



State of Ohio Environmental Protection Agency

STREET ADDRESS:

Lazarus Government Center
50 W. Town St., Suite 700
Columbus, Ohio 43215

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www.epa.state.oh.us

MAILING ADDRESS:

P.O. Box 1049
Columbus, OH 43216-1049

8/31/2009

Mark Shumaker
Nationwide Children's Hospital
700 CHILDRENS DR
COLUMBUS, OH 43205-2696

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 0125040588
Permit Number: P0105112
Permit Type: Initial Installation
County: Franklin

Certified Mail

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR
No	CEMS
No	MACT
Yes	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED

Dear Permit Holder:

Enclosed please find a final Air Pollution Permit-to-Install and Operate ("PTIO") which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully.

Ohio EPA maintains a document entitled "Frequently Asked Questions about the PTIO". The document can be downloaded from the DAPC Web page, www.epa.state.oh.us/dapc, from the "Permits" link. This document contains additional information related to your permit, such as what activities are covered under the PTIO, who has enforcement authority over the permit and Ohio EPA's authorization to inspect your facility and records. Please contact the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469 if you need assistance.

The issuance of this PTIO is a final action of the Director and may be appealed to the Environmental Review Appeals Commission ("ERAC") under Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and describe the action complained of and the grounds for the appeal. The appeal must be filed with the ERAC within thirty (30) days after notice of the Director's action. A filing fee of \$70.00 must be submitted to the ERAC with the appeal, although the ERAC, has discretion to reduce the amount of the filing fee if you can demonstrate (by affidavit) that payment of the full amount of the fee would cause extreme hardship. If you file an appeal of this action, you must notify Ohio EPA of the filing of the appeal (by providing a copy to the Director) within three (3) days of filing your appeal with the ERAC. Ohio EPA requests that a copy of the appeal also be provided to the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the ERAC at the following address:

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

If you have any questions regarding this permit, please contact the Ohio EPA DAPC, Central District Office. This permit has been posted to the Division of Air Pollution Control (DAPC) Web page www.epa.state.oh.us/dapc.

Sincerely,

Michael W. Ahern
Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: Ohio EPA-CDO

Ted Strickland, Governor
Lee Fisher, Lieutenant Governor
Chris Korleski, Director



**State of Ohio Environmental Protection Agency
Division of Air Pollution Control**

FINAL

**Air Pollution Permit-to-Install and Operate
for
Nationwide Children's Hospital**

Facility ID: 0125040588
Permit Number: P0105112
Permit Type: Initial Installation
Issued: 8/31/2009
Effective: 8/31/2009
Expiration: 8/31/2014



Air Pollution Permit-to-Install and Operate
for
Nationwide Children's Hospital

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State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Final Permit-to-Install and Operate
Permit Number: P0105112
Facility ID: 0125040588
Effective Date: 8/31/2009

Authorization

Facility ID: 0125040588
Application Number(s): A0037879
Permit Number: P0105112
Permit Description: Synthetic minor fuel usage restrictions on 2 natural gas-fired Nebraska boilers (77 mmBtu/hr with manufacturer's guaranteed low-NOx burner) and relocated natural gas-fired boiler (40 mmBtu/hr)
Permit Type: Initial Installation
Permit Fee: \$1,600.00
Issue Date: 8/31/2009
Effective Date: 8/31/2009
Expiration Date: 8/31/2014
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15
This document constitutes issuance to:

Nationwide Children's Hospital
561 S SEVENTEENTH ST
Columbus, OH 43205

of a Permit-to-Install and Operate for the emissions unit(s) identified on the following page.

Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Central District Office
50 West Town Street, 6th Floor
P.O. Box 1049
Columbus, OH 43216-1049
(614)728-3778

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s)) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Chris Korleski
Director



Authorization (continued)

Permit Number: P0105112
Permit Description: Synthetic minor fuel usage restrictions on 2 natural gas-fired Nebraska boilers (77 mmBtu/hr with manufacturer's guaranteed low-NOx burner) and relocated natural gas-fired boiler (40 mmBtu/hr)

Permits for the following emissions unit(s) or groups of emissions units are in this document as indicated below:

Emissions Unit ID: B019
Company Equipment ID: Boiler B-3
Superseded Permit Number:
General Permit Category and Type: Not Applicable

