



State of Ohio Environmental Protection Agency

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

**CERTIFIED MAIL**

Street Address:

122 S. Front Street

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

Mailing Address:

Lazarus Gov. Center  
P.O. Box 1049

**Application No: 14-05718**

**Fac ID: 1431071395**

**DATE: 8/16/2005**

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

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

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.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
309 South Fourth Street, Room 222  
Columbus, Ohio 43215

Sincerely,

*Michael W. Ahern*

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

CC: USEPA

HCDES



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**Permit To Install  
Terms and Conditions**

**Issue Date: 8/16/2005  
Effective Date: 8/16/2005**

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**FINAL PERMIT TO INSTALL 14-05718**

Application Number: 14-05718  
Facility ID: 1431071395  
Permit Fee: **\$1600**  
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):  
**Four 25.86 MMBtu/hr Natural gas / No. 2 fuel oil fired boilers.**

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

## Part I - GENERAL TERMS AND CONDITIONS

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

#### 1. Monitoring and Related Recordkeeping and Reporting Requirements

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

the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.8 below if no deviations occurred during the quarter.

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

## 2. Scheduled Maintenance/Malfunction Reporting

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

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

## 3. Risk Management Plans

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

#### 4. Title IV Provisions

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

#### 5. Severability Clause

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

#### 6. General Requirements

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

**Childrens Hospital Medical Center**  
**PTI Application: 14-05718**  
**Issued: 8/16/2005**

**Facility ID: 1431071395**

## **7. Fees**

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

## **8. Federal and State Enforceability**

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

## **9. Compliance Requirements**

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

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

#### 10. Permit-To-Operate Application

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

#### 11. Best Available Technology

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

**Childrens Hospital Medical Center**  
**PTI Application: 14-05718**  
**Issued: 8/16/2005**

**Facility ID: 1431071395**

**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.

**Childrens Hospital Medical Center**  
**PTI Application: 14-05718**  
**Issued: 8/16/2005**

**Facility ID: 1431071395**

### **13. Permit-To-Install**

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

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

### **1. Compliance Requirements**

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

### **2. Reporting Requirements**

The permittee shall submit required reports in the following manner:

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

### **3. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder.

**Childrens Hospital Medical Center**

**PTI Application: 14-05718**

**Issued: 8/16/2005**

**Facility ID: 1431071395**

The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

Childrens Hospital Medical Center  
PTI Application: 14-05718  
Issued: 8/16/2005

Facility ID: 1431071395

#### **4. Authorization To Install or Modify**

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

#### **5. Construction of New Sources(s)**

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

#### **6. Public Disclosure**

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

#### **7. Applicability**

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

#### **8. Construction Compliance Certification**

Childrens Hospital Medical Center  
 PTI Application: 14-05718  
 Issued: 8/16/2005

Facility ID: 1431071395

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

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

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

**C. Permit-To-Install Summary of Allowable Emissions**

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
PE/PM10	3.74
NOx	39.90
SO2	12.97
CO	38.06
OC	4.98

13

**Child**

**PTI A**

**Issued: 8/16/2005**

Emissions Unit ID: B018

14

**Childrens Hospital Medical Center**  
**PTI Application: 14-05718**  
**Issued: 8/16/2005**

**Facility ID: 1431071395**

**Part II - FACILITY SPECIFIC TERMS AND CONDITIONS**

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

None

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

None

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

**A. State and Federally Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
B018 - 25.86 mmBtu/hr natural gas/number 2 fuel oil fired boiler (Central Plant Boiler 261).	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:	shall not exceed 0.16 lb/mmBtu of actual heat input.
OAC rule 3745-18-06	Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns in diameter (PM10) shall not exceed 0.0076 lb/mmBtu of actual heat input.	Carbon Monoxide (CO) emissions shall not exceed 0.036 lb/mmBtu of actual heat input.
OAC rule 3745-18-06	Sulfur Dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.0006 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	Nitrogen Oxides (NO <sub>x</sub> ) emissions shall not exceed 0.08 lb/mmBtu of actual heat input.	See terms and conditions A.I.2.b, and A.II.1 through A.II.2.
OAC rule 3745-21-08(B)	Carbon Monoxide (CO) emissions shall not exceed 0.084 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), OAC rule 3745-31-05(C) and 40 CFR Part 60 Subpart Dc.
OAC rule 3745-23-06(B)	Organic Compound (OC) emissions shall not exceed 0.011 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 3745-31-05(C) Synthetic Minor to avoid Major Modification New Source Review	When burning Number 2 fuel oil:  Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns in diameter (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.  Sulfur Dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.  Nitrogen Oxides (NO <sub>x</sub> ) emissions	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).  The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

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.I.2.c.

See term and condition A.I.2.d.

See terms and conditions A.I.2.g and A.II.3.

## **2. Additional Terms and Conditions**

- 2.a** The lb/mmBtu emission limitations outlined in term A.I.1, except for SO<sub>2</sub> emissions when firing fuel oil, are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these emission limitations.
- 2.b** The maximum total annual emissions from emissions units B018, B019, B020 and B021, combined, shall not exceed the following rates based upon a rolling, 12-month summation:
- 3.74 tons per year (TPY) of particulate emissions (PE) and PM<sub>10</sub>;
  - 12.97 TPY of sulfur dioxide (SO<sub>2</sub>);
  - 38.06 TPY of carbon monoxide (CO); and
  - 4.98 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).

