



State of Ohio Environmental Protection Agency

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

CERTIFIED MAIL

Street Address:

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

Mailing Address:

Lazarus Gov.
Center

Application No: 14-05630

Fac ID: 1431071395

DATE: 3/3/2005

Childrens Hospital Medical Center
Thomas Kinman
3333 Burnet Avenue
Cincinnati, OH 45229-3039

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

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$4600** will be due. Please do not submit any payment now.

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

Sincerely,

Michael W. Ahern

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

CC: USEPA

HCDES

OH-KY-IN Regional Council of Gov.

KY

IN

HAMILTON COUNTY

PUBLIC NOTICE

**ISSUANCE OF DRAFT PERMIT TO INSTALL 14-05630 FOR AN AIR CONTAMINANT SOURCE FOR
Childrens Hospital Medical Center**

On 3/3/2005 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **Childrens Hospital Medical Center**, located at **3333 Burnet Avenue, Cincinnati, Ohio**.

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 14-05630:

Addition of ten natural gas/fuel oil fired boilers, and modification to five IC engine driven generators.

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

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



**Permit To Install
Terms and Conditions**

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

DRAFT PERMIT TO INSTALL 14-05630

Application Number: 14-05630
Facility ID: 1431071395
Permit Fee: **To be entered upon final issuance**
Name of Facility: Childrens Hospital Medical Center
Person to Contact: Thomas Kinman
Address: 3333 Burnet Avenue
Cincinnati, OH 45229-3039

Location of proposed air contaminant source(s) [emissions unit(s)]:
**3333 Burnet Avenue
Cincinnati, Ohio**

Description of proposed emissions unit(s):
Addition of ten natural gas/fuel oil fired boilers, and modification to five IC engine driven generators.

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

A. State and Federally Enforceable Permit To Install General Terms and Conditions**1. Monitoring and Related Recordkeeping and Reporting Requirements**

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.9 below if no deviations occurred during the quarter.

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- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
- iv. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

2. Scheduled Maintenance/Malfunction Reporting

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

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

3. Risk Management Plans

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

4. Title IV Provisions

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

5. Severability Clause

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

6. General Requirements

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and 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. 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.

7. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit To Install fees within 30 days after the issuance of this Permit To Install.

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any 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.

9. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

10. Permit To Operate Application

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete

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Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

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

12. Air Pollution Nuisance

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

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

1. Compliance Requirements

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

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

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

3. Permit Transfers

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

4. Termination of Permit To Install

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

Childrens Hospital Medical Center**Facility ID: 1431071395****PTI Application: 14-05630****Issued: To be entered upon final issuance****5. Construction of New Sources(s)**

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

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

6. Public Disclosure

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

7. Applicability

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

8. Construction Compliance Certification

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

9. Additional Reporting Requirements When There Are No Deviations of Federally

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Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

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

C. Permit To Install Summary of Allowable Emissions

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
PE	2.04
PM10	2.04
SO2	2.95
NOx	24.22
CO	15.41
OC	1.98

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Facility ID: 1431071395

Emissions Unit ID: B008

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

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

None

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

None

Child
PTI A

Emissions Unit ID: B008

Issued: To be entered upon final issuance

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
---------------------------------------------------	--------------------------------------

B008 - 25.2 MMBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	OAC rule 3745-31-05(A)(3)
--------------------------------------------------------------------	---------------------------

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	Applicable Emissions <u>Limitations/Control Measures</u>	actual heat input
OAC rule 3745-17-10(B)(1)	When burning natural gas:	Carbon Monoxide (CO) emissions shall not exceed 0.036 lb/MMBtu of actual heat input
OAC rule 3745-18-06	Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /MMBtu of actual heat input	Organic Compound (OC) emissions shall not exceed 0.004 lb/MMBtu of actual heat input
40 CFR Part 60 Subpart Dc	Sulfur Dioxide (SO2) emissions shall not exceed 0.0006 lb/MMBtu of actual heat input	See terms and conditions, A.I.2.b, and A.II.1 through A.II.3.
OAC rule 3745-21-08(B)	Nitrogen Oxides (NOx) emissions shall not exceed 0.10 lb/MMBtu of actual heat input	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 3745-23-06(B)		40 CFR Part 60 Subpart Dc.
OAC rule 3745-31-13(D)(1)	Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/MMBtu of actual heat input	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except as specified by rule.
	Organic Compound (OC) emissions shall not exceed 0.011 lb/MMBtu of actual heat input	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	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 emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	Sulfur Dioxide (SO2) emissions shall not exceed 0.052 lb/MMBtu of actual heat input	See term and condition A.III.2 See term and condition A.I.2.c
	Nitrogen Oxides (NOx) emissions shall not exceed 0.15 lb/MMBtu of	See term and condition A.I.2.d

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Facility ID: 1431071395

Emissions Unit ID: B008

See term and condition

A.I.2.e

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

- 2.a** The lb/MMBtu emission limitations outlined in term A.I.1, except for SO₂, 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 (NO_x)
- 15.41 TPY of carbon monoxide (CO)
- 1.98 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. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.
- 2.d** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).
- 2.e** As a non-profit education 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.f** The application and enforcement of the provisions of the New Source Performance

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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.g** 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.
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.
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.

III. Monitoring and/or Recordkeeping 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 lb/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, and the quality of the oil for those loads 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

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Emissions Unit ID: B008

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 lb/mmBtu). [The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F)].

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- c. 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 and D4294), 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, SO₂, NO_x, 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.

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.
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.
3. The permittee shall submit annual reports that specify the total particulate, PM10, SO₂, VOC, NO_x, and CO emissions for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

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4. Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:
 - a. Construction date (no later than 30 days after such date);
 - b. Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
 - c. Actual start-up date (within 15 days after such date);
 - d. Date of performance testing (if required, at least 30 days prior to testing);

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P. O. Box 163669
Columbus, Ohio 43216-3669

and

Department of Environmental Services
250 William Howard Taft Road
Cincinnati, Ohio 45219

5. 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.