Group Name: Nebraska boilers B-1 and B-2

Emissions Unit ID:	B017
Company Equipment ID:	Boiler B-1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B018
Company Equipment ID:	Boiler B-2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Final Permit-to-Install and Operate

Permit Number: P0105112

Facility ID: 0125040588

Effective Date: 8/31/2009

A. Standard Terms and Conditions



1. What does this permit-to-install and operate ("PTIO") allow me to do?

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

2. Who is responsible for complying with this permit?

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

3. What records must I keep under this permit?

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

4. What are my permit fees and when do I pay them?

There are two fees associated with permitted air contaminant sources in Ohio:

- PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

- Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

5. When does my PTIO expire, and when do I need to submit my renewal application?

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.



If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

6. What happens to this permit if my project is delayed or I do not install or modify my source?

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

7. What reports must I submit under this permit?

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.

10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the Ohio EPA DAPC, Central District Office in accordance with OAC



rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

12. What happens if one or more emissions units operated under this permit is/are shut down permanently?

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emission unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

13. Can I transfer this permit to a new owner or operator?

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Final Permit-to-Install and Operate

Permit Number: P0105112

Facility ID: 0125040588

Effective Date: 8/31/2009

14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

15. What happens if a portion of this permit is determined to be invalid?

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Final Permit-to-Install and Operate

Permit Number: P0105112

Facility ID: 0125040588

Effective Date: 8/31/2009

B. Facility-Wide Terms and Conditions



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Final Permit-to-Install and Operate

Permit Number: P0105112

Facility ID: 0125040588

Effective Date: 8/31/2009

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) None.
 - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (1) None.



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Final Permit-to-Install and Operate

Permit Number: P0105112

Facility ID: 0125040588

Effective Date: 8/31/2009

C. Emissions Unit Terms and Conditions



1. B019, Boiler B-3

Operations, Property and/or Equipment Description:

40.2 MMBTU/hr natural gas fired

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)b, c)(1) thru c)(3), d)(1), e)(2) and f)(1)b.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)a.
b.	OAC rule 3745-31-05(D) (synthetic minor restriction to avoid Title V permitting)	Nitrogen oxide (NOx) emissions shall not exceed 7.7 tons per rolling, 12-month period. See c)(1) thru c)(3).
c.	OAC rule 3745-17-10 (B)(1)	The maximum allowable amount of particulate emissions (PE) shall not exceed 0.020 pound per million Btu of actual heat input from a boiler fired with either gaseous fuels and/or No. 2 fuel oil.
d.	OAC rule 3745-17-07 (A)	Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average.
e.	OAC rule 3745-18-06(D)	Oil-fired steam generating unit shall not cause or permit the maximum emission of sulfur dioxide from any source to exceed



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		1.6 pounds of sulfur dioxide per mmBtu actual heat input. See c)(4).
f.	40 CFR Part 60 Subpart Dc	See b)(2)b, c)(4) and d)(1).
g.	OAC rule 3745-110-03(J)(16)	See b)(2)c., below.

(2) Additional Terms and Conditions

- a. The Best Available Technology (BAT) requirement under OAC rule 3745-31-05(A)(3) do not apply to the PE, NOx, CO, SO2 and VOC emissions from this air contaminant source since the calculated annual emissions rate for PE, NOx, CO, SO2 and VOC are less than 10 tons per year.

[OAC rule 3745-31-05(A)(3)(a)(ii)]

- b. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency (U.S. EPA), 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency (Ohio EPA).
- c. The requirements of OAC rule 3745-110-03 paragraphs (A) to (F) shall not apply to any affected source issued a valid air operating permit by Ohio environmental protection agency that restricts such affected source to twenty-five tons per year or less of NOx emissions.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas and/or No. 2 fuel oil in this emissions unit.
- (2) The annual natural gas usage shall not exceed 154,000,000 standard cubic feet, as determined by the summation of the rolling, 12-month fuel usage,
- (3) The quantity of No. 2 fuel oil burned in this emissions unit shall not exceed 4,800 gallons per rolling, 12-month period.
- (4) The quality of No. 2 fuel oil received for burning in this emissions unit shall have a combination of sulfur content of less than or equal to 0.5 weight per cent sulfur and heat content sufficient to comply with the sulfur dioxide emission limitation of 1.60 lb/mmBtu of actual heat input.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the following information:
 - a. the total volume of natural gas (cu ft) burned in this emissions unit;



