



3/31/2014

Certified Mail

Mr. Mark Barich
 Summa Health Systems Akron City Hospital
 525 E Market St
 Akron, OH 44309

No	TOXIC REVIEW
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
Yes	NSPS
No	NESHAPS
No	NETTING
No	MODELING SUBMITTED
Yes	SYNTHETIC MINOR TO AVOID TITLE V
Yes	FEDERALLY ENFORCABLE PTIO (FEPTIO)
Yes	SYNTHETIC MINOR TO AVOID MAJOR GHG

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
 Facility ID: 1677010001
 Permit Number: P0110877
 Permit Type: Renewal
 County: Summit

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) 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. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

The issuance of this PTIO is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
 77 South High Street, 17th Floor
 Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/survey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Akron Regional Air Quality Management District at (330)375-2480 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Michael W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: ARAQMD



Response to Comments

Facility ID:	1677010001
Facility Name:	Summa Health Systems Akron City Hospital
Facility Description:	
Facility Address:	525 E Market St Akron, OH 44309 Summit County
Permit:	P0110877, Permit-To-Install and Operate - Renewal
A public notice for the draft permit issuance was published in the Ohio EPA Weekly Review and appeared in the Akron Beacon Journal on 02/26/2014. The comment period ended on 03/28/2014.	
Hearing date (if held)	
Hearing Public Notice Date (if different from draft public notice)	

The following comments were received during the comment period specified. Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format. PDF copies of the original comments in the format submitted are available upon request.

- a. **No comments received.**



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
Summa Health Systems Akron City Hospital**

Facility ID:	1677010001
Permit Number:	P0110877
Permit Type:	Renewal
Issued:	3/31/2014
Effective:	3/31/2014
Expiration:	3/31/2019



Division of Air Pollution Control
Permit-to-Install and Operate
for
Summa Health Systems Akron City Hospital

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Final Permit-to-Install and Operate
Summa Health Systems Akron City Hospital
Permit Number: P0110877
Facility ID: 1677010001
Effective Date: 3/31/2014

Authorization

Facility ID: 1677010001
Application Number(s): A0045069
Permit Number: P0110877
Permit Description: Federally Enforceable Permit to Install and Operate Renewal for two Natural Gas Fired Boilers with No. 2 Fuel Oil as Back-up Fuel (B002 and B005).
Permit Type: Renewal
Permit Fee: \$0.00
Issue Date: 3/31/2014
Effective Date: 3/31/2014
Expiration Date: 3/31/2019
Permit Evaluation Report (PER) Annual Date: July 1 - June 30, Due Aug 15

This document constitutes issuance to:

Summa Health Systems Akron City Hospital
525 E Market St
Akron, OH 44309

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

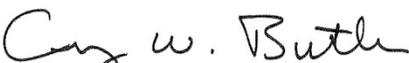
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

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

The above named entity is hereby granted 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


Craig W. Butler
Director



Final Permit-to-Install and Operate
Summa Health Systems Akron City Hospital
Permit Number: P0110877
Facility ID: 1677010001
Effective Date: 3/31/2014

Authorization (continued)

Permit Number: P0110877
Permit Description: Federally Enforceable Permit to Install and Operate Renewal for two Natural Gas Fired Boilers with No. 2 Fuel Oil as Back-up Fuel (B002 and B005).

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

Emissions Unit ID:	B002
Company Equipment ID:	Boiler 4
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B005
Company Equipment ID:	Boiler 5
Superseded Permit Number:	16-1522
General Permit Category and Type:	Not Applicable



Final Permit-to-Install and Operate
Summa Health Systems Akron City Hospital
Permit Number: P0110877
Facility ID: 1677010001
Effective Date: 3/31/2014

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 of this permit 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 [DO/LAA] 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.

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.



Final Permit-to-Install and Operate
Summa Health Systems Akron City Hospital
Permit Number: P0110877
Facility ID: 1677010001
Effective Date: 3/31/2014

B. Facility-Wide Terms and Conditions



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.
2. The following emissions unit contained in this permit is subject to the applicable requirements of 40 CFR Part 60, Subparts A and Dc: B005. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website <http://ecfr.gpoaccess.gov> or by contacting the Akron Regional Air Quality Management District.



