



Environmental Protection Agency

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

5/16/2012

Rainer Ingmann
MB MANUFACTURING CORPORATION
2904 Symmes Road
Fairfield, OH 45014

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 1409030403
Permit Number: P0109589
Permit Type: Renewal
County: Butler

Certified Mail

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

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

The issuance of this PTI 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
309 South Fourth Street, Room 222
Columbus, OH 43215

If you have any questions, please contact Southwest Ohio Air Quality Agency at (513)946-7777 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. This permit can be accessed electronically on the DAPCWeb page, www.epa.ohio.gov/dapc, by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

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

Cc: SWOAQA



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
MB MANUFACTURING CORPORATION**

Facility ID:	1409030403
Permit Number:	P0109589
Permit Type:	Renewal
Issued:	5/16/2012
Effective:	5/16/2012
Expiration:	5/16/2017



Division of Air Pollution Control
Permit-to-Install and Operate
for
MB MANUFACTURING CORPORATION

Table of Contents

Authorization 1
A. Standard Terms and Conditions 3
1. What does this permit-to-install and operate ("PTIO") allow me to do?..... 4
2. Who is responsible for complying with this permit? 4
3. What records must I keep under this permit? 4
4. What are my permit fees and when do I pay them?..... 4
5. When does my PTIO expire, and when do I need to submit my renewal application? 4
6. What happens to this permit if my project is delayed or I do not install or modify my source? 5
7. What reports must I submit under this permit? 5
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? 5
9. What are my obligations when I perform scheduled maintenance on air pollution control equipment? ... 5
10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report? 6
11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located? 6
12. What happens if one or more emissions units operated under this permit is/are shut down permanently? 6
13. Can I transfer this permit to a new owner or operator?..... 7
14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"? 7
15. What happens if a portion of this permit is determined to be invalid? 7
B. Facility-Wide Terms and Conditions..... 8
C. Emissions Unit Terms and Conditions 10
1. B002, 17.8 mmBtu/hr Wood-Fired Heat Exchgr 11
2. B003, 13.68 mmBtu/hr Wood-Fired Heat Exchanger..... 20

Authorization

Facility ID: 1409030403
Application Number(s): A0043362
Permit Number: P0109589
Permit Description: Administrative modification to update operational restriction and compliance methods for two wood-fired boilers B002 and B003.
Permit Type: Renewal
Permit Fee: \$0.00
Issue Date: 5/16/2012
Effective Date: 5/16/2012
Expiration Date: 5/16/2017
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

MB MANUFACTURING CORPORATION
2904 SYMMES ROAD
FAIRFIELD, OH 45014

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

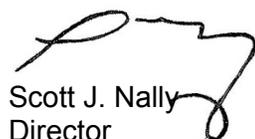
Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Southwest Ohio Air Quality Agency
250 William Howard Taft Rd.
Cincinnati, OH 45219
(513)946-7777

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


Scott J. Nally
Director



Authorization (continued)

Permit Number: P0109589

Permit Description: Administrative modification to update operational restriction and compliance methods for two wood-fired boilers B002 and B003.

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:	17.8 mmBtu/hr Wood-Fired Heat Exchgr
Superseded Permit Number:	14-00930
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B003
Company Equipment ID:	13.68 mmBtu/hr Wood-Fired Heat Exchgr
Superseded Permit Number:	14-04276
General Permit Category and Type:	Not Applicable



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. Unless otherwise specified, facilities subject to one or more synthetic minor restrictions must use Ohio EPA's "Air Services" to submit annual emissions associated with this permit requirement. 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 Southwest Ohio Air Quality Agency 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 submitting¹ 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 emissions 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.

¹Permittees that use Ohio EPA's "Air Services" can mark the affected emissions unit(s) as "permanently shutdown" in the facility profile along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).

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.

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 Ohio EPA has determined that this facility may be subject to the requirements of an area source MACT/GACT rule that the Ohio EPA does not have the delegated authority to implement. Although Ohio EPA has determined that an area source MACT (also known as the GACT) may apply, at this time Ohio EPA does not have the authority to enforce this standard. Instead, U.S. EPA has the authority to enforce this standard. Please be advised that all requirements associated with these rules are in effect and are enforceable by U.S. EPA. For more information on the area source rules, please refer to the following U.S. EPA website: <http://www.epa.gov/ttn/atw/area/arearules.html>.