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 method(s):
 - a. Emission Limitation:

20% opacity, as a six-minute average

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

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Stationary Sources"), as such Appendix existed on July 1, 2002, except as specified by rule.

b. Emission Limitations:

0.0076 lb PE/PM10 per MMBtu of actual heat input (Natural gas firing)

0.015 lb PE/PM10 per MMBtu of actual heat input (No. 2 fuel oil firing)

2.04 TPY of PE/PM10 (combined emissions from B008-B017)

Applicable compliance method:

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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

c. Emission Limitations:

0.0006 lb SO₂/MMBtu of actual heat input (Natural gas firing)

0.052 lb SO₂/MMBtu of actual heat input (No. 2 fuel oil firing)

2.95 TPY SO₂ (combined emissions from B008-B017)

Applicable compliance method:

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 SO₂/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

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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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

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d. Emission Limitations:

0.10 lb NO_x/MMBtu of actual heat input (Natural gas firing)
0.15 lb NO_x/MMBtu of actual heat input (No. 2 fuel oil firing)
24.22 TPY NO_x (combined emissions from B008-B017)

Applicable compliance method:

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 NO_x/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 NO_x /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 emission units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

e. Emission Limitations:

0.084 lb CO/MMBtu of actual heat input (Natural gas firing)
0.036 lb CO/MMBtu of actual heat input (No. 2 fuel oil firing)
15.41 TPY CO (combined emissions from B008-B017)

Applicable compliance method:

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 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 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

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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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

f. Emission Limitations:

0.011 lb OC/MMBtu of actual heat input (Natural gas firing)
0.004 lb OC/MMBtu of actual heat input (No. 2 fuel oil firing)
1.98 TPY OC (combined emissions from B008-B017)

Applicable compliance method:

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 5.5 lbs VOC/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 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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

3. 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
4. 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.

5. 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.

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VI. Miscellaneous Requirements

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None

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Emissions Unit ID: B008

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Emissions Unit ID: B009

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
B009 - 25.2 MMBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-17-07(A)(1)

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	<u>Applicable Emissions Limitations/Control Measures</u>	
OAC rule 3745-17-10(B)(1)	When burning natural gas:	actual heat input Carbon Monoxide (CO) emissions shall not exceed 0.036 lb/MMBtu of actual heat input
OAC rule 3745-18-06	Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /MMBtu of actual heat input	Organic Compound (OC) emissions shall not exceed 0.004 lb/MMBtu of actual heat input
40 CFR Part 60 Subpart Dc	Sulfur Dioxide (SO2) emissions shall not exceed 0.0006 lb/MMBtu of actual heat input	See terms and conditions A.I.2.b, and A.II.1 through A.II.3.
OAC rule 3745-21-08(B)	Nitrogen Oxides (NOx) emissions shall not exceed 0.10 lb/MMBtu of actual heat input	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 40 CFR Part 60 Subpart Dc.
OAC rule 3745-23-06(B)		
OAC rule 3745-31-13(D)(1)	Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/MMBtu of actual heat input	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except as specified by rule.
	Organic Compound (OC) emissions shall not exceed 0.011 lb/MMBtu of actual heat input	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	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 emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
		See term and condition A.III.2
	Sulfur Dioxide (SO2) emissions shall not exceed 0.052 lb/MMBtu of actual heat input	See term and condition A.I.2.c
		See term and condition A.I.2.d
	Nitrogen Oxides (NOx) emissions shall not exceed 0.15 lb/MMBtu of	See term and condition A.I.2.e

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

- 2.a** The lb/MMBtu emission limitations outlined in term A.I.1, except for SO₂ 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 (NO_x)
- 15.41 TPY of carbon monoxide (CO)
- 1.98 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. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.
- 2.d** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).
- 2.e** As a non-profit education 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.f** The application and enforcement of the provisions of the New Source Performance

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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.g** 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.
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.
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.

III. Monitoring and/or Recordkeeping 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 lb/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, and the quality of the oil for those loads 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

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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 lb/mmBtu). [The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F)].

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- c. 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 and D4294), 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, SO₂, NO_x, 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.

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.
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.
3. The permittee shall submit annual reports that specify the total particulate, PM10, SO₂, VOC, NO_x, and CO emissions for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

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4. Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:
 - a. Construction date (no later than 30 days after such date);
 - b. Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
 - c. Actual start-up date (within 15 days after such date);
 - d. Date of performance testing (if required, at least 30 days prior to testing);

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P. O. Box 163669
Columbus, Ohio 43216-3669

and

Department of Environmental Services
250 William Howard Taft Road
Cincinnati, Ohio 45219

5. 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.

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 method(s):
 - a. Emission Limitation:

20% opacity, as a six-minute average

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

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Stationary Sources"), as such Appendix existed on July 1, 2002, except as specified by rule.

b. Emission Limitations:

0.0076 lb PE/PM10 per MMBtu of actual heat input (Natural gas firing)

0.015 lb PE/PM10 per MMBtu of actual heat input (No. 2 fuel oil firing)

2.04 TPY of PE/PM10 (combined emissions from B008-B017)

Applicable compliance method:

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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

c. Emission Limitations:

0.0006 lb SO₂/MMBtu of actual heat input (Natural gas firing)

0.052 lb SO₂/MMBtu of actual heat input (No. 2 fuel oil firing)

2.95 TPY SO₂ (combined emissions from B008-B017)

Applicable compliance method:

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 SO₂/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

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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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

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d. Emission Limitations:

0.10 lb NO_x/MMBtu of actual heat input (Natural gas firing)
0.15 lb NO_x/MMBtu of actual heat input (No. 2 fuel oil firing)
24.22 TPY NO_x (combined emissions from B008-B017)

Applicable compliance method:

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 NO_x/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 NO_x /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 emission units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

e. Emission Limitations:

0.084 lb CO/MMBtu of actual heat input (Natural gas firing)
0.036 lb CO/MMBtu of actual heat input (No. 2 fuel oil firing)
15.41 TPY CO (combined emissions from B008-B017)

Applicable compliance method:

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 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

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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 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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

f. Emission Limitations:

0.011 lb OC/MMBtu of actual heat input (Natural gas firing)
 0.004 lb OC/MMBtu of actual heat input (No. 2 fuel oil firing)
 1.98 TPY OC (combined emissions from B008-B017)

Applicable compliance method:

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 5.5 lbs VOC/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 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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

3. 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
4. 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.