Final Permit-to-Install and Operate
Summa Health Systems Akron City Hospital
Permit Number: P0110877
Facility ID: 1677010001
Effective Date: 3/31/2014

C. Emissions Unit Terms and Conditions



1. B002, Boiler 4

Operations, Property and/or Equipment Description:

90.25 MMBTU/Hr Natural Gas Boiler (No. 2 Fuel Oil Back-up) - Boiler 4

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)a., c)(1), c)(2), c)(3), c)(4), d)(1), e)(1), f)(1)d., f)(1)e. and f)(1)f.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) (Synthetic Minor to Avoid Title V Applicability)	<p>The emissions of sulfur dioxide (SO₂) shall not exceed 2.1 tons per year, based upon a rolling 12-month summation of the emissions.</p> <p>The emissions of nitrogen oxides (NO_x) shall not exceed 24.96 tons per year, based upon a rolling 12-month summation of the emissions.</p> <p>The emissions of carbon dioxide equivalent (CO_{2e}) shall not exceed 29,849 tons per year, based upon a rolling 12-month summation of the emissions.</p> <p>See c)(1) through c)(4) below.</p>
b.	40 CFR 52.1881	The emission limitation specified by this rule is equivalent to the emission limitation established pursuant to OAC



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		rule 3745-18-83(A)(1).
c.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
d.	OAC rule 3745-17-10	The PE shall not exceed 0.020 pound per million Btu of actual heat input.
e.	OAC rule 3745-18-83(A)(1)	<p>The emissions of SO₂ shall not exceed 2.99 pounds per MMBtu actual heat input.</p> <p>This emissions unit is exempt from paragraphs (D), (F) and (G) of rule 3745-18-06 and from rules 3745-18-07 to 3745-18-94 of the Administrative Code during any calendar day in which natural gas is the only fuel burned.</p>
f.	OAC rule 3745-110-03(K)(17)	The requirements of paragraphs (A) to (G) of OAC rule 3745-110-03 do not apply to this emissions unit since this permit restricts the affected source to less than twenty-five tons per year of NO _x emissions.

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas and/or No. 2 fuel oil (as a backup) as fuel in this emissions unit.
- (2) The quality of the oil burned in this emissions unit shall meet a sulfur content that is sufficient to comply with the sulfur dioxide emission limitation specified in b)(1)e. above. In no case shall the sulfur content of fuel oil burned in this emissions unit exceed 0.5 percent, by weight.
- (3) This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the No. 2 fuel oil usage, upon issuance of this permit. The maximum annual No. 2 fuel oil usage for this emissions unit shall not exceed 55,000 gallons, based upon a rolling, 12-month summation of the No. 2 fuel oil usage figures.
- (4) This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the natural gas usage, upon issuance of this permit. The maximum annual natural



gasusage for this emissions unit shall not exceed 486 million cubic feet, based upon a rolling, 12-month summation of the natural gas usage figures.

d) **Monitoring and/or Recordkeeping Requirements**

(1) The permittee shall maintain monthly records of the following information:

- a. the No. 2 fuel oil usage each month, in gallons;
- b. the natural gas usage each month, in million cubic feet;
- c. the rolling, 12-month summation of the No. 2 fuel oil usage; and
- d. the rolling, 12-month summation of the natural gas usage.

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

a. **Alternative 1:**

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/MMBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in f)(1) below. A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

b. **Alternative 2:**

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/MMBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in f)(1) below.

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods, such as ASTM methods D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and



Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the Director.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify:
 - 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. all exceedances of the rolling, 12-month No. 2 fuel oil usage limitation and
 - ii. all exceedances of the rolling, 12-month natural gas usage limitation.
 - b. the probable cause of each deviation (excursion);
 - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - d. the magnitude and duration of each deviation (excursion).

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 reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid



electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

f) Testing Requirements

- (1) Sulfur dioxide emissions from liquid fuel samples shall be calculated as follows:

$$ER = [(1 \times 10^6) / H] \times D \times S \times 1.974$$

where:

ER = the emission rate in pounds of sulfur dioxide per MMBtu;

H = the heat content of the liquid fuel in Btu per gallon;

D = the density of the liquid fuel in pounds per gallon; and

S = the decimal fraction of sulfur in the liquid fuel.

- (2) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

Visible PE from the stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method:

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

b. Emission Limitation:

The PE shall not exceed 0.020 pound per MMBtu.

Compliance Method:

Compliance with the allowable PE limitation above shall be demonstrated through emission calculations using the PE factors of AP-42, Tables 1.4-2 and 1.3-1 and the worst-case hourly fuel consumption:

For natural gas:

$$(7.6 \text{ lbs of PE}/10^6 \text{ standard cubic feet of natural gas fired (scf)}) \times (88,480 \text{ cf/hr}) \times (1 \text{ hr}/90.25 \text{ MMBtu}) = 0.007 \text{ lb of PE/MMBtu}$$



For No. 2 fuel oil:

$$(2.0 \text{ lbs of PE}/1000 \text{ gal}) \times (645 \text{ gal/hr}) \times (1 \text{ hr}/90.25 \text{ MMBtu}) = 0.014 \text{ lb of PE/MMBtu}$$

If required, compliance with the allowable PE limitation above shall be demonstrated through emission testing in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A and the procedures specified in OAC rule 3745-17-03(B)(9).

c. Emission Limitation:

The emissions of SO₂ shall not exceed 2.99 pounds per MMBtu actual heat input.

