel) fired Generator	None	None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** 2.2 Megawatt Peaking Diesel Generator (P003)

**Activity Description:** Unit 3 of 3 Central Garage - 2.2 MW Package Generator Set consisting of diesel engine driven generator for peaking duty.

#### A. State and Federally Enforceable Section

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

- The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P003-2.2 Megawatt No.2 Fuel Oil (Diesel) fired Generator	OAC rule 3745-31-05(A)(3) (PTI 14-05139)	<p>Particulate Matter less than 10 microns (PM10) shall not exceed 0.026 lb /mmBtu of actual heat input.</p> <p>Sulfur Dioxide (SO2) emissions shall not exceed 0.051 lb/mmBtu of actual heat input.</p> <p>Nitrogen Oxides (NOx) emissions shall not exceed 61.62 lbs per hour.</p> <p>Carbon Monoxide (CO) emissions shall not exceed 2.2 lbs per hour.</p> <p>Organic Compound (OC) emissions shall not exceed 0.98 lb per hour.</p> <p>See term and conditions A.I.2.a, A.I.2.b, and A.II.1-A.II.3.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), OAC rule 3745-21-08(B), OAC rule 3745-23-06(B), and OAC rule 3745-17-11(B)(5)(b).</p>
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-11(B)(5)(b)	0.062 lb particulate emissions (PE)/mmBtu of actual heat input.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC rule 3745-18-06(D)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-21-08(B)	See term and condition A.I.2.c.
	OAC rule 3745-31-13(D)(1)	See term and condition A.I.2.d.

**2. Additional Terms and Conditions**

**2.a** The lbs/hr and lb/mmBtu emission limitations outlined in term A.I.1, except for SO<sub>2</sub>, are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these emission limits.

**2.b** The maximum total annual emissions from emissions units P001 through P003 shall not exceed the following rates:

1.5 TPY of particulate emissions (PE);

0.63 TPY of PM<sub>10</sub>;

1.21 TPY of sulfur dioxide (SO<sub>2</sub>);

70.24 TPY of nitrogen oxides (NO<sub>x</sub>);

6.40 TPY of carbon monoxide (CO); and

2.61 TPY of organic compounds (OC).

**2.c** The permittee satisfies the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08 by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

**2.d** As a non-profit health institution, the permittee requested and received a discretionary exemption from the Director in a letter dated January 6, 2005, to exempt this emissions unit from the PSD requirements contained in OAC rules 3745-31-10 through 3745-31-20.

**II. Operational Restrictions**

**1.** The permittee shall burn only No. 2 fuel oil in this emissions unit.

(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))

**2.** The quality of No. 2 fuel oil received for burning in this emissions unit shall have a combination of sulfur content and heat content sufficient to comply with the allowable sulfur dioxide emission limitation of 0.051 lb/mmBtu of actual heat input and a sulfur content limit of less than or equal to 0.05 percent sulfur by weight.

(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))

## II. Operational Restrictions (continued)

3. The maximum combined No. 2 fuel usage in emissions units P001 through P003 shall not exceed 350,000 gallons per year.

(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))

## III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below.

- a. Alternative 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

- b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods, such as ASTM methods D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the director.

2. The permittee shall maintain monthly records of the following information:
  - a. the total amount of No. 2 fuel oil burned in this emissions unit, recorded in gallons;
  - b. the total combined monthly amount of No. 2 fuel oil burned, recorded in gallons, for emissions units P001 through P003;
  - c. the total combined calculated emissions of the PE/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO and OC emissions, recorded in tons per year for emissions units P001 through P003; and
  - d. the type and total amount of fuel, other than No. 2 fuel oil, burned in this emissions unit.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

### III. Monitoring and/or Record Keeping Requirements (continued)

3. The permittee shall perform daily checks, when the emissions unit is in operation in peaking mode operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emission incident; and
  - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

4. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install number 14-05139, issued on 4/19/05: A.III.1-A.III.3. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

### IV. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation and/or sulfur content limitation based upon the calculated sulfur dioxide emission rates from Section A.III.1 above. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

2. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas or No. 2 fuel oil. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. The permittee shall submit annual reports that specify the total particulate, PM10, SO2, OC, NOx, and CO emissions for this emissions unit for the previous calendar year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

#### **IV. Reporting Requirements (continued)**

4. The permittee shall submit annual reports which identify the total amount of No. 2 fuel oil (in gallons) combusted in emissions units P001 - P003. These reports shall be submitted by January 31 of each year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

5. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month periods.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

6. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install # 14-05139, issued on 4/19/05: A.IV.1 - A.IV.5. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

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

1. Compliance with the emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined in accordance with Test Method 9, as set forth in "Appendix on Test Methods" in 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, except as specified by rule.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.b Emission Limitations:

Particulate Matter less than 10 microns (PM10) shall not exceed 0.026 lb/mmBtu of actual heat input.

Particulate Emissions (PE) shall not exceed 0.062 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units P001 through P003 shall not exceed the following rates:

1.5 TPY of PE; and  
0.63 TPY of PM10.

Applicable Compliance Method:

Compliance with the PE/PM10 emissions limitations shall be demonstrated by the emission factors, and the operational parameters as submitted in PTI application 14-05139 submitted April 17, 2001 and revised on October 15, 2004.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 5 for PE, and Methods 1-4, 201 and 202 for PM10.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units P001 through P003 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

### 1.c Emission Limitations:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.051 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units P001 through P003 shall not exceed the following rate:

1.21 TPY SO<sub>2</sub>.

Applicable Compliance Methods:

Compliance with the SO<sub>2</sub> emissions limitations shall be demonstrated by the emission factors, and the operational parameters as submitted in PTI application 14-05139 submitted April 17, 2001 and revised on October 15, 2004. Compliance with the lb/mmBtu emission limitation shall be based upon the record keeping in term and condition A.III.1.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 6.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units P001-P003 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

**V. Testing Requirements (continued)**

**1.d** Emission Limitations:

Nitrogen Oxide (NOx) emissions shall not exceed 61.62 lbs of NOx/hr .

The maximum total annual emissions from emissions units P001 through P003 shall not exceed the following rate:

70.24 TPY NOx.

Applicable Compliance Methods:

Compliance with the NOx emissions limitations shall be demonstrated by the emission factors, and the operational parameters as submitted in PTI application 14-05139 submitted April 17, 2001 and revised on October 15, 2004.

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 7.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units P001-P003 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

**1.e** Emission Limitations:

Carbon Monoxide (CO) emissions shall not exceed 2.2 lbs of CO/hr .

The maximum total annual emissions from emissions units P001 through P003 shall not exceed the following rate:

6.40 TPY CO.

Applicable Compliance Methods:

Compliance with the CO emissions limitations shall be demonstrated by the emission factors, and the operational parameters as submitted in PTI application 14-05139 submitted April 17, 2001 and revised on October 15, 2004.

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 10.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units P001-P003 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.f Emission Limitations:

Organic Compound (OC) emissions shall not exceed 0.98 lb of OC/hr.

The maximum total annual emissions from emissions units P001 through P003 shall not exceed the following rate:

2.61 TPY OC.

Applicable Compliance Methods:

Compliance with the OC emissions limitations shall be demonstrated by the emission factors, and the operational parameters as submitted in PTI application 14-05139 submitted April 17, 2001 and revised on October 15, 2004.