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5. 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.

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VI. Miscellaneous Requirements

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None

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
B010 - 25.2 MMBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-17-07(A)(1)
	OAC rule 3745-17-10(B)(1)
	OAC rule 3745-18-06

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	Applicable Emissions <u>Limitations/Control Measures</u>	actual heat input
40 CFR Part 60 Subpart Dc	When burning natural gas:	Carbon Monoxide (CO) emissions shall not exceed 0.036 lb/MMBtu of actual heat input
OAC rule 3745-21-08(B)	Particulate Emissions (PE) and	Organic Compound (OC) emissions shall
OAC rule 3745-23-06(B)	emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /MMBtu of actual heat input	not exceed 0.004 lb/MMBtu of actual heat input
OAC rule 3745-31-13(D)(1)	Sulfur Dioxide (SO2) emissions shall not exceed 0.0006 lb/MMBtu of actual heat input	See terms and conditions A.I.2.b, and A.II.1 through A.II.3.
	Nitrogen Oxides (NOx) emissions shall not exceed 0.10 lb/MMBtu of actual heat input	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 40 CFR Part 60 Subpart Dc.
	Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/MMBtu of actual heat input	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except as specified by rule.
	Organic Compound (OC) emissions shall not exceed 0.011 lb/MMBtu of actual heat input	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	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 emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
		See term and condition A.III.2
	Sulfur Dioxide (SO2) emissions shall not exceed 0.052 lb/MMBtu of actual heat input	See term and condition A.I.2.c
		See term and condition A.I.2.d
	Nitrogen Oxides (NOx) emissions shall not exceed 0.15 lb/MMBtu of	See term and condition A.I.2.e

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

- 2.a** The lb/MMBtu emission limitations outlined in term A.I.1, except for SO₂ 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 (NO_x)
- 15.41 TPY of carbon monoxide (CO)
- 1.98 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. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.
- 2.d** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).
- 2.e** As a non-profit education 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.f** The application and enforcement of the provisions of the New Source Performance

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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.g 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.
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.
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.

III. Monitoring and/or Recordkeeping 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 lb/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, and the quality of the oil for those loads 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

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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 lb/mmBtu). [The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F)].

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- c. 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 and D4294), 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, SO₂, NO_x, 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.

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.
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.
3. The permittee shall submit annual reports that specify the total particulate, PM10, SO₂, VOC, NO_x, and CO emissions for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
4. Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:
 - a. Construction date (no later than 30 days after such date);

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- b. Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
- c. Actual start-up date (within 15 days after such date);
- d. Date of performance testing (if required, at least 30 days prior to testing);

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P. O. Box 163669
Columbus, Ohio 43216-3669

and

Department of Environmental Services
250 William Howard Taft Road
Cincinnati, Ohio 45219

- 5. 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.

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 method(s):
 - a. Emission Limitation:

20% opacity, as a six-minute average

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.
 - b. Emission Limitations:

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0.0076 lb PE/PM10 per MMBtu of actual heat input (Natural gas firing)
0.015 lb PE/PM10 per MMBtu of actual heat input (No. 2 fuel oil firing)
2.04 TPY of PE/PM10 (combined emissions from B008-B017)

Applicable compliance method:

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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

c. Emission Limitations:

0.0006 lb SO₂/MMBtu of actual heat input (Natural gas firing)
0.052 lb SO₂/MMBtu of actual heat input (No. 2 fuel oil firing)
2.95 TPY SO₂ (combined emissions from B008-B017)

Applicable compliance method:

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 SO₂/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

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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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

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d. Emission Limitations:

0.10 lb NO_x/MMBtu of actual heat input (Natural gas firing)
0.15 lb NO_x/MMBtu of actual heat input (No. 2 fuel oil firing)
24.22 TPY NO_x (combined emissions from B008-B017)

Applicable compliance method:

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 NO_x/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 NO_x /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 emission units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

e. Emission Limitations:

0.084 lb CO/MMBtu of actual heat input (Natural gas firing)
0.036 lb CO/MMBtu of actual heat input (No. 2 fuel oil firing)
15.41 TPY CO (combined emissions from B008-B017)

Applicable compliance method:

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 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

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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 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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

f. Emission Limitations:

0.011 lb OC/MMBtu of actual heat input (Natural gas firing)
 0.004 lb OC/MMBtu of actual heat input (No. 2 fuel oil firing)
 1.98 TPY OC (combined emissions from B008-B017)

Applicable compliance method:

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 5.5 lbs VOC/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 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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

3. 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
4. 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.

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5. 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.

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VI. Miscellaneous Requirements

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None

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
B011 - 12.0 MMBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-17-07(A)(1)

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	<u>Applicable Emissions Limitations/Control Measures</u>	
OAC rule 3745-17-10(B)(1)	When burning natural gas:	Organic Compound (OC) emissions shall not exceed 0.004 lb/MMBtu of actual heat input
OAC rule 3745-18-06	Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /MMBtu of actual heat input	See terms and conditions A.I.2.b, and A.II.1 through A.II.3.
40 CFR Part 60 Subpart Dc	Sulfur Dioxide (SO2) emissions shall not exceed 0.0006 lb/MMBtu of actual heat input	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 40 CFR Part 60 Subpart Dc.
OAC rule 3745-21-08(B)	Nitrogen Oxides (NOx) emissions shall not exceed 0.10 lb/MMBtu of actual heat input	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 3745-23-06(B)		
OAC rule 3745-31-13(D)(1)	Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/MMBtu of actual heat input	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	Organic Compound (OC) emissions shall not exceed 0.011 lb/MMBtu of actual heat input	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	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	See term and condition A.III.2 See term and condition A.I.2.c See term and condition A.I.2.d
	Sulfur Dioxide (SO2) emissions shall not exceed 0.052 lb/MMBtu of actual heat input	See term and condition A.I.2.e
	Nitrogen Oxides (NOx) emissions shall not exceed 0.15 lb/MMBtu of actual heat input	
	Carbon Monoxide (CO) emissions shall not exceed 0.036 lb/MMBtu of actual heat input	

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

- 2.a** The lb/MMBtu emission limitations outlined in term A.I.1, except for SO₂ 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 (NO_x)
- 15.41 TPY of carbon monoxide (CO)
- 1.98 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. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.
- 2.d** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).
- 2.e** As a non-profit education 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.f** The application and enforcement of the provisions of the New Source Performance

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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.g 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.
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.
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.