Compliance Method:

Compliance with the allowable SO₂ emission limitation above shall be demonstrated through emission calculations using the SO₂ emission factors of AP-42, Tables 1.4-2 and 1.3-1 and the worst-case hourly fuel consumption for natural gas:

$$(0.6 \text{ lb of SO}_2/10^6 \text{ scf.}) \times (88,840 \text{ cf/hr}) \times (1 \text{ hr}/90.25 \text{ MMBtu}) = 0.0006 \text{ lb of SO}_2/\text{MMBtu}$$

When No. 2 fuel oil is burned, compliance with the allowable sulfur dioxide emission limitation above shall be demonstrated through the monitoring and record keeping and testing requirements in d)(2) and f)(1) above.

If required, compliance with the allowable SO₂ emission limitation above shall be demonstrated through emission testing in accordance with Methods 1-4 and Method 6, 6A, 6B or 6C of 40 CFR Part 60, Appendix A.

*Maximum allowable SO₂ content, in weight percent.

d. Emission Limitation:

The emissions of SO₂ shall not exceed 2.1 tons per year, based upon a rolling 12-month summation of the emissions.

Compliance Method:

Compliance with the annual allowable SO₂ emission limitation above shall be demonstrated through emission calculations using the SO₂ emission factors of AP-42, Tables 1.4-2 and 1.3-1 and the worst-case hourly fuel consumption for natural gas or the maximum allowable fuel consumption for No. 2 fuel oil and natural gas:

For natural gas only:

$$[(0.6 \text{ lb of SO}_2/10^6 \text{ scf.}) \times (88,480 \text{ cf/hr}) \times 8760 \text{ hrs/yr}] / 2000 \text{ lbs/ton} = 0.23 \text{ ton of SO}_2 \text{ per year}$$



For natural gas and No. 2 fuel oil with operational restrictions:

$$[(55,000 \text{ gal/yr}) \times (142 \times (0.5^*) \text{ lbs of SO}_2/1000 \text{ gal}) + ((0.6 \text{ lb of SO}_2/10^6 \text{ scf}) \times (486 \text{ million cf/yr})]/2000 \text{ pounds/ton} = 2.1 \text{ tons of SO}_2 \text{ per year}$$

Therefore, as long as compliance with the rolling 12-month operational restrictions for No. 2 fuel oil and natural gas are maintained, compliance with the annual allowable emission limitation above shall be demonstrated.

*Maximum allowable sulfur dioxide content, in weight percent.

e. Emission Limitation:

The emissions of NO_x shall not exceed 24.96 tons per year, based upon a rolling 12-month summation of the emissions.

Compliance Method:

Compliance with the annual allowable NO_x emission limitation above shall be demonstrated through emission calculations using the NO_x emission factors of AP-42, Tables 1.4-1 and 1.3-1 and the maximum allowable annual fuel consumption for No. 2 fuel oil and natural gas:

For natural gas and No. 2 fuel oil with operational restrictions:

$$[(55,000 \text{ gal/yr}) \times (24 \text{ lbs of NO}_x/1000 \text{ gal}) + ((100 \text{ lbs of NO}_x/\text{million scf}) \times (486 \text{ million cf/yr})]/2000 \text{ pounds/ton} = 24.96 \text{ tons of NO}_x \text{ per year}$$

Therefore, as long as compliance with the rolling 12-month operational restrictions for No. 2 fuel oil and natural gas are maintained, compliance with the annual allowable emission limitation above shall be demonstrated.

f. Emission Limitations:

The emissions of CO_{2e} shall not exceed 29,849 tons per year, based upon a rolling 12-month summation of the emissions.

Compliance Method:

Compliance with the annual allowable CO_{2e} emission limitation above shall be demonstrated through emission calculations using the CO_{2e} emission factors derived from Tables C-1 and C-2 and Equations C-1 and C-8 of 40 CFR Part 98, Subpart C, using the conversion factors in Tables A-1 and A-2 of 40 CFR Part 98, Subpart A and the maximum allowable annual fuel consumption for No. 2 fuel oil and natural gas:

For natural gas and No. 2 fuel oil with operational restrictions:

$$(55,000 \text{ gal/yr}) \times [(4.14 \times 10^{-7} \text{ metric ton of methane (CH}_4\text{)/gallon}) \times 21 + (8.28 \times 10^{-8} \text{ metric ton of nitrous oxide (N}_2\text{O)/gallon}) \times 310 + (1.0206 \times 10^{-2} \text{ metric ton of carbon dioxide (CO}_2\text{)/gallon})] + (486,000,000 \text{ cf/yr}) \times [(1.028 \times 10^{-9} \text{ metric ton of}$$