C. Emissions Unit Terms and Conditions



1. B002, 17.8 mmBtu/hr Wood-Fired Heat Exchgr

Operations, Property and/or Equipment Description:

17.8 mmBtu/hrKonus Dutch Oven-type Wood-fired Heat Exchanger w/Multiclone

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)(2)b., b)(2)d., c)(1), d)(1), d)(3), d)(4), e)(1), f)(1)b. – f)(1)d., f)(1)f., and f)(1)g.

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.

Table with 2 columns: Applicable Rules/Requirements and Applicable Emissions Limitations/Control Measures. Row a: OAC rule 3745-31-05(A)(3) with limitations for Particulate emissions (PE), Carbon monoxide (CO), Nitrogen oxides (NOx), Sulfur dioxide (SO2), and Volatile organic compound (VOC).



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		per million Btu of actual heat input. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1) and OAC rule 3745-31-05(D).
b.	OAC rule 3745-31-05(D)	See b)(2)b., b)(2)d., and c)(1).
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions 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(C)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

- a. The lb/mmBtu emission limitations outlined in term b)(1)a. are based on the emission unit's Potential to Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.
- b. The maximum total annual emissions from this emissions unit shall not exceed the following emission limitations based upon a rolling, 12-month summation:
 - 15.4 tons per year PE/PM10;
 - 36.8 tons per year CO;
 - 13.5 tons per year NOx;
 - 1.5 tons per year SO2; and
 - 1.0 tons per year VOC.
- c. Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the use of a multicyclone system, and compliance with the emission limitations, opacity limitations, and annual hours of operation restriction.
- d. The maximum allowable emissions of carbon monoxide (CO) from emissions units B001 (15 mmBtu/hr wood-fired heater exchanger), B002 (17.8 mmBtu/hr wood-fired heat exchanger), and B003 (13.68 mmBtu/hr wood-fired heat exchanger), combined, shall not exceed 96 TPY CO. Compliance with the above limitation shall be based on a rolling, 12-month summation of the CO emissions.

c) Operational Restrictions

- (1) The maximum annual operating hours for this emissions unit shall not exceed 6900 hours, based upon a rolling, 12-month summation of the operating hours.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the operating hours for each month; and
 - b. the updated rolling, 12-month summation of the operating hours.
- (2) The permittee shall maintain monthly records of the wood usage rate, in tons, for each month for emissions unit B002.
- (3) The permittee shall maintain monthly records of the PE/PM10, CO, NOx, SO2, and VOC emissions for each month and the updated, rolling, 12-month summation for the PE/PM10, CO, NOx, SO2, and VOC emissions, in tons, for emissions unit B002 (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).
- (4) The permittee shall maintain monthly records of the updated, rolling, 12-month summation for CO emissions, in tons, for emissions units B001, B002, and B003 combined (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).
- (5) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that

no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

- (6) The permittee shall develop and maintain a written preventative maintenance plan designed to ensure the compliance status of this emission unit. The preventative maintenance plan and related records must be kept onsite and available for inspection during regular office hours.
 - (7) The permittee shall perform semi-annual combustion efficiency engineering assessments of this emissions unit. The results of the assessment shall be documented, including a record of any conditions found that are not representative of proper operating conditions and the corrective actions taken to ensure the emissions unit is operating within manufacturer's recommendations for combustion efficiency.
- 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. PE/PM10, CO, NO_x, SO₂, and VOC emission limitations outlined in b)(2)b.;
 - ii. CO emission limitation outlined in b)(2)d.; and
 - iii. the rolling, 12-month restriction on the hours of operation for this emissions unit outlined in c)(1).
 - 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, electronically through Ohio EPA Air Services, 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 completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services 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.
 - (3) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in d)(4) above:
 - a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and
 - b. any corrective actions taken to minimize or eliminate the visible particulate emissions.
 - (4) The permittee shall submit semi-annual reports that (a) identify the most recent date the combustion efficiency engineering assessment was performed as specified in d)(7) and (b) describe any corrective actions taken to ensure the emission unit is operating within manufacturer's recommendations for combustion efficiency. These reports shall be submitted via the Ohio EPA's eBusiness Center: Air Services by January 31 and July 31 of each year and shall cover the previous 6-month period.
 - (5) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- f) Testing Requirements
- (1) 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 Limitations:

Particulate emissions (PE) and particulate matter 10 microns and less in diameter (PM10) emissions shall not exceed 0.25 pound per million Btu of actual heat input.