III. Monitoring and/or Recordkeeping 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 lb/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, and the quality of the oil for those loads 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

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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 lb/mmBtu). [The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F)].

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- c. 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 and D4294), 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, SO₂, NO_x, 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.

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.
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.
3. The permittee shall submit annual reports that specify the total particulate, PM10, SO₂, VOC, NO_x, and CO emissions for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

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4. Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:
 - a. Construction date (no later than 30 days after such date);
 - b. Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
 - c. Actual start-up date (within 15 days after such date);
 - d. Date of performance testing (if required, at least 30 days prior to testing);

Reports are to be sent to:

Ohio Environmental Protection Agency
 DAPC - Permit Management Unit
 P. O. Box 163669
 Columbus, Ohio 43216-3669

and

Department of Environmental Services
 250 William Howard Taft Road
 Cincinnati, Ohio 45219

5. 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.

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 method(s):
 - a. Emission Limitation:

20% opacity, as a six-minute average

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.
 - b. Emission Limitations:

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0.0076 lb PE/PM10 per MMBtu of actual heat input (Natural gas firing)
0.015 lb PE/PM10 per MMBtu of actual heat input (No. 2 fuel oil firing)
2.04 TPY of PE/PM10 (combined emissions from B008-B017)

Applicable compliance method:

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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

c. Emission Limitations:

0.0006 lb SO₂/MMBtu of actual heat input (Natural gas firing)
0.052 lb SO₂/MMBtu of actual heat input (No. 2 fuel oil firing)
2.95 TPY SO₂ (combined emissions from B008-B017)

Applicable compliance method:

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 SO₂/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

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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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

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d. Emission Limitations:

0.10 lb NO_x/MMBtu of actual heat input (Natural gas firing)
0.15 lb NO_x/MMBtu of actual heat input (No. 2 fuel oil firing)
24.22 TPY NO_x (combined emissions from B008-B017)

Applicable compliance method:

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 NO_x/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 NO_x /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 emission units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

e. Emission Limitations:

0.084 lb CO/MMBtu of actual heat input (Natural gas firing)
0.036 lb CO/MMBtu of actual heat input (No. 2 fuel oil firing)
15.41 TPY CO (combined emissions from B008-B017)

Applicable compliance method:

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 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

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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 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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

f. Emission Limitations:

0.011 lb OC/MMBtu of actual heat input (Natural gas firing)
0.004 lb OC/MMBtu of actual heat input (No. 2 fuel oil firing)
1.98 TPY OC (combined emissions from B008-B017)

Applicable compliance method:

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 5.5 lbs VOC/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 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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

3. Compliance with the sulfur limitations in term and condition A.II.2. shall be demonstrated by the

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record keeping in term and condition A.III.1

4. 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.
5. 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.

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VI. Miscellaneous Requirements

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None

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Emissions Unit ID: B011

Issued: To be entered upon final issuance**B. State Only Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

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

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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PTI A

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
B012 - 12.0 MMBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-17-07(A)(1)

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	Applicable Emissions <u>Limitations/Control Measures</u>	actual heat input
OAC rule 3745-17-10(B)(1)	When burning natural gas:	Carbon Monoxide (CO) emissions shall not exceed 0.036 lb/MMBtu of actual heat input
OAC rule 3745-18-06	Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /MMBtu of actual heat input	Organic Compound (OC) emissions shall not exceed 0.004 lb/MMBtu of actual heat input
40 CFR Part 60 Subpart Dc	Sulfur Dioxide (SO2) emissions shall not exceed 0.0006 lb/MMBtu of actual heat input	See terms and conditions A.I.2.b, and A.II.1 through A.II.3.
OAC rule 3745-21-08(B)	Nitrogen Oxides (NOx) emissions shall not exceed 0.10 lb/MMBtu of actual heat input	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 40 CFR Part 60 Subpart Dc.
OAC rule 3745-23-06(B)		
OAC rule 3745-31-13(D)(1)	Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/MMBtu of actual heat input	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except as specified by rule.
	Organic Compound (OC) emissions shall not exceed 0.011 lb/MMBtu of actual heat input	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	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 emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	Sulfur Dioxide (SO2) emissions shall not exceed 0.052 lb/MMBtu of actual heat input	See term and condition A.II.2.c
	Nitrogen Oxides (NOx) emissions shall not exceed 0.15 lb/MMBtu of	See term and condition A.I.2.d See term and condition A.I.2.e

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

- 2.a** The lb/MMBtu emission limitations outlined in term A.I.1, except for SO₂, 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 (NO_x)
 - 15.41 TPY of carbon monoxide (CO)
 - 1.98 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. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.
- 2.d** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).
- 2.e** As a non-profit education 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.f** The application and enforcement of the provisions of the New Source Performance

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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.g** 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.
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.
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.

III. Monitoring and/or Recordkeeping 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 lb/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, and the quality of the oil for those loads 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

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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 lb/mmBtu). [The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F)].

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- c. 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 and D4294), 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, SO₂, NO_x, 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.

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.
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.
3. The permittee shall submit annual reports that specify the total particulate, PM10, SO₂, VOC, NO_x, and CO emissions for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

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4. Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:
 - a. Construction date (no later than 30 days after such date);
 - b. Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
 - c. Actual start-up date (within 15 days after such date);
 - d. Date of performance testing (if required, at least 30 days prior to testing);

Reports are to be sent to:

Ohio Environmental Protection Agency
 DAPC - Permit Management Unit
 P. O. Box 163669
 Columbus, Ohio 43216-3669

and

Department of Environmental Services
 250 William Howard Taft Road
 Cincinnati, Ohio 45219

5. 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.