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$\text{CH}_4/\text{scf}) \times 21 + (1.028 \times 10^{-10} \text{ metric ton of N}_2\text{O /scf}) \times 310 + (5.4505 \times 10^{-5} \text{ metric ton of CO}_2/\text{scf})] \times 1.10231 \text{ ton/metric ton} = 29,849 \text{ tons of CO}_2\text{e per year}$

Therefore, as long as compliance with the rolling 12-month operational restrictions for No. 2 fuel oil and natural gas are maintained, compliance with the annual allowable emission limitation above shall be demonstrated.

g) Miscellaneous Requirements

(1) None.



2. B005, Boiler 5

Operations, Property and/or Equipment Description:

73 MMBTU/Hr Natural Gas Boiler (No. 2 Fuel Oil Back-up) - Boiler 5

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), c)(2), c)(3), c)(4), d)(11), d)(12), e)(7), f)(5)f., f)(5)g., f)(5)h. and f)(5)i.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	<p>The particulate emissions (PE) shall not exceed 0.020 pound per million British Thermal Units (MMBtu) and 4.26 tons per year.</p> <p>The emissions of carbon monoxide (CO) shall not exceed 6.01pounds per hour and 26.33 tons per year.</p> <p>The emissions of sulfur dioxide (SO₂) shall not exceed 0.81 pound per MMBtu.</p> <p>The permittee shall employ a low-nitrogen oxide (NO_x)burner and/or flue gas recirculation technology in this emissions unit.</p>
b.	OAC rule 3745-31-05(D) (Synthetic Minor to Avoid Title V	The emissions of SO ₂ shall not exceed 3.1 tons per year, based upon a rolling



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	Applicability)	<p>12-month summation of the emissions.</p> <p>The emissions of NO_x shall not exceed 0.10pound per MMBtu when this emissions unit is fired with natural gas and 24.99 tons per year, based upon a rolling 12-month summation of the emissions.</p> <p>The emissions of carbon dioxide equivalent (CO_{2e}) shall not exceed 29,308 tons per year, based upon a rolling 12-month summation of the emissions.</p> <p>See c)(1) through c)(4) below.</p>
c.	40 CFR 60, Subpart Dc	<p>When combusting No. 2 fuel oil, visible PE from the stack shall not exceed 20% opacity as a 6-minute average, except for one 6-minute period per hour of not more than 27% opacity.</p> <p>The opacity standard applies at all times, except during periods of startup, shutdown, or malfunction.</p> <p>The permittee shall not combust oil in this emissions unit that contains greater than 0.5 weight percent sulfur.</p> <p>The fuel oil sulfur limits apply at all times, including periods of startup, shutdown, and malfunction.</p>
d.	40 CFR 52.1881	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
e.	OAC rule 3745-17-07(A)	Visible PE from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
f.	OAC rule 3745-17-10	The emission limitation specified by this rule is equivalent to the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
g.	OAC rule 3745-18-83(A)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		rule 3745-31-05(A)(3).
h.	OAC rule 3745-110-03(K)(17)	The requirements of paragraphs (A) to (G) of OAC rule 3745-110-03 do not apply to this emissions unit since this permit restricts the affected source to less than twenty-five tons per year of NO _x emissions.

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas and/or No. 2 fuel oil (as a backup) as fuel in this emissions unit.
- (2) The quality of the oil burned in this emissions unit shall meet a sulfur content that is sufficient to comply with the sulfur dioxide emission limitation specified in b)(1)a. above. In no case shall the sulfur content of fuel oil burned in this emissions unit exceed 0.5 percent, by weight.
- (3) The maximum annual No. 2 fuel oil usage for this emissions unit shall not exceed 55,000 gallons, based upon a rolling, 12-month summation of No. 2 fuel oil usage.
- (4) This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the natural gas usage, upon issuance of this permit. The maximum annual natural gas usage for this emissions unit shall not exceed 477 million cubic feet, based upon a rolling, 12-month summation of the natural gas usage figures.
- (5) The maximum heat input to this emissions unit shall not exceed 73.0 MMBtu per hour.

d) Monitoring and/or Recordkeeping Requirements

- (1) An owner or operator of an affected facility that is subject to an opacity standard in §60.43c(c) of 40 CFR Part 60, Subpart Dc is not required to operate a COMS provided that the affected facility burns only gaseous fuels and/or fuel oils that contain no greater than 0.5 weight percent sulfur, and the owner or operator operates the unit according to a written site-specific monitoring plan approved by the permitting authority. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard. For testing performed as part of this site-specific monitoring plan, the permitting authority may require as an alternative to the notification and reporting requirements specified in §§60.8 and 60.11 of 40 CFR Part 60, Subpart A that the owner or operator submit any deviations with the excess emissions report required under §60.48c(c) of 40 CFR Part 60, Subpart Dc.