On February 15, 2005, OAC rule 3745-23-06 was rescinded and therefore no longer a 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 3745-23-06, the requirement to satisfy "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.e** The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.
- 2.f** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the visible emissions limitation, the mass emission limitations, the use of natural gas and/or ultra low sulfur (less than or equal to 0.05 weight percent sulfur) number 2 fuel oil and the annual fuel usage restriction.
- 2.g** The maximum total annual emissions from emissions units B018, B019, B020 and B021, combined, shall not exceed the following rate based upon a rolling, 12-month summation:

39.90 TPY of nitrogen oxides (NO<sub>x</sub>).

## **II. Operational Restrictions**

1. The permittee shall burn only natural gas and/or number 2 fuel oil in this emissions unit.
2. The quality of number 2 fuel oil received for burning in this emissions unit shall have a

**Childrens Hospital Medical Center****PTI Application: 11-05718****Issue:****Facility ID: 1431071395**

Emissions Unit ID: B018

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 annual number 2 fuel oil usage in emissions units B018, B019, B020 and B021, combined shall not exceed 3,512,300 gallons based upon a rolling, 12-month summation of the monthly oil usage rates.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the number 2 fuel oil usage for emissions units B018, B019, B020 and B021, combined as specified in the following table:

<u>Month</u>	<u>Maximum Allowable Cumulative Number 2 Fuel Oil Usage, Gallons</u>
1	390,255
1-2	780,510
1-3	1,170,765
1-4	1,561,020
1-5	1,951,257
1-6	2,341,530
1-7	2,731,785
1-8	3,122,040
1-9	3,512,300
1-10	3,512,300
1-11	3,512,300
1-12	3,512,300

The usage limitations above are for the sole use of number 2 fuel oil in emissions units B018, B019, B020 and B021. Under this usage scenario, no additional use of natural gas shall be permitted throughout the 12 month period. The usage of a combination of number 2 fuel oil and natural gas shall be in such quantities to maintain compliance with the NOx emissions limitation in Section A.I.2.g.

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual Number 2 fuel oil usage limitation shall be based upon a rolling, 12-month summation of the oil usage rates. The usage of a combination of number 2 fuel oil and natural gas shall be in such quantities to maintain compliance with the NOx emissions limitation in Section A.I.2.g.

### 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

**Childrens Hospital Medical Center****PTI Application: 11-05718****Issue:****Facility ID: 1431071395**

Emissions Unit ID: B018

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)].

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 for emissions units B018, B019, B020 and B021, combined:

a. the usage rates for each fuel (natural gas and number 2 fuel oil) burned;

b. beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the natural gas and number 2 fuel oil usage rates;

Also, during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative natural gas and number 2 fuel oil usage rates for each calendar month.

c. the type and total amount of fuel, other than natural gas or number 2 fuel oil, burned in this emissions unit.

3. The permittee shall maintain monthly records of the following information for emissions units B018, B019, B020 and B021, combined, in order to monitor compliance with the rolling, 12-month summation emissions limitations:

- a. the total emissions, in tons, for PE/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, and OC when burning any combination of fuels;
- b. the rolling, 12-monthly summation emissions total, in tons, for PE/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, and OC when burning any combination of fuels (the total amount of emissions calculated for the current month plus the total amount of emissions for the previous eleven calendar months).

#### **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 Number 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 PE, PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO and OC emissions for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.
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);

Emissions Unit ID: B018

- 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

The permittee shall submit deviation (excursion) reports which identify all exceedances of the following:

- a. an identification of all exceedances of the rolling, 12-month number 2 fuel oil usage restriction, and for the first 12 calendar months of operation following issuance of this permit, all exceedances of the maximum allowable cumulative fuel oil usage amounts; and
  - b. an identification of all exceedances of the rolling, 12-month emission limitations for NOx.
6. Unless otherwise specified, the deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.
7. The permittee shall submit annual reports which identify the total amount of natural gas (in million cubic feet) and number 2 fuel oil (in gallons) combusted in emissions units B018, B019, B020 and B021. These reports shall be submitted by January 31 of each year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

## **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 (number 2 fuel oil firing)  
3.74 TPY of PE/PM10 (combined emissions from B018-B021)

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 of total PM/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of number 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (in 1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 2 lbs of PM/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

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

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018, B019, B020 and B021, combined, shall be summed over the rolling 12 month period to determine compliance with the annual emission limitation.

c. Emission Limitations:

0.0006 lb SO<sub>2</sub>/mmBtu of actual heat input (natural gas firing)

Emissions Unit ID: B018

0.052 lb SO<sub>2</sub>/mmBtu of actual heat input (number 2 fuel oil firing)  
12.97 TPY SO<sub>2</sub> (combined emissions from B018-B021)

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 SO<sub>2</sub>/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of number 2 fuel oil, the emission limitations were based upon the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.3, Table 1.3-1 (9/98). Compliance with the lb/mmBtu emission limitation shall be based upon the record keeping in term and condition A.III.1.

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

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018, B019, B020 and B021, combined, shall be summed over the rolling 12 month period to determine compliance with the annual emission limitation.

d. Emission Limitations:

0.08 lb NO<sub>x</sub>/mmBtu of actual heat input (natural gas firing)  
0.16 lb NO<sub>x</sub>/mmBtu of actual heat input (number 2 fuel oil firing)  
39.90 TPY NO<sub>x</sub> (combined emissions from B018-B021)

Applicable compliance method:

For the use of natural gas, the short term emissions limitation is based upon the emission unit's potential to emit and the manufacturer's guaranteed emissions data as provided in PTI application 14-05718 submitted on April 29, 2005.