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 method(s):
 - a. Emission Limitation:

20% opacity, as a six-minute average

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.
 - b. Emission Limitations:

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0.0076 lb PE/PM10 per MMBtu of actual heat input (Natural gas firing)
0.015 lb PE/PM10 per MMBtu of actual heat input (No. 2 fuel oil firing)
2.04 TPY of PE/PM10 (combined emissions from B008-B017)

Applicable compliance method:

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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

c. Emission Limitations:

0.0006 lb SO₂/MMBtu of actual heat input (Natural gas firing)
0.052 lb SO₂/MMBtu of actual heat input (No. 2 fuel oil firing)
2.95 TPY SO₂ (combined emissions from B008-B017)

Applicable compliance method:

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 SO₂/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

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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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

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d. Emission Limitations:

0.10 lb NO_x/MMBtu of actual heat input (Natural gas firing)
0.15 lb NO_x/MMBtu of actual heat input (No. 2 fuel oil firing)
24.22 TPY NO_x (combined emissions from B008-B017)

Applicable compliance method:

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 NO_x/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 NO_x /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 emission units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

e. Emission Limitations:

0.084 lb CO/MMBtu of actual heat input (Natural gas firing)
0.036 lb CO/MMBtu of actual heat input (No. 2 fuel oil firing)
15.41 TPY CO (combined emissions from B008-B017)

Applicable compliance method:

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 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 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

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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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

f. Emission Limitations:

0.011 lb OC/MMBtu of actual heat input (Natural gas firing)
0.004 lb OC/MMBtu of actual heat input (No. 2 fuel oil firing)
1.98 TPY OC (combined emissions from B008-B017)

Applicable compliance method:

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 5.5 lbs VOC/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 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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

3. 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
4. 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.

5. 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.

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VI. Miscellaneous Requirements

Emissions Unit ID: B012

None

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PTI A

Emissions Unit ID: B012

Issued: To be entered upon final issuance**B. State Only Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

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

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Child
PTI A

Emissions Unit ID: B013

Issued: To be entered upon final issuance

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
B013 - 12.0 MMBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-17-07(A)(1)

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	<u>Applicable Emissions Limitations/Control Measures</u>	
OAC rule 3745-17-10(B)(1)	When burning natural gas:	actual heat input Carbon Monoxide (CO) emissions shall not exceed 0.036 lb/MMBtu of actual heat input
OAC rule 3745-18-06	Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /MMBtu of actual heat input	Organic Compound (OC) emissions shall not exceed 0.004 lb/MMBtu of actual heat input
40 CFR Part 60 Subpart Dc	Sulfur Dioxide (SO2) emissions shall not exceed 0.0006 lb/MMBtu of actual heat input	See terms and conditions A.I.2.b, and A.II.1 through A.II.3.
OAC rule 3745-21-08(B)	Nitrogen Oxides (NOx) emissions shall not exceed 0.10 lb/MMBtu of actual heat input	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 40 CFR Part 60 Subpart Dc.
OAC rule 3745-23-06(B)		
OAC rule 3745-31-13(D)(1)	Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/MMBtu of actual heat input	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except as specified by rule.
	Organic Compound (OC) emissions shall not exceed 0.011 lb/MMBtu of actual heat input	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	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 emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
		See term and condition A.III.2
	Sulfur Dioxide (SO2) emissions shall not exceed 0.052 lb/MMBtu of actual heat input	See term and condition A.I.2.c
		See term and condition A.I.2.d
	Nitrogen Oxides (NOx) emissions shall not exceed 0.15 lb/MMBtu of	See term and condition A.I.2.e

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Facility ID: 1431071395

Emissions Unit ID: B013

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

- 2.a** The lb/MMBtu emission limitations outlined in term A.I.1, except for SO₂, 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 (NO_x)
 - 15.41 TPY of carbon monoxide (CO)
 - 1.98 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. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.
- 2.d** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).
- 2.e** As a non-profit education 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.f** The application and enforcement of the provisions of the New Source Performance

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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.g** 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.
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.
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.

III. Monitoring and/or Recordkeeping 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 lb/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, and the quality of the oil for those loads 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

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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 lb/mmBtu). [The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F)].

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- c. 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 and D4294), 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, SO₂, NO_x, 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.

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.
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.
3. The permittee shall submit annual reports that specify the total particulate, PM10, SO₂, VOC, NO_x, and CO emissions for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

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4. Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:
 - a. Construction date (no later than 30 days after such date);
 - b. Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
 - c. Actual start-up date (within 15 days after such date);
 - d. Date of performance testing (if required, at least 30 days prior to testing);

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P. O. Box 163669
Columbus, Ohio 43216-3669

and

Department of Environmental Services
250 William Howard Taft Road
Cincinnati, Ohio 45219

5. 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.

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 method(s):
 - a. Emission Limitation:

20% opacity, as a six-minute average

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

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Stationary Sources"), as such Appendix existed on July 1, 2002, except as specified by rule.

b. Emission Limitations:

0.0076 lb PE/PM10 per MMBtu of actual heat input (Natural gas firing)

0.015 lb PE/PM10 per MMBtu of actual heat input (No. 2 fuel oil firing)

2.04 TPY of PE/PM10 (combined emissions from B008-B017)

Applicable compliance method:

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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

c. Emission Limitations:

0.0006 lb SO₂/MMBtu of actual heat input (Natural gas firing)

0.052 lb SO₂/MMBtu of actual heat input (No. 2 fuel oil firing)

2.95 TPY SO₂ (combined emissions from B008-B017)

Applicable compliance method:

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 SO₂/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

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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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

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d. Emission Limitations:

0.10 lb NO_x/MMBtu of actual heat input (Natural gas firing)
0.15 lb NO_x/MMBtu of actual heat input (No. 2 fuel oil firing)
24.22 TPY NO_x (combined emissions from B008-B017)

Applicable compliance method:

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 NO_x/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 NO_x /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 emission units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

e. Emission Limitations:

0.084 lb CO/MMBtu of actual heat input (Natural gas firing)
0.036 lb CO/MMBtu of actual heat input (No. 2 fuel oil firing)
15.41 TPY CO (combined emissions from B008-B017)

Applicable compliance method:

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 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

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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 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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

f. Emission Limitations:

0.011 lb OC/MMBtu of actual heat input (Natural gas firing)
 0.004 lb OC/MMBtu of actual heat input (No. 2 fuel oil firing)
 1.98 TPY OC (combined emissions from B008-B017)

Applicable compliance method:

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 5.5 lbs VOC/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 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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

3. 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
4. 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.