- (2) Compliance with the emission limits or fuel oil sulfur limits under §60.42 of 40 CFR Part 60, Subpart Dc may be determined based on a certification from the fuel supplier, as described under §60.48c(f) of 40 CFR Part 60, Subpart Dc, as applicable.
- (3) Fuel supplier certification shall include the following information:
 - a. For distillate oil:
 - i. The name of the oil supplier;
 - ii. A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41 of 40 CFR Part 60, Subpart Dc; and
 - iii. The sulfur content or maximum sulfur content of the oil.
- (4) Except as provided under d)(5) and d)(6) below, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.
- (5) As an alternative to meeting the requirements of d)(4) above, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) of 40 CFR Part 60, Subpart Dc to demonstrate compliance with the SO₂ standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.
- (6) As an alternative to meeting the requirements of d)(4) above, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to of 40 CFR Part 60, Subpart Dc) at that property are natural gas, wood, distillate oil meeting the most current requirements in §60.42 of 40 CFR Part 60, Subpart Dc to use fuel certification to demonstrate compliance with the SO₂ standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.
- (7) For each performance test conducted using Method 9 of Appendix A-4 of 40 CFR Part 60, the owner or operator shall keep the records including the information specified in d)(7)a. through d)(7)c. below.
 - a. Dates and time intervals of all opacity observation periods;
 - b. Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and



- c. Copies of all visible emission observer opacity field data sheets.
- (8) For each performance test conducted using Method 22 of Appendix A-4 of 40 CFR Part 60, the owner or operator shall keep the records including the information specified in d)(8)a. through d)(8)d. below.
- a. Dates and time intervals of all visible emissions observation periods;
 - b. Name and affiliation for each visible emission observer participating in the performance test;
 - c. Copies of all visible emission observer opacity field data sheets; and
 - d. Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements.
- (9) For each digital opacity compliance system, the owner or operator shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator.
- (10) All records required under §60.48 of 40 CFR Part 60, Subpart Dc shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.
- (11) The permittee shall record each operating day the following information for this emissions unit:
- a. the No. 2 fuel oil usage, in gallons and the associated total heat input, in MMBtu;
 - b. the natural gas usage, in million cubic feet and the associated total heat input, in MMBtu;
 - c. the total hours of operation; and
 - d. the average hourly heat input, in MMBtu per hour.
- (12) The permittee shall generate and record the following monthly records, based on the record keeping requirements of d)(11) above:
- a. the No. 2 fuel oil usage each month, in gallons;
 - b. the natural gas usage each month, in million cubic feet;
 - c. the rolling, 12-month summation of the No. 2 fuel oil usage; and
 - d. the rolling, 12-month summation of the natural gas usage.
- (13) The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below:



a. Alternative 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/MMBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in f)(4). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/MMBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in f)(4) below.

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

e) Reporting Requirements

- (1) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by §60.7 of 40 CFR Part 60, Subpart A. This notification shall include:
 - a. The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.
 - b. If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §60.42c or §60.43c of 40 CFR Part 60, Subpart Dc.



- c. The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.
 - d. Notification if an emerging technology will be used for controlling SO₂ emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42c(a) or (b)(1) of 40 CFR Part 60, Subpart Dc, unless and until this determination is made by the Administrator.
- (2) The owner or operator of each affected facility subject to the SO₂ emission limits of §60.42c of 40 CFR Part 60, Subpart Dc, or the PM or opacity limits of §60.43c of 40 CFR Part 60, Subpart Dc, shall submit to the Administrator the performance test data from the initial and any subsequent performance.
 - (3) In addition to the applicable requirements in §60.7 of 40 CFR Part 60, Subpart A, the owner or operator of an affected facility subject to the opacity limits in §60.43c(c) of 40 CFR Part 60, Subpart Dc shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period and maintain records according to the requirements specified in d)(7) through d)(9) above, as applicable to the visible emissions monitoring method used.
 - (4) The owner or operator of each affected facility subject to the SO₂ emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c of 40 CFR Part 60, Subpart Dc shall submit reports to the Administrator.
 - (5) The owner or operator of each affected facility subject to the SO₂ emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c of 40 CFR Part 60, Subpart Dc shall keep records and submit reports as required under paragraph e)(4) above, including the following information, as applicable.
 - a. Calendar dates covered in the reporting period.
 - b. If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under d)(3) above, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.
 - (6) The reporting period for the reports required under 40 CFR Part 60, Subpart Dc is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.