For the use of number 2 fuel oil, the short term emissions limitation is based upon the emission unit's potential to emit and the manufacturer's guaranteed emissions data as provided in PTI application 14-05718 submitted on April 29, 2005.

If required, the permittee shall demonstrate compliance with the lb/mmBtu

emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 7.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018, B019, B020 and B021, combined, shall be summed over the rolling 12 month period to determine compliance with the annual emission limitation.

e. Emission Limitations:

0.084 lb CO/mmBtu of actual heat input (natural gas firing)  
0.036 lb CO/mmBtu of actual heat input (number 2 fuel oil firing)  
38.06 TPY CO (combined emissions from B018 - B021)

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 number 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (in 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 B018, B019, B020 and B021, combined, shall be summed over the rolling 12 month period to determine compliance with the annual emission limitation.

f. Emission Limitations:

Emissions Unit ID: B018

0.011 lb OC/mmBtu of actual heat input (natural gas firing)  
0.004 lb OC/mmBtu of actual heat input (number 2 fuel oil firing)  
4.98 TPY OC (combined emissions from B018 - B021)

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 11 lbs OC /mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of number 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (in 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 B018, B019, B020 and B021, combined, shall be summed over the rolling 12 month period 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.
6. Compliance with the mass emissions limitations in terms and conditions A.I.2.b. and A.I.2.g. shall be demonstrated by the record keeping in term and condition A.III.3.
7. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. the emission testing shall be conducted within six months after startup of this emissions unit;

- b. the emissions testing shall be conducted to demonstrate compliance with the allowable NOx emissions limitations while combusting natural gas;
- c. the following test methods(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):1-5, and 7. Alternative U.S. EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services; and,
- d. the test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Hamilton County Department of Environmental Services within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report where warranted, with prior approval from the Hamilton County Department of Environmental Services.

**Childrens Hospital Medical Center**  
**PTI Application: 11-05718**  
**Issue:**

**Facility ID: 1431071395**

Emissions Unit ID: B018

**VI. Miscellaneous Requirements**

None

**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>
B018 - 25.86 mmBtu/hr natural gas / number 2 fuel oil fired boiler (Central Plant Boiler 261)	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**

33

**Child**

**PTI A**

**Issued: 8/16/2005**

Emissions Unit ID: B018

None

Child  
PTI A  
Issued: 8/16/2005

Emissions Unit ID: B019

**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>
B019 - 25.86 mmBtu/hr natural gas/number 2 fuel oil fired boiler (Central Plant Boiler 262)	OAC rule 3745-31-05(A)(3)

Child  
PTI A  
Issued: 8/16/2005

Emissions Unit ID: B019

	Source Review	<u>Applicable Emissions Limitations/Control Measures</u>
OAC rule 3745-17-07(A)(1)		When burning natural gas:  Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns in diameter (PM10) shall not exceed 0.0076 lb/mmBtu of actual heat input.
OAC rule 3745-17-10(B)(1)		Sulfur Dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.
OAC rule 3745-18-06		Nitrogen Oxides (NO <sub>x</sub> ) emissions shall not exceed 0.08 lb/mmBtu of actual heat input.
40 CFR Part 60 Subpart Dc		Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.
OAC rule 3745-21-08(B)		Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.
OAC rule 3745-23-06(B)		When burning number 2 fuel oil:  Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns in diameter (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.
OAC rule 3745-31-05(C) Synthetic Minor to avoid Major Modification New		Sulfur Dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.
		Nitrogen Oxides (NO <sub>x</sub> ) emissions

**Child****PTI A****Issued: 8/16/2005**

Emissions Unit ID: B019

shall not exceed 0.16 lb/mmBtu of actual heat input.

emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

Carbon Monoxide (CO) emissions shall not exceed 0.036 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 0.004 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 terms and conditions A.I.2.b, and A.II.1 through A.II.2.

See term and condition A.I.2.c

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), OAC rule 3745-31-05(C) and 40 CFR Part 60 Subpart Dc.

See term and condition A.I.2.d

See terms and conditions A.I.2.g and A.II.3.

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

The emission limitation specified by this rule is less stringent than the

Emissions Unit ID: B019

## 2. Additional Terms and Conditions

**2.a** The lb/mmBtu emission limitations outlined in term A.I.1, except for SO<sub>2</sub> emissions when firing fuel oil, are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these emission limitations.

**2.b** The maximum total annual emissions from emissions units B018, B019, B020 and B021, combined, shall not exceed the following rates based upon a rolling, 12-month summation:

3.74 tons per year (TPY) of particulate emissions (PE) and PM<sub>10</sub>;

12.97 TPY of sulfur dioxide (SO<sub>2</sub>);

38.06 TPY of carbon monoxide (CO); and

4.98 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).

On February 15, 2005, OAC rule 3745-23-06 was rescinded and therefore no longer a 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 3745-23-06, the requirement to satisfy "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.e** The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.
- 2.f** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the visible emissions limitation, the mass emission limitations, the use of natural gas and/or ultra low sulfur (less than or equal to 0.05 weight percent sulfur) number 2 fuel oil and the annual fuel usage restriction.
- 2.g** The maximum total annual emissions from emissions units B018, B019, B020 and B021, combined, shall not exceed the following rate based upon a rolling, 12-month summation:
- 39.90 TPY of nitrogen oxides (NO<sub>x</sub>).