Carbon monoxide (CO) emissions shall not exceed 0.60 pound per million Btu of actual heat input.

Nitrogen oxides (NOx) emissions shall not exceed 0.22 pound per million Btu of actual heat input.

Sulfur dioxide (SO2) emissions shall not exceed 0.025 pound per million Btu of actual heat input.

Volatile organic compound (VOC) emissions shall not exceed 0.017 pound per million Btu of actual heat input.

Applicable Compliance Methods:

These emission limitations are based upon the emission unit's potential to emit, the manufacturer's guaranteed emissions for PE/PM10 provided with the PTI 14-00930 application, submitted 10/1/1985, and the CO, NO_x, SO₂, and VOC emission factors for bark and wet wood fuel found in USEPA AP-42, Fifth Edition, Section 1.6 Wood Residue Combustion in Boilers, Tables 1.6-2 and 1.6-3 (revised 9/2003).

The permittee shall demonstrate compliance with the PE/PM10 emission limitation based upon the results of emission testing required in f)(2).

The permittee shall demonstrate compliance with the CO emission limitation based upon the results of emission testing required in f)(2).

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

If required, the permittee shall demonstrate compliance with the SO₂ emission limitation through emission tests performed in accordance with Methods 1-4 and 6 of 40 CFR Part 60, Appendix A.

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

b. Emission Limitations:

Particulate emissions (PE) and particulate matter 10 microns and less in diameter (PM10) emissions shall not exceed 15.4 tons per year, as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the emission limitation specified above shall be determined by the wood usage record keeping requirements specified in d)(2) and the calculated emissions factor* in pounds of PE/PM10 per ton of wood used from the permittee's most recent stack test results showing compliance, divided by 2,000 pounds per ton.

*Emission factor calculation: (the average tested PE/PM10 emissions rate in pounds per hour) / (the average tested wood usage rate in tons per hour) = emission factor in pounds of PE/PM10 per ton of wood fuel used.

- c. Carbon monoxide (CO) emissions shall not exceed 36.8 tons per year, as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the emission limitation specified above shall be determined by the wood usage record keeping requirements specified in d)(2) and the calculated emissions factor* in pounds of CO per ton of wood used from the permittee's most recent stack test results showing compliance, divided by 2,000 pounds per ton.

*Emission factor calculation: (the average tested CO emissions rate in pounds per hour) / (the average tested wood usage rate in tons per hour) = emission factor in pounds of CO per ton of wood fuel used.

- d. Nitrogen oxides (NOx) emissions shall not exceed 13.5 tons per year, as a rolling, 12-month summation.

Sulfur dioxide (SO₂) emissions shall not exceed 1.5 tons per year, as a rolling, 12-month summation.

Volatile organic compound (VOC) emissions shall not exceed 1.0 tons per year, as a rolling, 12-month summation.

Applicable Compliance Methods:

Compliance with the above emission limitations may be demonstrated by the record keeping requirements specified in d)(1) and related emissions factors found in USEPA AP-42, Fifth Edition, Section 1.6 Wood Residue Combustion in Boilers, Tables 1.6-2 and 1.6-3 (revised 9/2003) using the following equation:

(AP-42 emissions factor in lbs of emissions/mmBtu) x (17.8 mmBtu/hr maximum rated capacity of B002) x (actual operating hours per year) / (2000 lbs/ton) = total emissions in TPY.

- e. Emission Limitation:

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

Applicable Compliance Method:

Compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.

- f. Emission Limitation:

CO emissions shall not exceed 96 TPY for emissions units B001, B002, and B003 combined, as a rolling 12-month summation.

Applicable Compliance Method:

Compliance with the above CO emission limitation specified in b)(2)d. shall be demonstrated by the record keeping requirements in d)(4).

g. Operating Restriction:

The maximum annual operating hours for this emissions unit shall not exceed 6900 hours, based upon a rolling, 12-month summation of the operating hours.

Applicable Compliance Method:

Compliance with the operating hours restriction shall be demonstrated by the record keeping requirements in d)(1).

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted approximately 2.5 years after permit issuance and within 6 months prior to the permit expiration;
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission limitations for particulate of 0.25 lb PE/mmBtu and for CO of 0.60 lb CO/mmBtu;
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Methods 1-4 and 5 of 40 CFR Part 60, Appendix A for particulate; and
Methods 1-4 and 10 of 40 CFR Part 60, Appendix A for CO.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.
- e. Test results shall also be reported in pounds of PE per ton of wood combusted and pounds of CO per ton of wood combusted.