- (7) The permittee shall submit quarterly deviation (excursion) reports that identify:
- 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. all exceedances of the rolling, 12-month No. 2 fuel oil usage limitation and
 - ii. all exceedances of the rolling, 12-month natural gas usage limitation.
 - b. the probable cause of each deviation (excursion);
 - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - d. the magnitude and duration of each deviation (excursion).

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 reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

- (8) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (9) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.



f) Testing Requirements

- (1) For affected facilities subject to §60.42c(h)(1), (2), or (3) of 40 CFR Part 60, Subpart Dc where the owner or operator seeks to demonstrate compliance with the SO₂ standards based on fuel supplier certification, the performance test shall consist of the certification from the fuel supplier, as described in §60.48c(f) of 40 CFR Part 60, Subpart Dc, as applicable.
- (2) The owner or operator of an affected facility subject to the PM and/or opacity standards under §60.43 of 40 CFR Part 60, Subpart Dc shall conduct an initial performance test as required under §60.8 of 40 CFR Part 60, Subpart A, and shall conduct subsequent performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods, except as specified in paragraph (c) of §60.45 of 40 CFR Part 60, Subpart Dc: Method 9 of Appendix A-4 of 40 CFR Part 60 shall be used for determining the opacity of stack emissions.
- (3) The owner or operator of an affected facility subject to an opacity standard in §60.43c(c) of 40 CFR Part 60, Subpart Dc that is not required to use a COMS due to paragraphs (c), (d), (e), or (f) of §60.47 of 40 CFR Part 60, Subpart Dc that elects not to use a COMS shall conduct a performance test using Method 9 of Appendix A-4 of 40 CFR Part 60 and the procedures in §60.11 of 40 CFR Part 60, Subpart A to demonstrate compliance with the applicable limit in §60.43 of 40 CFR Part 60, Subpart Dc by April 29, 2011, within 45 days of stopping use of an existing COMS, or within 180 days after initial startup of the facility, whichever is later, and shall comply with either f)(3)a., f)(3)b., or f)(3)c. below. The observation period for Method 9 of Appendix A-4 of 40 CFR Part 60 performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation.
 - a. Except as provided in f)(3)b. and f)(3)c. below, the owner or operator shall conduct subsequent Method 9 of Appendix A-4 of 40 CFR Part 60 performance tests using the procedures in f)(3) above according to the applicable schedule in f)(3)a.i. through f)(3)a.iv. below, as determined by the most recent Method 9 of Appendix A-4 of 40 CFR Part 60 performance test results.
 - i. If no visible emissions are observed, a subsequent Method 9 of Appendix A-4 of 40 CFR Part 60 performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;
 - ii. If visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 of Appendix A-4 of 40 CFR Part 60 performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;
 - iii. If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of Appendix A-4



- of 40 CFR Part 60 performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; or
- iv. If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 of Appendix A-4 of 40 CFR Part 60 performance test must be completed within 45 calendar days from the date that the most recent performance test was conducted.
- b. If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of Appendix A-4 of 40 CFR Part 60 performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of Appendix A-4 of 40 CFR Part 60 performance tests, elect to perform subsequent monitoring using Method 22 of Appendix A-7 of 40 CFR Part 60 according to the procedures specified in paragraphs f)(3)b.i. and f)(3)b.ii. below.
 - i. The owner or operator shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using Method 22 of Appendix A-7 of 40 CFR Part 60 and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (*i.e.*, 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (*i.e.*, 90 seconds per 30 minute period), the owner or operator shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observation (*i.e.*, 90 seconds) or conduct a new Method 9 of Appendix A-4 of 40 CFR Part 60 performance test using the procedures in f)(3) above within 45 calendar days according to the requirements in §60.45c(a)(8) of 40 CFR Part 60, Subpart Dc.
 - ii. If no visible emissions are observed for 10 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed.
 - c. If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of Appendix A-4 of 40 CFR Part 60 performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of Appendix A-4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in f)(3)b. above. For reference purposes in preparing the monitoring plan, see OAQPS "Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems." This document is available from the U.S. Environmental Protection



Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods.

- (4) Sulfur dioxide emissions from liquid fuel samples shall be calculated as follows:

$$ER = [(1 \times 10^6) / H] \times D \times S \times 1.974$$

where:

ER = the emission rate in pounds of sulfur dioxide per MMBtu;

H = the heat content of the liquid fuel in Btu per gallon;

D = the density of the liquid fuel in pounds per gallon; and

S = the decimal fraction of sulfur in the liquid fuel.