If required, the permittee shall demonstrate compliance with the lb/hr emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 25.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units P001-P003 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

2. Compliance with the sulfur limitations in term and condition A.II.2 shall be demonstrated by the record keeping in term and condition A.III.1.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

3. Compliance with the fuel usage limitations in term and condition A.II.3. shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

4. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install number 14-05139, issued on 4/19/05: A.V.1.-A.V.3. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

## VI. Miscellaneous Requirements

**None**

**B. State Enforceable Section**

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P003-2.2 Megawatt No.2 Fuel Oil (Diesel) fired Generator	None	None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** 1.75 Megawatt Peaking Diesel Generator (P004)

**Activity Description:** Unit 1 of 2 North Garage - 1.75 MW Package Generator Set consisting of diesel engine driven generator for peaking duty

#### A. State and Federally Enforceable Section

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

- The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P004-1.75 Megawatt No.2 Fuel Oil (Diesel) fired Generator	OAC rule 3745-31-05(A)(3) (PTI 14-05139)	Particulate Matter less than 10 microns (PM10) shall not exceed 0.062 lb /mmBtu of actual heat input.
		Sulfur Dioxide (SO2) emissions shall not exceed 0.051 lb/mmBtu of actual heat input.
		Nitrogen Oxides (NOx) emissions shall not exceed 62.56 lbs per hour.
		Carbon Monoxide (CO) emissions shall not exceed 12.31 lbs per hour.
		Organic Compound (OC) emissions shall not exceed 1.27 lb per hour.
		See term and conditions A.I.2.a, A.I.2.b, and A.II.1-A.II.3.
		The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), OAC rule 3745-21-08(B), OAC rule 3745-23-06(B), and OAC rule 3745-17-11(B)(5)(b).
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-11(B)(5)(b)	0.062 lb particulate emissions (PE)/mmBtu of actual heat input.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC rule 3745-18-06(D)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-21-08(B)	See term and condition A.I.2.c.
	OAC rule 3745-31-13(D)(1)	See term and condition A.I.2.d.

**2. Additional Terms and Conditions**

**2.a** The lbs/hr and lb/mmBtu emission limitations outlined in term A.I.1, except for SO<sub>2</sub>, are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these emission limits.

**2.b** The maximum total annual emissions from the emissions unit shall not exceed the following rates:

0.24 TPY of PE/PM<sub>10</sub>;

0.20 TPY of sulfur dioxide (SO<sub>2</sub>);

27.9 TPY of nitrogen oxides (NO<sub>x</sub>);

8.3 TPY of carbon monoxide (CO); and

3.1 TPY of organic compounds (OC).

**2.c** The permittee satisfies the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08 by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

**2.d** As a non-profit health institution, the permittee requested and received a discretionary exemption from the Director in a letter dated January 6, 2005, to exempt this emissions unit from the PSD requirements contained in OAC rules 3745-31-10 through 3745-31-20.

**II. Operational Restrictions**

**1.** The permittee shall burn only No. 2 fuel oil in this emissions unit.

(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))

**2.** The quality of No. 2 fuel oil received for burning in this emissions unit shall have a combination of sulfur content and heat content sufficient to comply with the allowable sulfur dioxide emission limitation of 0.051 lb/mmBtu of actual heat input and a sulfur content limit of less than or equal to 0.05 percent sulfur by weight.

(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))

**3.** The maximum amount of No. 2 fuel oil used in this emission unit shall not exceed 57,500 gallons per year.

(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))

### III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below.

- a. Alternative 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

- b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods, such as ASTM methods D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the director.

2. The permittee shall maintain monthly records of the following information:
  - a. the total amount of No. 2 fuel oil burned in this emissions unit, recorded in gallons;
  - b. the calculated emissions of the PE/PM10, SO2, NOx, CO and OC emissions, recorded in tons per year for this emission unit; and
  - c. the type and total amount of fuel, other than No. 2 fuel oil, burned in this emissions unit.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

### III. Monitoring and/or Record Keeping Requirements (continued)

3. The permittee shall perform daily checks, when the emissions unit is in operation in peaking mode operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emission incident; and
  - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

4. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install number 14-05139, issued on 4/19/05: A.III.1-A.III.3. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