- f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).
 - g. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
 - h. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.
- g) **Miscellaneous Requirements**
- (1) None.



2. B003, 13.68 mmBtu/hr Wood-Fired Heat Exchanger

Operations, Property and/or Equipment Description:

13.68 mmBtu/hrKonus Suspension-type Wood-fired Heat Exchanger w/Multiclones and oil-fired preheat burner

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)(2)b., b)(2)d., b)(2)e., c)(1), d)(1), d)(4), d)(5), d)(8), e)(1), f)(1)f. – f)(1)k., and f)(1)m.

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)	When burning wood: Particulate emissions (PE) shall not exceed 0.24 pound per million Btu of actual heat input. Particulate matter 10 microns and less in diameter (PM10) emissions shall not exceed 0.087 pound per million Btu of actual heat input. Carbon monoxide (CO) emissions shall not exceed 0.456 pound per million Btu of actual heat input. Nitrogen oxides (NOx) emissions shall not exceed 0.22 pound per million Btu of



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>actual heat input.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 0.025 pound per million Btu of actual heat input.</p> <p>Volatile organic compound (VOC) emissions shall not exceed 0.017 pound per million Btu of actual heat input.</p> <p>When burning No. 2 fuel oil:</p> <p>Particulate emissions (PE) shall not exceed 0.01 pound per million Btu of actual heat input.</p> <p>Particulate matter 10 microns and less in diameter (PM₁₀) emissions shall not exceed 0.01 pound per million Btu of actual heat input.</p> <p>Carbon monoxide (CO) emissions shall not exceed 0.04 pound per million Btu of actual heat input.</p> <p>Nitrogen oxides (NO_x) emissions shall not exceed 0.14 pound per million Btu of actual heat input.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 0.50 pound per million Btu of actual heat input.</p> <p>Volatile organic compound (VOC) emissions shall not exceed 0.002 pound per million Btu of actual heat input.</p> <p>See c)(2) and c)(3).</p> <p>Visible particulate emissions from any stack shall not exceed 10 percent opacity, as a six-minute average, except as specified by rule.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D) and 40 CFR Part 60,</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Subpart Dc.
b.	OAC rule 3745-31-05(D)	See b)(2)b., b)(2)e., c)(1) and c)(2).
c.	OAC rule 3745-17-07(A)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-17-10(C)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
e.	40 CFR Part 60, Subpart Dc	See b)(2)d. and d)(8).
f.	OAC rule 3745-18-06(H)	The requirements established pursuant to this rule are equivalent to the requirements of 40 CFR Part 60, Subpart Dc.

(2) Additional Terms and Conditions

- a. The PE, PM10, CO, NOx, VOC, and SO2 (for wood fuel only) lb/mmBtu emission limitations outlined in b)(1)a. are based on the emission unit's Potential to Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.
- b. The maximum total annual emissions from this emissions unit shall not exceed the following emission limitations based upon a rolling, 12-month summation for burning wood and fuel oil, combined:
 - 12.5 tons per year PE;
 - 4.5 tons per year PM10;
 - 23.7 tons per year CO;
 - 11.4 tons per year NOx;
 - 1.4 tons per year SO2; and
 - 0.9 ton per year VOC.
- c. Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the use of a multicyclone system, and compliance with the emission limitations, opacity limitations, oil sulfur content, annual hours of operation restriction, and fuel oil usage restriction.