## **II. Operational Restrictions**

1. The permittee shall burn only natural gas and/or number 2 fuel oil in this emissions unit.
2. The quality of number 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 annual number 2 fuel oil usage in emissions units B018, B019, B020 and B021, combined shall not exceed 3,512,300 gallons based upon a rolling, 12-month summation of the monthly oil usage rates.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the number 2 fuel oil usage for emissions units B018, B019, B020 and B021, combined as specified in the following table:

<u>Month</u>	<u>Maximum Allowable Cumulative Number 2 Fuel Oil Usage, Gallons</u>
1	390,255
1-2	780,510
1-3	1,170,765
1-4	1,561,020
1-5	1,951,257
1-6	2,341,530
1-7	2,731,785
1-8	3,122,040
1-9	3,512,300
1-10	3,512,300
1-11	3,512,300
1-12	3,512,300

The usage limitations above are for the sole use of number 2 fuel oil in emissions units B018, B019, B020 and B021. Under this usage scenario, no additional use of natural gas shall be permitted throughout the 12 month period. The usage of a combination of number 2 fuel oil and natural gas shall be in such quantities to maintain compliance with the NOx emissions limitation in Section A.I.2.g.

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual Number 2 fuel oil usage limitation shall be based upon a rolling, 12-month summation of the oil usage rates. The usage of a combination of number 2 fuel oil and natural gas shall be in such quantities to maintain compliance with the NOx emissions limitation in Section A.I.2.g.

### 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.

40

**Child**

**PTI A**

**Issued: 8/16/2005**

Emissions Unit ID: B019

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 for emissions units B018, B019, B020 and B021, combined:

a. the usage rates for each fuel (natural gas and number 2 fuel oil) burned;

b. beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the natural gas and number 2 fuel oil usage rates;

Also, during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative natural gas and number 2 fuel oil usage rates for each calendar month.

c. the type and total amount of fuel, other than natural gas or number 2 fuel oil, burned in this emissions unit.

3. The permittee shall maintain monthly records of the following information for emissions units B018, B019, B020 and B021, combined, in order to monitor compliance with the rolling, 12-month summation emissions limitations:

**Childrens Hospital Medical Center**  
**PTI Application: 11-05718**  
**Issue**

**Facility ID: 1431071395**

Emissions Unit ID: B019

- a. the total emissions, in tons, for PE/PM10, SO2, NOx, CO, and OC when burning any combination of fuels;
- b. the rolling, 12-monthly summation emissions total, in tons, for PE/PM10, SO2, NOx, CO, and OC when burning any combination of fuels (the total amount of emissions calculated for the current month plus the total amount of emissions for the previous eleven calendar months).

#### **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 Number 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 PE, PM10, SO2, NOx, CO and OC emissions for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.
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

**Childrens Hospital Medical Center**  
**PTI Application: 14-05718**  
**Issue:**

**Facility ID: 1431071395**

Emissions Unit ID: B019

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 deviation (excursion) reports which identify all exceedances of the following:
  - a. an identification of all exceedances of the rolling, 12-month number 2 fuel oil usage restriction, and for the first 12 calendar months of operation following issuance of this permit, all exceedances of the maximum allowable cumulative fuel oil usage amounts; and
  - b. an identification of all exceedances of the rolling, 12-month emission limitations for NO<sub>x</sub>.
6. Unless otherwise specified, the deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.
7. The permittee shall submit annual reports which identify the total amount of natural gas (in million cubic feet) and number 2 fuel oil (in gallons) combusted in emissions units B018, B019, B020 and B021. These reports shall be submitted by January 31 of each year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

## **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 (number 2 fuel oil firing)  
3.74 TPY of PE/PM10 (combined emissions from B018-B021)

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 of total PM/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of number 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (in 1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 2 lbs of PM/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

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

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018, B019, B020 and B021, combined, shall be summed over the rolling 12 month period to determine compliance with the annual emission limitation.

c. Emission Limitations:

0.0006 lb SO<sub>2</sub>/mmBtu of actual heat input (natural gas firing)  
0.052 lb SO<sub>2</sub>/mmBtu of actual heat input (number 2 fuel oil firing)  
12.97 TPY SO<sub>2</sub> (combined emissions from B018-B021)

Applicable compliance method:

Emissions Unit ID: B019

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

For the use of number 2 fuel oil, the emission limitations were based upon the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.3, Table 1.3-1 (9/98). Compliance with the lb/mmBtu emission limitation shall be based upon the record keeping in term and condition A.III.1.

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

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018, B019, B020 and B021, combined, shall be summed over the rolling 12 month period to determine compliance with the annual emission limitation.

d. Emission Limitations:

0.08 lb NO<sub>x</sub>/mmBtu of actual heat input (natural gas firing)  
0.16 lb NO<sub>x</sub>/mmBtu of actual heat input (number 2 fuel oil firing)  
39.90 TPY NO<sub>x</sub> (combined emissions from B018-B021)

Applicable compliance method:

For the use of natural gas, the short term emissions limitation is based upon the emission unit's potential to emit and the manufacturer's guaranteed emissions data as provided in PTI application 14-05718 submitted on April 29, 2005.

For the use of number 2 fuel oil, the short term emissions limitation is based upon the emission unit's potential to emit and the manufacturer's guaranteed emissions data as provided in PTI application 14-05718 submitted on April 29, 2005.