- b. during the first 12 calendar months of operation, the permittee shall record the cumulative volume of natural gas (cu ft) burned and, subsequently, after the first 12 calendar months of operation, the rolling, 12-month summation of the monthly volume of natural gas (cu ft) burned in this emissions unit;
 - c. the total number of gallons of No. 2 fuel oil used in this boiler for each month;
 - d. during the first 12 calendar months of operation, the permittee shall record the cumulative number of gallons of No. 2 fuel oil used in this boiler and, subsequently, after the first 12 calendar months of operation, the rolling, 12-month summation of the gallons of No. 2 fuel oil used;
- (2) 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.
- e) Reporting Requirements
- (1) Pursuant to the NSPS, the permittee is required to report the following information at the appropriate times (if the information has not already been reported):
- 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); and,
 - d. Date of performance testing (if required, at least 30 days prior to testing).
- Reports are to be sent to the appropriate local air agency or District Office and to:
- Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P.O. Box 163669
Columbus, Ohio 43216-3669
- (2) The permittee shall submit quarterly deviation (excursion) reports that include the following information:
- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the Potential to Emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
 - i. each period of time (start time and date, and end time and date) when the natural gas usage exceeded 154,000,000 standard cubic feet, as



determined by the summation of the rolling, 12-month fuel usage as identified by recordkeeping in d)(1)b; and,

- ii. each period of time (start time and date, and end time and date) when the quantity of No. 2 fuel oil burned in this emissions unit shall exceeded 4,800 gallons per rolling, 12-month period as identified by recordkeeping in d)(1)d.

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[OAC rule 3745-15-03(B)(1)(a)] and [OAC rule 3745-15-03(C)]

- (3) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

f) Testing Requirements

- (1) Compliance with the emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emissions Limitation:

The maximum allowable amount of particulate emissions (PE) shall not exceed 0.020 pound per million Btu of actual heat input from a boiler fired with either gaseous fuels and/or No 2 fuel oil.

Applicable Compliance Method:

Compliance while combusting natural gas, may be derived from an emission factor of 7.6 lbs PM₁₀/10⁶ scf of natural gas usage divided by 1,020 Btu/10⁶ scf of natural gas.

This emission factor is specified in the U.S. EPA reference document AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.4, Table 1.4-2 (7/98).

Compliance, while combusting fuel oil, with the lb/mmBtu emission limitation may be determined by dividing the 2 lbs PM₁₀/1000 gallon fuel oil usage by 140 mmBtu /1000 gallon fuel oil.

The emission factor is from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.3, Table 1.3-1 (9/98).



If required, particulate emissions shall be determined according to Methods 1 through 5, as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources".

b. Emissions Limitation:

Nitrogen oxides (NOx) emissions shall not exceed 7.7 tons/yr.

Applicable Compliance Method:

Compliance with the annual emission limitation may be demonstrated by record keeping of the cubic feet of natural gas usage in d)(1) and multiplying that by the 0.10 lb/mmBtu of heat input when combusting natural gas and by record keeping of the gallons of No. 2 fuel oil usage in d)(1) and multiplying that by the 0.14 lb /mmBtu of heat input when combusting fuel oil (manufacturer's guaranteed emission factors) and dividing by 2,000 lbs/ton.

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.

c. Emissions Limitation:

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

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon visible particulate emission observations performed in accordance with the method and procedures specified in OAC rule 3745-17-03(B)(1).

OAC rules 3745-17-03(B)(1)

d. Emissions Limitation:

An oil-fired steam generating unit shall not cause or permit the maximum emission of sulfur dioxide from any source to exceed 1.6 pounds of sulfur dioxide per mmBtu actual heat input.

Applicable Compliance Method:

Compliance with the sulfur emissions limitation for No. 2 fuel oil of less than or equal to 0.5 weight per cent sulfur shall be based upon the record keeping in c)(4) and calculations in d)(2).

g) Miscellaneous Requirements

(1) None.