- d. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.
 - e. The maximum allowable emissions of carbon monoxide (CO) from emissions units B001 (15 mmBtu/hr wood-fired heater exchanger), B002 (17.8 mmBtu/hr wood-fired heat exchanger), and B003 (13.68 mmBtu/hr wood-fired heat exchanger), combined, shall not exceed 96 TPY CO. Compliance with the above limitation shall be based on a rolling, 12-month summation of the CO emissions.
- c) **Operational Restrictions**
- (1) The maximum annual operating hours for this emissions unit shall not exceed 7600 hours, based upon a rolling, 12-month summation of the operating hours.
 - (2) The maximum annual No. 2 fuel oil usage rate for this emissions unit shall not exceed 3000 gallons per year, based upon a rolling, 12-month summation of fuel oil usage.
 - (3) The quality of the fuel oil burned in this emissions unit shall meet a sulfur content that is sufficient to comply with the allowable sulfur dioxide emission limitation specified in b)(1)a. above. The sulfur content of the fuel oil shall not to exceed 0.5 percent sulfur by weight.
- d) **Monitoring and/or Recordkeeping Requirements**
- (1) The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the operating hours for each month; and
 - b. the updated rolling, 12-month summation of the operating hours.
 - (2) The permittee shall maintain monthly records of the wood usage rate, in tons, for each month for emissions unit B003.
 - (3) The permittee shall maintain monthly records of the No. 2 fuel oil usage rate and the updated, rolling, 12-month summation for No. 2 fuel oil usage, in gallons, for this emissions unit (the total amount of fuel oil used for the current month plus the total amount of fuel oil used for the previous eleven calendar months).
 - (4) The permittee shall maintain monthly records of the PE, PM10, CO, NOx, SO2, and VOC emissions for each month and the updated, rolling, 12-month summation for the PE, PM10, CO, NOx, SO2, and VOC emissions, in tons, for emissions unit B003 (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).

- (5) The permittee shall maintain monthly records of the updated, rolling, 12-month summation for CO emissions, in tons, for emissions units B001, B002, and B003 combined (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months).
- (6) For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the name of the supplier, the total quantity of oil received, the fuel oil type, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

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 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.

The permittee shall maintain a record of certification from each oil supplier that the fuel oil complies with the definition of distillate oil in accordance with 40 CFR Part 60.41c.

- (7) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that

no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

- (8) The permittee shall maintain daily records of the amount of wood and No. 2 fuel oil combusted.
 - (9) The permittee shall develop and maintain a written preventative maintenance plan designed to ensure the compliance status of this emission unit. The preventative maintenance plan and related records must be kept onsite and available for inspection during regular office hours.
 - (10) The permittee shall perform semi-annual combustion efficiency engineering assessments of this emissions unit. The results of the assessment shall be documented, including a record of any conditions found that are not representative of proper operating conditions and the corrective actions taken to ensure the emissions unit is operating within manufacturer's recommendations for combustion efficiency.
- 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. PE, PM₁₀, CO, NO_x, SO₂, and VOC emission limitations outlined in b)(2)b.;
 - ii. CO emission limitation outlined in b)(2)e.;
 - iii. the rolling, 12-month restriction on the hours of operation for this emissions unit outlined in c)(1);
 - iv. the rolling, 12-month restriction on No. 2 fuel oil usage outlined in c)(2); and
 - v. any exceedance of the allowable sulfur dioxide emission limitation, in pounds sulfur dioxide/mmBtu actual heat input.
 - 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, electronically through Ohio EPA Air Services, 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 completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services 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.
 - (3) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in d)(7) above:
 - a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and
 - b. any corrective actions taken to minimize or eliminate the visible particulate emissions.
 - (4) The permittee shall submit semi-annual reports that (a) identify the most recent date the combustion efficiency engineering assessment was performed as specified in d)(10) and (b) describe any corrective actions taken to ensure the emission unit is operating within manufacturer's recommendations for combustion efficiency. These reports shall be submitted via the Ohio EPA's eBusiness Center: Air Services by January 31 and July 31 of each year and shall cover the previous 6-month period.
 - (5) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- f) Testing Requirements
- (1) 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 Limitations for wood combustion:

Nitrogen oxides (NO_x) emissions shall not exceed 0.22 pound per million Btu of actual heat input.

Sulfur dioxide (SO₂) emissions shall not exceed 0.025 pound per million Btu of actual heat input.

Volatile organic compound (VOC) emissions shall not exceed 0.017 pound per million Btu of actual heat input.

Applicable Compliance Method:

These emission limitations are based upon the emissions unit's potential to emit and the emissions factors for bark and wet wood fuel found in USEPA AP-42, Fifth Edition, Section 1.6 Wood Residue Combustion in Boilers, Tables 1.6-2 and 1.6-3 (revised 9/2003).

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

If required, the permittee shall demonstrate compliance with the SO₂ emission limitation through emission tests performed in accordance with Methods 1-4 and 6 of 40 CFR Part 60, Appendix A.

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

b. Emission Limitations for wood combustion:

Particulate emissions (PE) shall not exceed 0.24 pound per million Btu of actual heat input.

Particulate matter 10 microns and less in diameter (PM₁₀) emissions shall not exceed 0.087 pound per million Btu of actual heat input.

Carbon monoxide (CO) emissions shall not exceed 0.456 pound per million Btu of actual heat input.