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

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual

emissions from emission units B018, B019, B020 and B021, combined, shall be summed over the rolling 12 month period to determine compliance with the annual emission limitation.

e. Emission Limitations:

0.084 lb CO/mmBtu of actual heat input (natural gas firing)  
0.036 lb CO/mmBtu of actual heat input (number 2 fuel oil firing)  
38.06 TPY CO (combined emissions from B018 - B021)

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 number 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (in 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 B018, B019, B020 and B021, combined, shall be summed over the rolling 12 month period 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 (number 2 fuel oil firing)  
4.98 TPY OC (combined emissions from B018 - B021)

Applicable compliance method:

Emissions Unit ID: B019

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

For the use of number 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (in 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 B018, B019, B020 and B021, combined, shall be summed over the rolling 12 month period 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.
6. Compliance with the mass emissions limitations in terms and conditions A.I.2.b. and A.I.2.g. shall be demonstrated by the record keeping in term and condition A.III.3.

## **VI. Miscellaneous Requirements**

None

Child  
PTI A  
Issued: 8/16/2005

Emissions Unit ID: B019

**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>
B019 - 25.86 mmBtu/hr natural gas/number 2 fuel oil fired boiler (Central Plant Boiler 262).	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**

49

**Childrens Hospital Medical Center**

**PTI Application: 11-05718**

**Issue:**

**Facility ID: 1431071395**

Emissions Unit ID: B019

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>
B020 - 25.86 mmBtu/hr natural gas/number 2 fuel oil fired boiler (Central Plant Boiler 263).	OAC rule 3745-31-05(A)(3)

	Source Review	<u>Applicable Emissions Limitations/Control Measures</u>
OAC rule 3745-17-07(A)(1)		<p>When burning natural gas:</p> <p>Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns in diameter (PM10) shall not exceed 0.0076 lb/mmBtu of actual heat input.</p>
OAC rule 3745-17-10(B)(1)		<p>Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.</p>
OAC rule 3745-18-06		<p>Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.08 lb/mmBtu of actual heat input.</p>
40 CFR Part 60 Subpart Dc		<p>Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.</p>
OAC rule 3745-21-08(B)		<p>Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.</p>
OAC rule 3745-23-06(B)		<p>When burning Number 2 fuel oil:</p> <p>Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns in diameter (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.</p>
OAC rule 3745-31-05(C) Synthetic Minor to avoid Major Modification New		<p>Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.</p>
		<p>Nitrogen Oxides (NO<sub>x</sub>) emissions</p>

**Child**  
**PTI A**  
**Issued: 8/16/2005**

Emissions Unit ID: B020

shall not exceed 0.16 lb/mmBtu of actual heat input.

emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

Carbon Monoxide (CO) emissions shall not exceed 0.036 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 0.004 lb/mBtu 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 terms and conditions A.I.2.b, and A.II.1 through A.II.2.

See term and condition A.I.2.c

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), OAC rule 3745-31-05(C) and 40 CFR Part 60 Subpart Dc.

See term and condition A.I.2.d

See terms and conditions A.I.2.g and A.II.3.

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

The emission limitation specified by this rule is less stringent than the

## **2. Additional Terms and Conditions**

**2.a** The lb/mmBtu emission limitations outlined in term A.I.1, except for SO<sub>2</sub> emissions when firing fuel oil, are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these emission limitations.

**2.b** The maximum total annual emissions from emissions units B018, B019, B020 and B021, combined, shall not exceed the following rates based upon a rolling, 12-month summation:

3.74 tons per year (TPY) of particulate emissions (PE) and PM<sub>10</sub>;

12.97 TPY of sulfur dioxide (SO<sub>2</sub>);

38.06 TPY of carbon monoxide (CO); and

4.98 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).

On February 15, 2005, OAC rule 3745-23-06 was rescinded and therefore no longer a 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

Emissions Unit ID: B020

Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-23-06, the requirement to satisfy "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.e** The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.
- 2.f** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the visible emissions limitation, the mass emission limitations, the use of natural gas and/or ultra low sulfur (less than or equal to 0.05 weight percent sulfur) number 2 fuel oil and the annual fuel usage restriction.
- 2.g** The maximum total annual emissions from emissions units B018, B019, B020 and B021, combined, shall not exceed the following rate based upon a rolling, 12-month summation:

39.90 TPY of nitrogen oxides (NO<sub>x</sub>).

## **II. Operational Restrictions**

- 1. The permittee shall burn only natural gas and/or number 2 fuel oil in this emissions unit.
- 2. The quality of number 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 annual number 2 fuel oil usage in emissions units B018, B019, B020 and B021, combined shall not exceed 3,512,300 gallons based upon a rolling, 12-month summation of the monthly oil usage rates.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the number 2 fuel oil usage for emissions units B018, B019, B020 and B021, combined as specified in the following table:

<u>Month</u>	<u>Maximum Allowable Cumulative Number 2 Fuel Oil Usage, Gallons</u>
1	390,255
1-2	780,510
1-3	1,170,765
1-4	1,561,020
1-5	1,951,257
1-6	2,341,530
1-7	2,731,785
1-8	3,122,040
1-9	3,512,300
1-10	3,512,300
1-11	3,512,300
1-12	3,512,300

The usage limitations above are for the sole use of number 2 fuel oil in emissions units B018, B019, B020 and B021. Under this usage scenario, no additional use of natural gas shall be permitted throughout the 12 month period. The usage of a combination of number 2 fuel oil and natural gas shall be in such quantities to maintain compliance with the NOx emissions limitation in Section A.I.2.g.