### IV. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation and/or sulfur content limitation based upon the calculated sulfur dioxide emission rates from Section A.III.1 above. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

2. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas or No. 2 fuel oil. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. The permittee shall submit annual reports that specify the total particulate, PM10, SO<sub>2</sub>, OC, NO<sub>x</sub>, and CO emissions for this emissions unit for the previous calendar year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

#### **IV. Reporting Requirements (continued)**

4. The permittee shall submit annual reports which identify the total amount of No. 2 fuel oil (in gallons) combusted in this emission unit. These reports shall be submitted by January 31 of each year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

5. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month periods.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

6. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install number 14-05139, issued on 4/19/05: A.IV.1 - A.IV.5. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

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

1. Compliance with the emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined in accordance with Test Method 9, as set forth in "Appendix on Test Methods" in 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, except as specified by rule.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

**V. Testing Requirements (continued)**

**1.b** Emission Limitations:

Particulate Emissions (PE) and Particulate Matter less than 10 microns (PM10) shall not exceed 0.062 lb/mmBtu of actual heat input and 0.24 TPY.

Applicable Compliance Methods:

Compliance with the PE/PM10 emissions limitations shall be demonstrated by the emission factors, and the operational parameters as submitted in PTI application 14-05139 submitted April 17, 2001 and revised on October 15, 2004.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 5 for PE, and Methods 1-4, 201 and 202 for PM10.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from this emission unit shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

**1.c** Emission Limitations:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.051 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units P001 through P003 shall not exceed the following rate:

1.21 TPY SO<sub>2</sub>.

Applicable Compliance Methods:

Compliance with the SO<sub>2</sub> emissions limitations shall be demonstrated by the emission factors, and the operational parameters as submitted in PTI application 14-05139 submitted April 17, 2001 and revised on October 15, 2004. Compliance with the lb/mmBtu emission limitation shall be based upon the record keeping in term and condition A.III.1.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 6.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units P001-P003 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.d Emission Limitations:

Nitrogen Oxide (NO<sub>x</sub>) emissions shall not exceed 62.56 lbs of NO<sub>x</sub>/hr and 27.9 TPY.

#### Applicable Compliance Methods:

Compliance with the NO<sub>x</sub> emissions limitations shall be demonstrated by the emission factors, and the operational parameters as submitted in PTI application 14-05139 submitted April 17, 2001 and revised on October 15, 2004.

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 7.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from this emission unit shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

### 1.e Emission Limitations:

Carbon Monoxide (CO) emissions shall not exceed 12.31 lbs of CO/hr and 8.3 TPY.

#### Applicable Compliance Methods:

Compliance with the CO emissions limitations shall be demonstrated by the emission factors, and the operational parameters as submitted in PTI application 14-05139 submitted April 17, 2001 and revised on October 15, 2004.

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 10.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from this emission unit shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

### 1.f Emission Limitations:

Organic Compound (OC) emissions shall not exceed 1.27 lbs of OC/hr and 3.1 TPY.

#### Applicable Compliance Methods:

Compliance with the OC emissions limitations shall be demonstrated by the emission factors, and the operational parameters as submitted in PTI application 14-05139 submitted April 17, 2001 and revised on October 15, 2004.

If required, the permittee shall demonstrate compliance with the lb/hr emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 25.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from this emission unit shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

**V. Testing Requirements (continued)**

2. Compliance with the sulfur limitations in term and condition A.II.2 shall be demonstrated by the record keeping in term and condition A.III.1.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

3. Compliance with the fuel usage limitations in term and condition A.II.3 shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

4. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install number 14-05139, issued on 4/19/05: A.V.1.-A.V.3. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

**VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P004-1.75 Megawatt No.2 Fuel Oil (Diesel) fired Generator	None	None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** 1.75 Megawatt Peaking Diesel Generator (P005)