Applicable Compliance Method:

The PE, PM₁₀, and CO emission limitations are based upon the emissions unit's potential to emit and the manufacturer's guaranteed emissions data provided with the PTI 14-04276 application, submitted November 19, 1996.

The permittee shall demonstrate compliance with the PE, PM₁₀, and CO emission limitations based upon the results of emission testing required in f)(2) of this permit.

c. Emission Limitations for fuel oil combustion:

Particulate emissions (PE) shall not exceed 0.01 pound per million Btu of actual heat input.

Particulate matter 10 microns and less in diameter (PM₁₀) emissions shall not exceed 0.01 pound per million Btu of actual heat input.

Carbon monoxide (CO) emissions shall not exceed 0.04 pound per million Btu of actual heat input.

Nitrogen oxides (NO_x) emissions shall not exceed 0.14 pound per million Btu of actual heat input.

Volatile organic compound (VOC) emissions shall not exceed 0.002 pound per million Btu of actual heat input.

Applicable Compliance Method:

These emission limitations are based upon the emission unit's potential to emit and related emissions factors found in USEPA AP-42, Fifth Edition, Section 1.3 Fuel Oil Combustion in Boilers, Tables 1.3-1 and 1.3-3 (revised 5/2010).

Compliance with the emission limitations above shall be determined by use of the above-referenced USEPA AP-42 emission factors as follows:

For PE and PM₁₀, 2 pounds PE per 1000 gallons of fuel oil divided by the heat content of No. 2 fuel oil at 140 mmBtu per 1000 gallons;

For CO, 5 pounds CO per 1000 gallons of fuel oil divided by the heat content of No. 2 fuel oil at 140 mmBtu per 1000 gallons;

For NO_x, 20 pounds NO_x per 1000 gallons of fuel oil divided by the heat content of No. 2 fuel oil at 140 mmBtu per 1000 gallons; and

For VOC, 0.252 pound VOC per 1000 gallons of fuel oil divided by the heat content of No. 2 fuel oil at 140 mmBtu per 1000 gallons.

If required, the permittee shall demonstrate compliance with the PE and PM₁₀ emission limitation through emission tests performed in accordance with Methods 1-4 and 5 of 40 CFR Part 60, Appendix A.

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

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

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

d. Emission Limitation for fuel oil combustion:

Sulfur dioxide (SO₂) emissions shall not exceed 0.50 pound per million Btu of actual heat input.

Applicable Compliance Method:

Continuous compliance with the allowable sulfur dioxide emission limitation shall be demonstrated by documenting that the sulfur content of each shipment of oil received during a calendar month meets the limitation.

This emission limitation is based upon the emission unit's potential to emit and related emissions factors found in USEPA AP-42, Fifth Edition, Section 1.3 Fuel Oil Combustion in Boilers, Tables 1.3-1 and 1.3-3 (revised 5/2010) and is equivalent to the allowable limit under NSPS 40 CFR Part 60, Subpart Dc.

For SO₂, 142 pounds SO₂ per 1000 gallons of fuel oil multiplied by the weight percent of sulfur in the fuel oil of 0.5 percent divided by the heat content of No. 2 fuel oil at 140 mmBtu per 1000 gallons.

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

- e. Emission Limitation for wood and fuel oil combustion, combined:

Particulate emissions (PE) shall not exceed 12.5 tons per year, as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the emission limitation specified above shall be based on the combined summation of emissions from the use of wood fuel and No. 2 fuel oil.

Emissions from the use of wood fuel shall be determined by the wood usage record keeping requirements specified in d)(2) and the calculated emissions factor* in pounds of PE per ton of wood used from the permittee's most recent stack test results showing compliance, divided by 2,000 pounds per ton.

*Emission factor calculation: (the average tested PE rate in pounds per hour) / (the average tested wood usage rate in tons per hour) = emission factor in pounds of PE per ton of wood fuel used.

Emissions from the use of No. 2 fuel oil shall be determined by the fuel oil usage record keeping requirements specified in d)(3) and the emissions factor found in USEPA AP-42, Fifth Edition, Section 1.3 Fuel Oil Combustion in Boilers, Tables 1.3-1 and 1.3-3 (revised 5/2010), of 2 pounds PE per 1000 gallons, divided by 2,000 pounds per ton.