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual Number 2 fuel oil usage limitation shall be based upon a rolling, 12-month summation of the oil usage rates. The usage of a combination of number 2 fuel oil and natural gas shall be in such quantities to maintain compliance with the NOx emissions limitation in Section A.I.2.g.

### 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

**Childrens Hospital Medical Center****PTI Application: 11-05718****Issue:****Facility ID: 1431071395**

Emissions Unit ID: B020

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)].

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 for emissions units B018, B019, B020 and B021, combined:

a. the usage rates for each fuel (natural gas and number 2 fuel oil) burned;

b. beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the natural gas and number 2 fuel oil usage rates;

Also, during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative natural gas and number 2 fuel oil usage rates for each calendar month.

c. the type and total amount of fuel, other than natural gas or number 2 fuel oil, burned in this emissions unit.

3. The permittee shall maintain monthly records of the following information for emissions units B018, B019, B020 and B021, combined, in order to monitor compliance with the rolling, 12-month summation emissions limitations:

- a. the total emissions, in tons, for PE/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, and OC when burning any combination of fuels;
- b. the rolling, 12-monthly summation emissions total, in tons, for PE/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, and OC when burning any combination of fuels (the total amount of emissions calculated for the current month plus the total amount of emissions for the previous eleven calendar months).

#### **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 Number 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 PE, PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO and OC emissions for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.
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);

Emissions Unit ID: B020

- 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 deviation (excursion) reports which identify all exceedances of the following:
- a. an identification of all exceedances of the rolling, 12-month number 2 fuel oil usage restriction, and for the first 12 calendar months of operation following issuance of this permit, all exceedances of the maximum allowable cumulative fuel oil usage amounts; and
  - b. an identification of all exceedances of the rolling, 12-month emission limitations for NOx.
6. Unless otherwise specified, the deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.
7. The permittee shall submit annual reports which identify the total amount of natural gas (in million cubic feet) and number 2 fuel oil (in gallons) combusted in emissions units B018, B019, B020 and B021. These reports shall be submitted by January 31 of each year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

## **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 (number 2 fuel oil firing)  
3.74 TPY of PE/PM10 (combined emissions from B018-B021)

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 of total PM/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of number 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (in 1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 2 lbs of PM/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

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

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018, B019, B020 and B021, combined, shall be summed over the rolling 12 month period to determine compliance with the annual emission limitation.

c. Emission Limitations:

0.0006 lb SO<sub>2</sub>/mmBtu of actual heat input (natural gas firing)

Emissions Unit ID: B020

0.052 lb SO<sub>2</sub>/mmBtu of actual heat input (number 2 fuel oil firing)  
12.97 TPY SO<sub>2</sub> (combined emissions from B018-B021)

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 SO<sub>2</sub>/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of number 2 fuel oil, the emission limitations were based upon the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.3, Table 1.3-1 (9/98). Compliance with the lb/mmBtu emission limitation shall be based upon the record keeping in term and condition A.III.1.

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

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018, B019, B020 and B021, combined, shall be summed over the rolling 12 month period to determine compliance with the annual emission limitation.

d. Emission Limitations:

0.08 lb NO<sub>x</sub>/mmBtu of actual heat input (natural gas firing)  
0.16 lb NO<sub>x</sub>/mmBtu of actual heat input (number 2 fuel oil firing)  
39.90 TPY NO<sub>x</sub> (combined emissions from B018-B021)

Applicable compliance method:

For the use of natural gas, the short term emissions limitation is based upon the emission unit's potential to emit and the manufacturer's guaranteed emissions data as provided in PTI application 14-05718 submitted on April 29, 2005.

For the use of number 2 fuel oil, the short term emissions limitation is based upon the emission unit's potential to emit and the manufacturer's guaranteed emissions data as provided in PTI application 14-05718 submitted on April 29, 2005.

If required, the permittee shall demonstrate compliance with the lb/mmBtu

emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 7.

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018, B019, B020 and B021, combined, shall be summed over the rolling 12 month period to determine compliance with the annual emission limitation.

e. Emission Limitations:

0.084 lb CO/mmBtu of actual heat input (natural gas firing)  
0.036 lb CO/mmBtu of actual heat input (number 2 fuel oil firing)  
38.06 TPY CO (combined emissions from B018 - B021)

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 number 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (in 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 B018, B019, B020 and B021, combined, shall be summed over the rolling 12 month period to determine compliance with the annual emission limitation.

f. Emission Limitations:

Emissions Unit ID: B020

0.011 lb OC/mmBtu of actual heat input (natural gas firing)  
 0.004 lb OC/mmBtu of actual heat input (number 2 fuel oil firing)  
 4.98 TPY OC (combined emissions from B018 - B021)

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 11 lbs OC /mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of number 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (in 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 B018, B019, B020 and B021, combined, shall be summed over the rolling 12 month period 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.
6. Compliance with the mass emissions limitations in terms and conditions A.I.2.b. and A.I.2.g. shall be demonstrated by the record keeping in term and condition A.III.3.
7. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. the emission testing shall be conducted within six months after startup of this emissions unit;

- b. the emissions testing shall be conducted to demonstrate compliance with the allowable NOx emissions limitations while combusting natural gas;
- c. the following test methods(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):1-5, and 7. Alternative U.S. EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services; and,
- d. the test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Hamilton County Department of Environmental Services within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report where warranted, with prior approval from the Hamilton County Department of Environmental Services.