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5. 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.

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VI. Miscellaneous Requirements

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None

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
B014 - 33.6 MMBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-17-07(A)(1)
	OAC rule 3745-17-10(B)(1)
	OAC rule 3745-18-06

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	Applicable Emissions <u>Limitations/Control Measures</u>	actual heat input
40 CFR Part 60 Subpart Dc	When burning natural gas:	Carbon Monoxide (CO) emissions shall not exceed 0.036 lb/MMBtu of actual heat input
OAC rule 3745-21-08(B)	Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /MMBtu of actual heat input	Organic Compound (OC) emissions shall not exceed 0.004 lb/MMBtu of actual heat input
OAC rule 3745-23-06(B)	Sulfur Dioxide (SO2) emissions shall not exceed 0.0006 lb/MMBtu of actual heat input	See terms and conditions A.I.2.b, and A.II.1 through A.II.3.
OAC rule 3745-31-13(D)(1)	Nitrogen Oxides (NOx) emissions shall not exceed 0.10 lb/MMBtu of actual heat input	The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-08(B), OAC rule 3745-23-06(B), and 40 CFR Part 60 Subpart Dc.
	Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/MMBtu of actual heat input	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to 40 CFR Part 60 Subpart Dc.
	Organic Compound (OC) emissions shall not exceed 0.011 lb/MMBtu of actual heat input	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	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 emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	Sulfur Dioxide (SO2) emissions shall not exceed 0.052 lb/MMBtu of actual heat input	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.
	Nitrogen Oxides (NOx) emissions shall not exceed 0.15 lb/MMBtu of	See term and condition A.III.2

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See term and condition
A.I.2.c

See term and condition
A.I.2.d

See term and condition
A.I.2.e

2. Additional Terms and Conditions

2.a The lb/MMBtu emission limitations outlined in term A.I.1, except for SO₂, 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 (NO_x)

15.41 TPY of carbon monoxide (CO)

1.98 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. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).
- 2.e As a non-profit education 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.f 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.g 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.
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.
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.

III. Monitoring and/or Recordkeeping 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 lb/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, and the quality of the oil for those loads may be represented by a single batch analysis from the supplier.

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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 lb/mmBtu). [The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F)].

c. 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 and D4294), 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, SO₂, NO_x, 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.

IV. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing

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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.

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.
3. The permittee shall submit annual reports that specify the total particulate, PM10, SO₂, VOC, NO_x, and CO emissions for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
4. Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:
 - a. Construction date (no later than 30 days after such date);
 - b. Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
 - c. Actual start-up date (within 15 days after such date);
 - d. Date of performance testing (if required, at least 30 days prior to testing);

Reports are to be sent to:

Ohio Environmental Protection Agency
 DAPC - Permit Management Unit
 P. O. Box 163669
 Columbus, Ohio 43216-3669

and

Department of Environmental Services
 250 William Howard Taft Road
 Cincinnati, Ohio 45219

5. 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.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 and A.I.2 of these terms and conditions

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shall be determined in accordance with the following method(s):

a. Emission Limitation:

20% opacity, as a six-minute average

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.

b. Emission Limitations:

0.0076 lb PE/PM10 per MMBtu of actual heat input (Natural gas firing)
0.015 lb PE/PM10 per MMBtu of actual heat input (No. 2 fuel oil firing)
2.04 TPY of PE/PM10 (combined emissions from B008-B017)

Applicable compliance method:

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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

c. Emission Limitations:

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0.0006 lb SO₂/MMBtu of actual heat input (Natural gas firing)
0.052 lb SO₂/MMBtu of actual heat input (No. 2 fuel oil firing)
2.95 TPY SO₂ (combined emissions from B008-B017)

Applicable compliance method:

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 SO₂/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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

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d. Emission Limitations:

0.10 lb NO_x/MMBtu of actual heat input (Natural gas firing)
0.15 lb NO_x/MMBtu of actual heat input (No. 2 fuel oil firing)
24.22 TPY NO_x (combined emissions from B008-B017)

Applicable compliance method:

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 NO_x/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 NO_x /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 emission units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

e. Emission Limitations:

0.084 lb CO/MMBtu of actual heat input (Natural gas firing)
0.036 lb CO/MMBtu of actual heat input (No. 2 fuel oil firing)
15.41 TPY CO (combined emissions from B008-B017)

Applicable compliance method:

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 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

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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 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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

f. Emission Limitations:

0.011 lb OC/MMBtu of actual heat input (Natural gas firing)
 0.004 lb OC/MMBtu of actual heat input (No. 2 fuel oil firing)
 1.98 TPY OC (combined emissions from B008-B017)

Applicable compliance method:

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 5.5 lbs VOC/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 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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

3. 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
4. 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.

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5. 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.

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VI. Miscellaneous Requirements

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None

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Emissions Unit ID: B015

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
B015 - 33.6 MMBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-17-07(A)(1)

	Applicable Emissions <u>Limitations/Control Measures</u>	
OAC rule 3745-17-10(B)(1)	When burning natural gas:	Organic Compound (OC) emissions shall not exceed 0.004 lb/MMBtu of actual heat input
OAC rule 3745-18-06	Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 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), OAC rule 3745-23-06(B), and 40 CFR Part 60 Subpart Dc.
40 CFR Part 60 Subpart Dc	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	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to 40 CFR Part 60 Subpart Dc.
OAC rule 3745-21-08(B)	Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/MMBtu of actual heat input	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-23-06(B)	Organic Compound (OC) emissions shall not exceed 0.011 lb/MMBtu of actual heat input	
OAC rule 3745-31-13(D)(1)	When burning No. 2 fuel oil:	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.015 lb/MMBtu of actual heat input	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 of not more than 27 percent opacity.
	Sulfur Dioxide (SO2) emissions shall not exceed 0.052 lb/MMBtu of actual heat input	See term and condition A.III.2 See term and condition A.I.2.c
	Nitrogen Oxides (NOx) emissions shall not exceed 0.15 lb/MMBtu of actual heat input	See term and condition A.I.2.d See term and condition A.I.2.e
	Carbon Monoxide (CO) emissions shall not exceed 0.036 lb/MMBtu of actual heat input	

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

2.a The lb/MMBtu emission limitations outlined in term A.I.1, except for SO₂, 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 (NO_x)

15.41 TPY of carbon monoxide (CO)

1.98 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. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).