**Activity Description:** Unit 2 of 2 North Garage - 1.75 MW Package Generator Set consisting of diesel engine driven generator for peaking duty

#### A. State and Federally Enforceable Section

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

- The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P005-1.75 Megawatt No.2 Fuel Oil (Diesel) fired Generator	OAC rule 3745-31-05(A)(3) (PTI 14-05139)	<p>Particulate Matter less than 10 microns (PM10) shall not exceed 0.062 lb /mmBtu of actual heat input.</p> <p>Sulfur Dioxide (SO2) emissions shall not exceed 0.051 lb/mmBtu of actual heat input.</p> <p>Nitrogen Oxides (NOx) emissions shall not exceed 62.56 lbs per hour.</p> <p>Carbon Monoxide (CO) emissions shall not exceed 12.31 lbs per hour.</p> <p>Organic Compound (OC) emissions shall not exceed 1.27 lb per hour.</p> <p>See term and conditions A.I.2.a, A.I.2.b, and A.II.1-A.II.3.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), OAC rule 3745-21-08(B), OAC rule 3745-23-06(B), and OAC rule 3745-17-11(B)(5)(b).</p>
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-11(B)(5)(b)	0.062 lb particulate emissions (PE)/mmBtu of actual heat input.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC rule 3745-18-06(D)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-21-08(B)	See term and condition A.I.2.c.
	OAC rule 3745-31-13(D)(1)	See term and condition A.I.2.d.

**2. Additional Terms and Conditions**

**2.a** The lbs/hr and lb/mmBtu emission limitations outlined in term A.I.1, except for SO<sub>2</sub>, are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these emission limits.

**2.b** The maximum total annual emissions from the emissions unit shall not exceed the following rates:

0.24 TPY of PE/PM<sub>10</sub>;

0.20 TPY of sulfur dioxide (SO<sub>2</sub>);

27.9 TPY of nitrogen oxides (NO<sub>x</sub>);

8.3 TPY of carbon monoxide (CO); and

3.1 TPY of organic compounds (OC).

**2.c** The permittee satisfies the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08 by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

**2.d** As a non-profit health institution, the permittee requested and received a discretionary exemption from the Director in a letter dated January 6, 2005, to exempt this emissions unit from the PSD requirements contained in OAC rules 3745-31-10 through 3745-31-20.

**II. Operational Restrictions**

**1.** The permittee shall burn only No. 2 fuel oil in this emissions unit.

(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))

**2.** The quality of No. 2 fuel oil received for burning in this emissions unit shall have a combination of sulfur content and heat content sufficient to comply with the allowable sulfur dioxide emission limitation of 0.051 lb/mmBtu of actual heat input and a sulfur content limit of less than or equal to 0.05 percent sulfur by weight.

(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))

**3.** The maximum amount of No. 2 fuel oil used in this emission unit shall not exceed 57,500 gallons per year.

(Authority for term: OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3))

### III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below.

- a. Alternative 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

- b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods, such as ASTM methods D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the director.

2. The permittee shall maintain monthly records of the following information:
  - a. the total amount of No. 2 fuel oil burned in this emissions unit, recorded in gallons;
  - b. the calculated emissions of the PE/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO and OC emissions, recorded in tons per year for this emission unit; and
  - c. the type and total amount of fuel, other than No. 2 fuel oil, burned in this emissions unit.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

### III. Monitoring and/or Record Keeping Requirements (continued)

3. The permittee shall perform daily checks, when the emissions unit is in operation in peaking mode operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emission incident; and
  - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

4. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install number 14-05139, issued on 4/19/05: A.III.1-A.III.3. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

### IV. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation and/or sulfur content limitation based upon the calculated sulfur dioxide emission rates from Section A.III.1 above. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

2. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas or No. 2 fuel oil. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

3. The permittee shall submit annual reports that specify the total particulate, PM10, SO<sub>2</sub>, OC, NO<sub>x</sub>, and CO emissions for this emissions unit for the previous calendar year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

#### **IV. Reporting Requirements (continued)**

4. The permittee shall submit annual reports which identify the total amount of No. 2 fuel oil (in gallons) combusted in this emission unit. These reports shall be submitted by January 31 of each year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

5. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month periods.