**Childrens Hospital Medical Center**  
**PTI Application: 11-05718**  
**Issue:**

**Facility ID: 1431071395**

Emissions Unit ID: B020

**VI. Miscellaneous Requirements**

None

**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>
B020 - 25.86 mmBtu/hr natural gas/number 2 fuel oil fired boiler (Central Plant Boiler 263).	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**

67

**Child**

**PTI A**

**Issued: 8/16/2005**

Emissions Unit ID: B020

None

Child  
PTI A  
Issued: 8/16/2005

Emissions Unit ID: B021

**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>
B021 - 25.86 mmBtu/hr natural gas/number 2 fuel oil fired boiler (Central Plant Boiler 264).	OAC rule 3745-31-05(A)(3)

	Source Review	<u>Applicable Emissions Limitations/Control Measures</u>
OAC rule 3745-17-07(A)(1)		<p>When burning natural gas:</p> <p>Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns in diameter (PM10) shall not exceed 0.0076 lb/mmBtu of actual heat input.</p>
OAC rule 3745-17-10(B)(1)		<p>Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input.</p>
OAC rule 3745-18-06		<p>Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.08 lb/mmBtu of actual heat input.</p>
40 CFR Part 60 Subpart Dc		<p>Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input.</p>
OAC rule 3745-21-08(B)		<p>Organic Compound (OC) emissions shall not exceed 0.011 lb/mmBtu of actual heat input.</p>
OAC rule 3745-23-06(B)		<p>When burning number 2 fuel oil:</p> <p>Particulate Emissions (PE) and emissions of Particulate Matter less than 10 microns in diameter (PM10) shall not exceed 0.015 lb/mmBtu of actual heat input.</p>
OAC rule 3745-31-05(C) Synthetic Minor to avoid Major Modification New		<p>Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.052 lb/mmBtu of actual heat input.</p>
		<p>Nitrogen Oxides (NO<sub>x</sub>) emissions</p>

**Child****PTI A****Issued: 8/16/2005**

Emissions Unit ID: B021

shall not exceed 0.16 lb/mmBtu of actual heat input.

emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

Carbon Monoxide (CO) emissions shall not exceed 0.036 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 0.004 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 terms and conditions A.I.2.b, and A.II.1 through A.II.2.

See term and condition A.I.2.c

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), OAC rule 3745-31-05(C) and 40 CFR Part 60 Subpart Dc.

See term and condition A.I.2.d

See terms and conditions A.I.2.g and A.II.3.

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

The emission limitation specified by this rule is less stringent than the

Emissions Unit ID: B021

## 2. Additional Terms and Conditions

**2.a** The lb/mmBtu emission limitations outlined in term A.I.1, except for SO<sub>2</sub> emissions when firing fuel oil, are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these emission limitations.

**2.b** The maximum total annual emissions from emissions units B018, B019, B020 and B021, combined, shall not exceed the following rates based upon a rolling, 12-month summation:

3.74 tons per year (TPY) of particulate emissions (PE) and PM<sub>10</sub>;

12.97 TPY of sulfur dioxide (SO<sub>2</sub>);

38.06 TPY of carbon monoxide (CO); and

4.98 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).

On February 15, 2005, OAC rule 3745-23-06 was rescinded and therefore no longer a 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 3745-23-06, the requirement to satisfy "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.e** The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.
- 2.f** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the visible emissions limitation, the mass emission limitations, the use of natural gas and/or ultra low sulfur (less than or equal to 0.05 weight percent sulfur) number 2 fuel oil and the annual fuel usage restriction.
- 2.g** The maximum total annual emissions from emissions units B018, B019, B020 and B021, combined, shall not exceed the following rate based upon a rolling, 12-month summation:
- 39.90 TPY of nitrogen oxides (NO<sub>x</sub>).

## II. Operational Restrictions

1. The permittee shall burn only natural gas and/or number 2 fuel oil in this emissions unit.
2. The quality of number 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 annual number 2 fuel oil usage in emissions units B018, B019, B020 and B021, combined shall not exceed 3,512,300 gallons based upon a rolling, 12-month summation of the monthly oil usage rates.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the number 2 fuel oil usage for emissions units B018, B019, B020 and B021, combined as specified in the following table:

<u>Month</u>	<u>Maximum Allowable Cumulative Number 2 Fuel Oil Usage, Gallons</u>
1	390,255
1-2	780,510
1-3	1,170,765
1-4	1,561,020
1-5	1,951,257
1-6	2,341,530
1-7	2,731,785
1-8	3,122,040
1-9	3,512,300
1-10	3,512,300
1-11	3,512,300
1-12	3,512,300

The usage limitations above are for the sole use of number 2 fuel oil in emissions units B018, B019, B020 and B021. Under this usage scenario, no additional use of natural gas shall be permitted throughout the 12 month period. The usage of a combination of number 2 fuel oil and natural gas shall be in such quantities to maintain compliance with the NOx emissions limitation in Section A.I.2.g.

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual Number 2 fuel oil usage limitation shall be based upon a rolling, 12-month summation of the oil usage rates. The usage of a combination of number 2 fuel oil and natural gas shall be in such quantities to maintain compliance with the NOx emissions limitation in Section A.I.2.g.