- (5) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

Visible PE from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.

Compliance Method:

If required, compliance with the visible PE limitation above shall be determined through visible PE observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- b. Emission Limitation:

When combusting No. 2 fuel oil, visible PE from the stack shall not exceed 20% opacity as a 6-minute average, except for one 6-minute period per hour of not more than 27% opacity.

Compliance Method:

Compliance with the visible PE limitation above shall be determined through visible particulate emissions observations as described in f)(2) and f)(3) above.

- c. Emission Limitation:

The PE shall not exceed 0.020 pound per MMBtu.



Compliance Method:

Compliance with the allowable PE limitation above shall be demonstrated through emission calculations using the PE factors of AP-42, Tables 1.4-2 and 1.3-1 and the worst-case hourly fuel consumption:

For natural gas:

$$(7.6 \text{ lbs of PE}/10^6 \text{ standard cubic feet of natural gas fired (scf)}) \times (71,569 \text{ cf/hr}) \times (1 \text{ hr}/73 \text{ MMBtu}) = 0.007 \text{ lb of PE/MMBtu}$$

For No. 2 fuel oil:

$$(2.0 \text{ lbs of PE}/1000 \text{ gal}) \times (521 \text{ gal/hr}) \times (1 \text{ hr}/73 \text{ MMBtu}) = 0.014 \text{ lb of PE/MMBtu}$$

If required, compliance with the allowable PE limitation above shall be demonstrated through emission testing in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A and the procedures specified in OAC rule 3745-17-03(B)(9).

d. Emission Limitation:

The PE shall not exceed 4.26 tons per year.

Compliance Method:

Compliance with the annual allowable PE limitation above shall be demonstrated through emission calculations using the PE factors of AP-42, Tables 1.4-2 and 1.3-1 and the worst-case hourly fuel consumption for natural gas or the maximum allowable fuel consumption for No. 2 fuel oil and natural gas:

For natural gas only:

$$((7.6 \text{ lbs of PE}/10^6 \text{ scf}) \times (71,569 \text{ cf/hr}) \times 8760 \text{ hrs/yr})/2000 \text{ lbs/ton} = 2.38 \text{ tons of PE per year}$$

For natural gas and No. 2 fuel oil with operational restrictions:

$$[(55,000 \text{ gal/yr}) \times (2.0 \text{ lbs of PE}/1000 \text{ gal}) + ((7.6 \text{ lbs of PE}/10^6 \text{ scf}) \times (477 \text{ million cu. ft/yr})]/2000 \text{ pounds/ton} = 1.87 \text{ tons of PE per year}$$

e. Emission Limitation:

The emissions of SO₂ shall not exceed 0.81 pound per MMBtu.

Compliance Method:

Compliance with the allowable SO₂ emission limitation above shall be demonstrated through emission calculations using the SO₂ emission factor of AP-42, Table 1.4-2 and the worst-case hourly fuel consumption for natural gas:



$$(0.6 \text{ lb of SO}_2/10^6\text{scf.}) \times (71,569 \text{ cf/hr}) \times (1 \text{ hr}/73 \text{ MMBtu}) = 0.0006 \text{ lb of SO}_2/\text{MMBtu}$$

When No. 2 fuel oil is burned, compliance with the allowable sulfur dioxide emission limitation above shall be demonstrated through the monitoring and record keeping and testing requirements in d)(13) and f)(4) above.

If required, compliance with the allowable SO₂ emission limitation above shall be demonstrated through emission testing in accordance with Methods 1-4 and Method 6, 6A, 6B or 6C of 40 CFR Part 60, Appendix A.

f. Emission Limitation:

The emissions of SO₂ shall not exceed 3.1 tons per year, based upon a rolling 12-month summation of the emissions.

Compliance Method:

Compliance with the annual allowable SO₂ emission limitation above shall be demonstrated through emission calculations using the SO₂ emission factors of AP-42, Tables 1.4-2 and 1.3-1 and the worst-case hourly fuel consumption for natural gas or the maximum allowable fuel consumption for No. 2 fuel oil and natural gas:

For natural gas only:

$$[(0.6 \text{ lb of SO}_2/10^6\text{scf.}) \times (71,569 \text{ cf/hr}) \times 8760 \text{ hrs/yr}] / 2000 \text{ lbs/ton} = 0.19 \text{ ton of SO}_2 \text{ per year}$$

For natural gas and No. 2 fuel oil with operational restrictions:

$$[(55,000 \text{ gal/yr}) \times (142 \times (0.5^*) \text{ lbs of SO}_2/1000 \text{ gal}) + ((0.6 \text{ lb of SO}_2/10^6\text{scf}) \times (477 \text{ million cu. ft/hr})] / 2000 \text{ pounds/ton} = 2.1 \text{ tons of SO}_2 \text{ per year}$$

Therefore, as long as compliance with the rolling 12-month operational restriction for No. 2 fuel oil and natural gas is maintained, compliance with the annual allowable emission limitation above shall be demonstrated.