2.e As a non-profit education 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.f The application and enforcement of the provisions of the New Source Performance

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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.g 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.
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.
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.

III. Monitoring and/or Recordkeeping 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 lb/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, and the quality of the oil for those loads 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

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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 lb/mmBtu). [The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F)].

- c. 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 and D4294), 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, SO₂, NO_x, 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.

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.
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.

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3. The permittee shall submit annual reports that specify the total particulate, PM10, SO₂, VOC, NO_x, and CO emissions for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
4. Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:
 - a. Construction date (no later than 30 days after such date);
 - b. Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
 - c. Actual start-up date (within 15 days after such date);
 - d. Date of performance testing (if required, at least 30 days prior to testing);

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P. O. Box 163669
Columbus, Ohio 43216-3669

and

Department of Environmental Services
250 William Howard Taft Road
Cincinnati, Ohio 45219

5. 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.

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 method(s):

- a. Emission Limitation:

20% opacity, as a six-minute average

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

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Stationary Sources"), as such Appendix existed on July 1, 2002, except as specified by rule.

b. Emission Limitations:

0.0076 lb PE/PM10 per MMBtu of actual heat input (Natural gas firing)
0.015 lb PE/PM10 per MMBtu of actual heat input (No. 2 fuel oil firing)
2.04 TPY of PE/PM10 (combined emissions from B008-B017)

Applicable compliance method:

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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

c. Emission Limitations:

0.0006 lb SO₂/MMBtu of actual heat input (Natural gas firing)
0.052 lb SO₂/MMBtu of actual heat input (No. 2 fuel oil firing)
2.95 TPY SO₂ (combined emissions from B008-B017)

Applicable compliance method:

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 SO₂/MM cu. ft, and then

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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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

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d. Emission Limitations:

0.10 lb NO_x/MMBtu of actual heat input (Natural gas firing)
0.15 lb NO_x/MMBtu of actual heat input (No. 2 fuel oil firing)
24.22 TPY NO_x (combined emissions from B008-B017)

Applicable compliance method:

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 NO_x/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 NO_x /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 emission units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

e. Emission Limitations:

0.084 lb CO/MMBtu of actual heat input (Natural gas firing)
0.036 lb CO/MMBtu of actual heat input (No. 2 fuel oil firing)
15.41 TPY CO (combined emissions from B008-B017)

Applicable compliance method:

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 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

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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 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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

f. Emission Limitations:

0.011 lb OC/MMBtu of actual heat input (Natural gas firing)
0.004 lb OC/MMBtu of actual heat input (No. 2 fuel oil firing)
1.98 TPY OC (combined emissions from B008-B017)

Applicable compliance method:

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 5.5 lbs VOC/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 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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

3. 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

4. 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.
5. 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.

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VI. Miscellaneous Requirements

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None

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B015 - 33.6 MMBTU/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Emissions Unit ID: B016

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
B016 - 8.4 MMBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-17-07(A)(1)

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	<p style="text-align: center;"><u>Applicable Emissions Limitations/Control Measures</u></p>	<p style="text-align: center;">actual heat input</p>
OAC rule 3745-17-10(B)(1)	When burning natural gas:	Carbon Monoxide (CO) emissions shall not exceed 0.036 lb/MMBtu of actual heat input
OAC rule 3745-18-06(B)	Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /MMBtu of actual heat input	Organic Compound (OC) emissions shall not exceed 0.004 lb/MMBtu of actual heat input
OAC rule 3745-21-08(B)		See terms and conditions A.I.2.b, and
OAC rule 3745-23-06(B)	Sulfur Dioxide (SO2) emissions shall not exceed 0.0006 lb/MMBtu of actual heat input	A.II.1 through A.II.3.
OAC rule 3745-31-13(D)(1)	Nitrogen Oxides (NOx) emissions shall not exceed 0.10 lb/MMBtu of actual heat input	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 OAC rule 3745-23-06(B).
	Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/MMBtu of actual heat input	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except as specified by rule.
	Organic Compound (OC) emissions shall not exceed 0.011 lb/MMBtu of actual heat input	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	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	Exempt See term and condition A.I.2.c See term and condition A.I.2.d
	Sulfur Dioxide (SO2) emissions shall not exceed 0.052 lb/MMBtu of actual heat input	See term and condition A.I.2.e
	Nitrogen Oxides (NOx) emissions shall not exceed 0.15 lb/MMBtu of	

2. Additional Terms and Conditions

2.a The lb/MMBtu emission limitations outlined in term A.I.1, except for SO₂, 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 (NO_x)

15.41 TPY of carbon monoxide (CO)

1.98 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. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).

2.e As a non-profit education 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.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

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1. The permittee shall burn only natural gas and/or No. 2 fuel oil in this emissions unit.
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.
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.

III. Monitoring and/or Recordkeeping 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 lb/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, and the quality of the oil for those loads 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 lb/mmBtu). [The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F)].

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- c. 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 and D4294), 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, SO₂, NO_x, 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.

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.
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.
3. The permittee shall submit annual reports that specify the total particulate, PM10, SO₂, VOC, NO_x, and CO emissions for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
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.

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 method(s):

- a. Emission Limitation:

20% opacity, as a six-minute average

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.