2. Emissions Unit Group - Nebraska boilers B-1 and B-2: B017, B018,

EU ID	Operations, Property and/or Equipment Description
B017	77.1 MMBTU/hr natural gas fired (fuel oil backup)
B018	77.1 MMBTU/hr natural gas fired (fuel oil backup)

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
- (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
- a. None.
- (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
- a. b)(1)c, c)(1) thru (3), d)(1), e)(2), f)(1)b and f)(1)c.
- b) Applicable Emissions Limitations and/or Control Requirements
- (1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)	Nitrogen oxides (NOx) emissions shall not exceed 0.10 lb/mmBtu of heat input when combusting natural gas and 0.14 lb /mmBtu of heat input when combusting fuel oil. Carbon monoxide (CO) emissions shall not exceed 0.08 lb CO/mmBtu of actual heat input and 14.3 tons per year. Visible particulate emissions from any stack shall not exceed 10% opacity, as a 6-minute average, except for one 6-minute period per hour of not more than 27% opacity. The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-08(B), 3745-23-06(B)



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		and 40 CFR, Part 60, Subpart Dc.
c.	OAC rule 3745-31-05(D) (Synthetic minor restriction to avoid Title V permitting)	NOx emissions from B017 and B018 combined shall not exceed 17.0 tons per rolling, 12-month period. See c)(1) thru c)(3).
d.	OAC rule 3745-17-10(B)(1)	The maximum allowable amount of particulate emissions (PE) shall not exceed 0.020 pound per million Btu of actual heat input from a boiler fired with either gaseous fuels and/or No. 2 fuel oil.
e.	OAC rule 3745-17-07(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
f.	OAC rule 3745-18-31(A)(2)	For fossil fuel-fired steam generating units equal to or greater than 50.0 mmBtu per hour total rated heat input capacity, the emission limitation shall be 1.50 pounds of sulfur dioxide per mmBtu actual heat input. See c)(4).
g.	OAC rule 3745-21-07(B)	See b)(2)b.
h.	OAC rule 3745-21-08(B)	See b)(2)c.
i.	40 CFR Part 60 Subpart Dc	See b)(2)d, c)(4), d)(1) and d)(2).
j.	OAC rule 3745-110-03(J)(16)	See b)(2)e., below.

(2) Additional Terms and Conditions

- a. The Best Available Technology (BAT) requirement under OAC rule 3745-31-05(A)(3) do not apply to the PE, SO₂ and VOC emissions from this air contaminant source since the calculated annual emissions rate for PE, SO₂ and VOC are less than 10 tons per year.

[OAC rule 3745-31-05(A)(3)(a)(ii)]

- b. The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-07(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).



On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 provisions still exists as part of the federally approved SIP for Ohio.

- c. The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to 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 U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revisions 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.

- d. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency (U.S. EPA), 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency (Ohio EPA).
- e. The requirements of OAC rule 3745-110-03 paragraphs (A) to (F) shall not apply to any affected source issued a valid air operating permit by Ohio environmental protection agency that restricts such affected source to twenty-five tons per year or less of NOx emissions.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas and/or No. 2 fuel oil in this emissions unit.
- (2) The quantity of No. 2 fuel oil burned in this emissions unit shall not exceed 4,800 gallons per rolling, 12-month period.
- (3) For boilers B017 and B018, the combined annual usage shall not exceed 380,000,000 standard cubic feet of natural gas, as a summation of the rolling, 12-month fuel usages.
- (4) The quality of No. 2 fuel oil received for burning in this emissions unit shall have a combination of sulfur content of less than or equal to 0.5 weight per cent sulfur and heat content sufficient to comply with the sulfur dioxide emission limitation of 1.50 lb/mmBtu of actual heat input.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly fuel usage records of the following information:
 - a. the total volume of natural gas (cu ft) burned in this emissions unit;



- b. during the first 12 calendar months of operation, the permittee shall record the cumulative volume of natural gas (cu ft) burned and, subsequently, after the first 12 calendar months of operation, the rolling, 12-month summation of the monthly volume of natural gas (cu ft) burned in this emissions unit;
 - c. the total number of gallons of No. 2 fuel oil used in this boiler for each month;
 - d. during the first 12 calendar months of operation, the permittee shall record the cumulative number of gallons of No. 2 fuel oil used in this boiler and, subsequently, after the first 12 calendar months of operation, the rolling, 12-month summation of the gallons of No. 2 fuel oil used;
- (2) 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.
- e) Reporting Requirements
- (1) Pursuant to the NSPS, the permittee is required to report the following information at the appropriate times (if the information has not already been reported):
- 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); and,
 - d. Date of performance testing (if required, at least 30 days prior to testing).
- Reports are to be sent to the appropriate local air agency or District Office and to:
- Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P.O. Box 163669
Columbus, Ohio 43216-3669
- (2) The permittee shall submit quarterly deviation (excursion) reports that include the following information:
- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the Potential to Emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
 - i. each period of time (start time and date, and end time and date) when the natural gas usage exceeded 380,000,000 standard cubic feet, as