*Maximum allowable sulfur dioxide content, in weight percent.

g. Emission Limitation:

The emissions of NO_x shall not exceed 0.10 pound per MMBtu when this emissions unit is fired with natural gas.

Compliance Method:

If required, compliance with the allowable NO_x emission limitation above shall be demonstrated through emission testing in accordance with Methods 1-4 and Method 7, 7A, 7C, 7D or 7E of 40 CFR Part 60, Appendix A.



h. Emission Limitation:

The emissions of NO_x shall not exceed 24.99 tons per year, based upon a rolling 12-month summation of the emissions.

Compliance Method:

Compliance with the annual allowable NO_x emission limitation above shall be demonstrated through emission calculations using the allowable NO_x emission limitation and the maximum allowable annual fuel consumption for No. 2 fuel oil and natural gas:

For natural gas and No. 2 fuel oil with operational restrictions:

$$[(55,000 \text{ gal/yr}) \times (24 \text{ lbs of NO}_x/1000 \text{ gal}) + ((0.10 \text{ lb of NO}_x/\text{MMBtu}) \times 1020 \text{ Btu/scf (477 million cf/yr)})/2000 \text{ pounds/ton} = 24.99 \text{ tons of NO}_x \text{ per year}$$

Therefore, as long as compliance with the rolling 12-month operational restrictions for No. 2 fuel oil and natural gas are maintained, compliance with the annual allowable emission limitation above shall be demonstrated.

i. Emission Limitation:

The emissions of CO_{2e} shall not exceed 29,308 tons per year, based upon a rolling 12-month summation of the emissions.

Compliance Method:

Compliance with the annual allowable CO_{2e} emission limitation above shall be demonstrated through emission calculations using the CO_{2e} emission factors derived from Tables C-1 and C-2 and Equations C-1 and C-8 of 40 CFR Part 98, Subpart C, using the conversion factors in Tables A-1 and A-2 of 40 CFR Part 98, Subpart A and the maximum allowable annual fuel consumption for No. 2 fuel oil and natural gas:

For natural gas and No. 2 fuel oil with operational restrictions:

$$(55,000 \text{ gal/yr}) \times [(4.14 \times 10^{-7} \text{ metric ton of methane (CH}_4\text{)/gallon}) \times 21 + (8.28 \times 10^{-8} \text{ metric ton of nitrous oxide (N}_2\text{O)/gallon}) \times 310 + (1.0206 \times 10^{-2} \text{ metric ton of carbon dioxide (CO}_2\text{)/gallon})] + (477,000,000 \text{ cf/yr}) \times [(1.028 \times 10^{-9} \text{ metric ton of CH}_4\text{/scf}) \times 21 + (1.028 \times 10^{-10} \text{ metric ton of N}_2\text{O /scf}) \times 310 + (5.4505 \times 10^{-5} \text{ metric ton of CO}_2\text{/scf})] \times 1.10231 \text{ ton/metric ton} = 29,308 \text{ tons of CO}_{2e}\text{ per year}$$

Therefore, as long as compliance with the rolling 12-month operational restrictions for No. 2 fuel oil and natural gas are maintained, compliance with the annual allowable emission limitation above shall be demonstrated.



j. Emission Limitation:

The emissions of CO shall not exceed 6.01 pounds per hour.

Compliance Method:

Compliance with the hourly allowable CO emission limitation above shall be demonstrated through emission calculations using the CO emission factors of AP-42, Tables 1.4-1 and 1.3-1 and the worst-case hourly fuel consumption:

For natural gas:

$$(84 \text{ lbs}/10^6 \text{ scf.}) \times (71,569 \text{ cf/hr}) = 6.01 \text{ lbs/hr}$$

For No. 2 fuel oil:

$$(5.0 \text{ lbs}/1000 \text{ gal}) \times (521 \text{ gal/hr}) = 2.61 \text{ lbs/hr}$$

If required, compliance with the hourly allowable CO emission limitation shall be demonstrated through emission testing in accordance with Methods 1-4 and 10 of 40 CFR Part 60, Appendix A.

k. Emission Limitation:

The emissions of CO shall not exceed 26.33 tons per year.

Compliance Method:

Compliance with the annual allowable CO emission limitation above shall be demonstrated by multiplying the hourly allowable emission limitation by 8760 hours per year and then divided by 2000 pounds per ton. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual allowable emission limitation above shall be demonstrated.

g) Miscellaneous Requirements

(1) None.