- b. Emission Limitations:

0.0076 lb PE/PM10 per MMBtu of actual heat input (Natural gas firing)
0.015 lb PE/PM10 per MMBtu of actual heat input (No. 2 fuel oil firing)
2.04 TPY of PE/PM10 (combined emissions from B008-B017)

Applicable compliance method:

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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

- c. Emission Limitations:

0.0006 lb SO₂/MMBtu of actual heat input (Natural gas firing)
0.052 lb SO₂/MMBtu of actual heat input (No. 2 fuel oil firing)

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2.95 TPY SO₂ (combined emissions from B008-B017)

Applicable compliance method:

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 SO₂/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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

d. Emission Limitations:

0.10 lb NO_x/MMBtu of actual heat input (Natural gas firing)
0.15 lb NO_x/MMBtu of actual heat input (No. 2 fuel oil firing)
24.22 TPY NO_x (combined emissions from B008-B017)

Applicable compliance method:

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 NO_x/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 NO_x /1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (MMBtu/hr).

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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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

e. Emission Limitations:

0.084 lb CO/MMBtu of actual heat input (Natural gas firing)
0.036 lb CO/MMBtu of actual heat input (No. 2 fuel oil firing)
15.41 TPY CO (combined emissions from B008-B017)

Applicable compliance method:

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 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 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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

f. Emission Limitations:

0.011 lb OC/MMBtu of actual heat input (Natural gas firing)
0.004 lb OC/MMBtu of actual heat input (No. 2 fuel oil firing)
1.98 TPY OC (combined emissions from B008-B017)

Applicable compliance method:

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

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1.4, Table 1.4-2 (revised 7/98) emission factor of 5.5 lbs VOC/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 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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

3. 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
4. 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.
5. 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.

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VI. Miscellaneous Requirements

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None

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B016 - 8.4 MMBTU/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
B017 - 8.4 MMBtu/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-17-07(A)(1)
	OAC rule 3745-17-10(B)(1)
	OAC rule 3745-18-06(B)
	OAC rule 3745-21-08(B)

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OAC rule 3745-23-06(B)	Applicable Emissions <u>Limitations/Control Measures</u>	actual heat input
OAC rule 3745-31-13(D)(1)	When burning natural gas:	Carbon Monoxide (CO) emissions shall not exceed 0.036 lb/MMBtu of actual heat input
	Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns (PM10) shall not exceed 0.0076 lb /MMBtu of actual heat input	Organic Compound (OC) emissions shall not exceed 0.004 lb/MMBtu of actual heat input
	Sulfur Dioxide (SO2) emissions shall not exceed 0.0006 lb/MMBtu of actual heat input	See terms and conditions A.I.2.b, and A.II.1 through A.II.3.
	Nitrogen Oxides (NOx) emissions shall not exceed 0.10 lb/MMBtu of actual heat input	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 OAC rule 3745-23-06(B).
	Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/MMBtu of actual heat input	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six-minute average, except as specified by rule.
	Organic Compound (OC) emissions shall not exceed 0.011 lb/MMBtu of actual heat input	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	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	Exempt See term and condition A.I.2.c See term and condition A.I.2.d
	Sulfur Dioxide (SO2) emissions shall not exceed 0.052 lb/MMBtu of actual heat input	See term and condition A.I.2.e
	Nitrogen Oxides (NOx) emissions shall not exceed 0.15 lb/MMBtu of	

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

2.a The lb/MMBtu emission limitations outlined in term A.I.1, except for SO₂, 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 (NO_x)

15.41 TPY of carbon monoxide (CO)

1.98 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. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).

2.e As a non-profit education 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.f Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the visible

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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.
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.
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.

III. Monitoring and/or Recordkeeping 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 lb/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, and the quality of the oil for those loads 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 lb/mmBtu). [The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F)].

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- c. 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 and D4294), 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, SO₂, NO_x, 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.

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.
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.
3. The permittee shall submit annual reports that specify the total particulate, PM10, SO₂, VOC, NO_x, and CO emissions for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

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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.

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 method(s):

- a. Emission Limitation:

20% opacity, as a six-minute average

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.

- b. Emission Limitations:

0.0076 lb PE/PM10 per MMBtu of actual heat input (Natural gas firing)

0.015 lb PE/PM10 per MMBtu of actual heat input (No. 2 fuel oil firing)

2.04 TPY of PE/PM10 (combined emissions from B008-B017)

Applicable compliance method:

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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

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c. Emission Limitations:

0.0006 lb SO₂/MMBtu of actual heat input (Natural gas firing)
0.052 lb SO₂/MMBtu of actual heat input (No. 2 fuel oil firing)
2.95 TPY SO₂ (combined emissions from B008-B017)

Applicable compliance method:

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 SO₂/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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

d. Emission Limitations:

0.10 lb NO_x/MMBtu of actual heat input (Natural gas firing)
0.15 lb NO_x/MMBtu of actual heat input (No. 2 fuel oil firing)
24.22 TPY NO_x (combined emissions from B008-B017)

Applicable compliance method:

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 NO_x/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

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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 NO_x /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 emission units B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

e. Emission Limitations:

0.084 lb CO/MMBtu of actual heat input (Natural gas firing)
0.036 lb CO/MMBtu of actual heat input (No. 2 fuel oil firing)
15.41 TPY CO (combined emissions from B008-B017)

Applicable compliance method:

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 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 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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

f. Emission Limitations:

0.011 lb OC/MMBtu of actual heat input (Natural gas firing)
0.004 lb OC/MMBtu of actual heat input (No. 2 fuel oil firing)
1.98 TPY OC (combined emissions from B008-B017)

Issued: To be entered upon final issuance

Applicable compliance method:

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 5.5 lbs VOC/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 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 B008 through B017 shall be summed over the calendar year to determine compliance with the annual emission limitation.

3. 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
4. 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.
5. 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.

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Childrens Hospital Medical Center

PTI Application: 14-05630

Issued

Facility ID: 1431071395

Emissions Unit ID: B017

VI. Miscellaneous Requirements

None

**Child
PTI A**

Emissions Unit ID: B017

Issued: To be entered upon final issuance

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B017 - 8.4 MMBTU/hr Natural Gas/No. 2 Fuel Oil Fired Boiler	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None