determined by the summation of the rolling, 12-month fuel usage as identified by recordkeeping in d)(1)b; and,

- ii. each period of time (start time and date, and end time and date) when the quantity of No. 2 fuel oil burned in this emissions unit shall exceeded 4,800 gallons per rolling, 12-month period as identified by recordkeeping in d)(1)d.

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[OAC rule 3745-15-03(B)(1)(a)] and [OAC rule 3745-15-03(C)]

- (3) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

f) Testing Requirements

- (1) Compliance with the emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emissions Limitation:

The maximum allowable amount of particulate emissions (PE) shall not exceed 0.020 pound per million Btu of actual heat input from a boiler fired with either gaseous fuels and/or No 2 fuel oil.

Applicable Compliance Method:

Compliance while combusting natural gas, may be derived from an emission factor of 7.6 lbs PM₁₀/10⁶ scf of natural gas usage divided by 1,020 Btu/10⁶ scf of natural gas.

This emission factor is specified in the U.S. EPA reference document AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.4, Table 1.4-2 (7/98).

Compliance, while combusting fuel oil, with the lb/mmBtu emission limitation may be determined by dividing the 2 lbs PM₁₀/1000 gallon fuel oil usage by 140 mmBtu /1000 gallon fuel oil.

The emission factor is from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.3, Table 1.3-1 (9/98).



If required, particulate emissions shall be determined according to Methods 1 through 5, as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources".

b. Emissions Limitation:

Nitrogen oxides (NO_x) emissions shall not exceed 0.10 lb/mmBtu of heat input when combusting natural gas and 0.14 lb /mmBtu of heat input when combusting fuel oil.

Applicable Compliance Method:

The emission limitations represent the manufacturer's guaranteed emission factors.

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.

c. Emissions Limitation:

Nitrogen oxides (NO_x) emissions shall not exceed 17.0 tons per year.

Applicable Compliance Method:

Compliance with the annual emission limitation may be demonstrated by record keeping of the cubic feet of natural gas usage in d)(1) and multiplying that by the 0.10 lb/mmBtu of heat input when combusting natural gas and by record keeping of the gallons of No. 2 fuel oil usage in d)(1) and multiplying that by the 0.14 lb /mmBtu of heat input when combusting fuel oil (manufacturer's guaranteed emission factors) and dividing by 2,000 lbs/ton.

d. Emissions Limitation:

Carbon monoxide (CO) emissions shall not exceed 0.08 lb CO/mmBtu and 14.3 tons per year.

Applicable Compliance Method:

The emission limitations were derived from an emission factor of 0.08 lb CO/mmBtu as provided by the manufacturer.

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.

Compliance with the annual emission limitation may be demonstrated by record keeping of the cubic feet of natural gas usage in d)(1) and multiplying that by the 0.80 lb CO/mmBtu emission factor and dividing by 2000 lbs/ton.



e. Emissions Limitation:

Visible particulate emissions from any stack shall not exceed 10% opacity, as a 6-minute average, except for one 6-minute period per hour of not more than 27% opacity.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon visible particulate emission observations performed in accordance with the method and procedures specified in OAC rule 3745-17-03(B)(1).

OAC rules 3745-17-03(B)(1)

f. Emissions limitation:

For fossil fuel-fired steam generating units equal to or greater than 50.0 mmBtu per hour total rated heat input capacity, the emission limitation shall be 1.50 pounds of sulfur dioxide per mmBtu actual heat input.

Applicable Compliance Method:

Compliance with the sulfur emissions limitation for No. 2 fuel oil of less than or equal to 0.5 weight per cent sulfur shall be based upon the record keeping in c)(4) and calculations in d)(2).

g) Miscellaneous Requirements

(1) None.