### 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.

74

**Child**

**PTI A**

**Issued: 8/16/2005**

Emissions Unit ID: B021

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 for emissions units B018, B019, B020 and B021, combined:

a. the usage rates for each fuel (natural gas and number 2 fuel oil) burned;

b. beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the natural gas and number 2 fuel oil usage rates;

Also, during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative natural gas and number 2 fuel oil usage rates for each calendar month.

c. the type and total amount of fuel, other than natural gas or number 2 fuel oil, burned in this emissions unit.

3. The permittee shall maintain monthly records of the following information for emissions units B018, B019, B020 and B021, combined, in order to monitor compliance with the rolling, 12-month summation emissions limitations:

**Childrens Hospital Medical Center**  
**PTI Application: 11-05718**  
**Issue**

**Facility ID: 1431071395**

Emissions Unit ID: B021

- a. the total emissions, in tons, for PE/PM10, SO2, NOx, CO, and OC when burning any combination of fuels;
- b. the rolling, 12-monthly summation emissions total, in tons, for PE/PM10, SO2, NOx, CO, and OC when burning any combination of fuels (the total amount of emissions calculated for the current month plus the total amount of emissions for the previous eleven calendar months).

#### **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 Number 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 PE, PM10, SO2, NOx, CO and OC emissions for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.
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

Emissions Unit ID: B021

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 deviation (excursion) reports which identify all exceedances of the following:
  - a. an identification of all exceedances of the rolling, 12-month number 2 fuel oil usage restriction, and for the first 12 calendar months of operation following issuance of this permit, all exceedances of the maximum allowable cumulative fuel oil usage amounts; and
  - b. an identification of all exceedances of the rolling, 12-month emission limitations for NO<sub>x</sub>.
6. Unless otherwise specified, the deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.
7. The permittee shall submit annual reports which identify the total amount of natural gas (in million cubic feet) and number 2 fuel oil (in gallons) combusted in emissions units B018, B019, B020 and B021. These reports shall be submitted by January 31 of each year. The CAA, Title V Fee Emission Report (FER) required to be submitted annually by April 15 for the facility will also satisfy the emission reporting requirement of this condition.

## **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 (number 2 fuel oil firing)  
3.74 TPY of PE/PM10 (combined emissions from B018-B021)

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 of total PM/mm cu. ft, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

For the use of number 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (in 1000 gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 2 lbs of PM/1000 gallons, and then dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr).

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

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018, B019, B020 and B021, combined, shall be summed over the rolling 12 month period to determine compliance with the annual emission limitation.

c. Emission Limitations:

0.0006 lb SO<sub>2</sub>/mmBtu of actual heat input (natural gas firing)  
0.052 lb SO<sub>2</sub>/mmBtu of actual heat input (number 2 fuel oil firing)  
12.97 TPY SO<sub>2</sub> (combined emissions from B018-B021)

Applicable compliance method:

Emissions Unit ID: B021

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

For the use of number 2 fuel oil, the emission limitations were based upon the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.3, Table 1.3-1 (9/98). Compliance with the lb/mmBtu emission limitation shall be based upon the record keeping in term and condition A.III.1.

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

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual emissions from emission units B018, B019, B020 and B021, combined, shall be summed over the rolling 12 month period to determine compliance with the annual emission limitation.

d. Emission Limitations:

0.08 lb NO<sub>x</sub>/mmBtu of actual heat input (natural gas firing)  
0.16 lb NO<sub>x</sub>/mmBtu of actual heat input (number 2 fuel oil firing)  
39.90 TPY NO<sub>x</sub> (combined emissions from B018-B021)

Applicable compliance method:

For the use of natural gas, the short term emissions limitation is based upon the emission unit's potential to emit and the manufacturer's guaranteed emissions data as provided in PTI application 14-05718 submitted on April 29, 2005.

For the use of number 2 fuel oil, the short term emissions limitation is based upon the emission unit's potential to emit and the manufacturer's guaranteed emissions data as provided in PTI application 14-05718 submitted on April 29, 2005.

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

The actual annual emission rate shall be calculated by using the actual fuel usages and emission factors and methodologies specified above. The annual

emissions from emission units B018, B019, B020 and B021, combined, shall be summed over the rolling 12 month period to determine compliance with the annual emission limitation.

e. Emission Limitations:

0.084 lb CO/mmBtu of actual heat input (natural gas firing)  
0.036 lb CO/mmBtu of actual heat input (number 2 fuel oil firing)  
38.06 TPY CO (combined emissions from B018 - B021)

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 number 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (in 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 B018, B019, B020 and B021, combined, shall be summed over the rolling 12 month period 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 (number 2 fuel oil firing)  
4.98 TPY OC (combined emissions from B018 - B021)

Applicable compliance method:

Emissions Unit ID: B021

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

For the use of number 2 fuel oil, compliance may be determined by multiplying the hourly oil burning capacity of the emissions unit (in 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 B018, B019, B020 and B021, combined, shall be summed over the rolling 12 month period 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.
6. Compliance with the mass emissions limitations in terms and conditions A.I.2.b. and A.I.2.g. shall be demonstrated by the record keeping in term and condition A.III.3.

## **VI. Miscellaneous Requirements**

None

Child  
PTI A  
Issued: 8/16/2005

Emissions Unit ID: B021

**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>
B021 - 25.86 MmBtu/hr Natural gas / Number 2 fuel oil fired boiler (Central Plant Boiler 264)	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**

83

**Childrens Hospital Medical Center**

**PTI Application: 11-05718**

**Issue:**

**Facility ID: 1431071395**

Emissions Unit ID: B021

None