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-31-05(A)(3))

6. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install number 14-05139, issued on 4/19/05: A.IV.1 - A.IV.5. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

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

1. Compliance with the emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined in accordance with Test Method 9, as set forth in "Appendix on Test Methods" in 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, except as specified by rule.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

**V. Testing Requirements (continued)**

**1.b** Emission Limitations:

Particulate Emissions (PE) and Particulate Matter less than 10 microns (PM10) shall not exceed 0.062 lb/mmBtu of actual heat input and 0.24 TPY.

Applicable Compliance Methods:

Compliance with the PE/PM10 emissions limitations shall be demonstrated by the emission factors, and the operational parameters as submitted in PTI application 14-05139 submitted April 17, 2001 and revised on October 15, 2004.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 5 for PE, and Methods 1-4, 201 and 202 for PM10.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from this emission unit shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

**1.c** Emission Limitations:

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.051 lb/mmBtu of actual heat input.

The maximum total annual emissions from emissions units P001 through P003 shall not exceed the following rate:

1.21 TPY SO<sub>2</sub>.

Applicable Compliance Methods:

Compliance with the SO<sub>2</sub> emissions limitations shall be demonstrated by the emission factors, and the operational parameters as submitted in PTI application 14-05139 submitted April 17, 2001 and revised on October 15, 2004. Compliance with the lb/mmBtu emission limitation shall be based upon the record keeping in term and condition A.III.1.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 6.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units P001-P003 shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

## V. Testing Requirements (continued)

### 1.d Emission Limitations:

Nitrogen Oxide (NO<sub>x</sub>) emissions shall not exceed 62.56 lbs of NO<sub>x</sub>/hr and 27.9 TPY.

#### Applicable Compliance Methods:

Compliance with the NO<sub>x</sub> emissions limitations shall be demonstrated by the emission factors, and the operational parameters as submitted in PTI application 14-05139 submitted April 17, 2001 and revised on October 15, 2004.

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 7.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from this emission unit shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

### 1.e Emission Limitations:

Carbon Monoxide (CO) emissions shall not exceed 12.31 lbs of CO/hr and 8.3 TPY.

#### Applicable Compliance Methods:

Compliance with the CO emissions limitations shall be demonstrated by the emission factors, and the operational parameters as submitted in PTI application 14-05139 submitted April 17, 2001 and revised on October 15, 2004.

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 10.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from this emission unit shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

### 1.f Emission Limitations:

Organic Compound (OC) emissions shall not exceed 1.27 lbs of OC/hr and 3.1 TPY.

#### Applicable Compliance Methods:

Compliance with the OC emissions limitations shall be demonstrated by the emission factors, and the operational parameters as submitted in PTI application 14-05139 submitted April 17, 2001 and revised on October 15, 2004.

If required, the permittee shall demonstrate compliance with the lb/hr emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 25.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from this emission unit shall be summed over the calendar year to determine compliance with the annual emission limitation.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

**V. Testing Requirements (continued)**

2. Compliance with the sulfur limitations in term and condition A.II.2 shall be demonstrated by the record keeping in term and condition A.III.1.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

3. Compliance with the fuel usage limitations in term and condition A.II.3 shall be demonstrated by the record keeping in term and condition A.III.2.

(Authority for term: OAC rule 3745-77-07(C)(1)) and 3745-31-05(A)(3))

4. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install number 14-05139, issued on 4/19/05: A.V.1.-A.V.3. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

(Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii))

**VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

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

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P005-1.75 Megawatt No.2 Fuel Oil (Diesel) fired Generator	None	None

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

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