- f. Emission Limitation for wood and fuel oil combustion, combined:

Particulate matter 10 microns and less in diameter (PM₁₀) emissions shall not exceed 4.5 tons per year, as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the emission limitation specified above shall be based on the combined summation of emissions from the use of wood fuel and No. 2 fuel oil.

Emissions from the use of wood fuel shall be determined by the wood usage record keeping requirements specified in d)(2) and the calculated emissions factor* in pounds of PM10 per ton of wood used from the permittee's most recent stack test results showing compliance, divided by 2,000 pounds per ton.

*Emission factor calculation: (the average tested PM10 emissions rate in pounds per hour) / (the average tested wood usage rate in tons per hour) = emission factor in pounds of PM10 per ton of wood fuel used.

Emissions from the use of No. 2 fuel oil shall be determined by the fuel oil usage record keeping requirements specified in d)(3) and the emissions factor found in USEPA AP-42, Fifth Edition, Section 1.3 Fuel Oil Combustion in Boilers, Tables 1.3-1 and 1.3-3 (revised 5/2010), of 2 pounds PE/PM10 per 1000 gallons, divided by 2,000 pounds per ton.

- g. Emission Limitation for wood and fuel oil combustion, combined:

Carbon monoxide (CO) emissions shall not exceed 23.7 tons per year, as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the emission limitation specified above shall be based on the combined summation of emissions from the use of wood fuel and No. 2 fuel oil.

Emissions from the use of wood fuel shall be determined by the wood usage record keeping requirements specified in d)(2) and the calculated emissions factor* in pounds of CO per ton of wood used from the permittee's most recent stack test results showing compliance, divided by 2,000 pounds per ton.

*Emission factor calculation: (the average tested CO emissions rate in pounds per hour) / (the average tested wood usage rate in tons per hour) = emission factor in pounds of CO per ton of wood fuel used.

Emissions from the use of No. 2 fuel oil shall be determined by the fuel oil usage record keeping requirements specified in d)(3) and the emissions factor found in USEPA AP-42, Fifth Edition, Section 1.3 Fuel Oil Combustion in Boilers, Tables 1.3-1 and 1.3-3 (revised 5/2010), of 5 pounds CO per 1000 gallons, divided by 2,000 pounds per ton.

- h. Emission Limitation for wood and fuel oil combustion, combined:

Nitrogen oxide (NOx) emissions shall not exceed 11.4 tons per year, as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the emission limitation specified above shall be based on the combined summation of emissions from the use of wood fuel and No. 2 fuel oil.

Emissions from the use of wood fuel shall be determined by the record keeping requirements specified in d)(1) and related emissions factors found in USEPA AP-42, Fifth Edition, Section 1.6 Wood Residue Combustion in Boilers, Tables 1.6-2 and 1.6-3 (revised 9/2003) using the following equation:

$(\text{AP-42 emissions factor of } 0.22 \text{ lbNO}_x/\text{mmBtu}) \times (13.68 \text{ mmBtu/hr maximum rated capacity of B003}) \times (\text{actual operating hours per year}) / (2000 \text{ lbs/ton}) = \text{TPY NO}_x \text{ emissions from wood fuel.}$

Emissions from the use of No. 2 fuel oil shall be determined by the fuel oil usage record keeping requirements specified in d)(3) and the emissions factor found in USEPA AP-42, Fifth Edition, Section 1.3 Fuel Oil Combustion in Boilers, Tables 1.3-1 and 1.3-3 (revised 5/2010), of 20 pounds NO_x per 1000 gallons, divided by 2,000 pounds per ton.

- i. Emission Limitation for wood and fuel oil combustion, combined:

Sulfur dioxide (SO₂) emissions shall not exceed 1.4 tons per year, as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the emission limitation specified above shall be based on the combined summation of emissions from the use of wood fuel and No. 2 fuel oil.

Emissions from the use of wood fuel shall be determined by the record keeping requirements specified in d)(1) and related emissions factors found in USEPA AP-42, Fifth Edition, Section 1.6 Wood Residue Combustion in Boilers, Tables 1.6-2 and 1.6-3 (revised 9/2003) using the following equation:

$(\text{AP-42 emissions factor of } 0.025 \text{ lb SO}_2/\text{mmBtu}) \times (13.68 \text{ mmBtu/hr maximum rated capacity of B003}) \times (\text{actual operating hours per year}) / (2000 \text{ lbs/ton}) = \text{TPY SO}_2 \text{ emissions from wood fuel.}$

Emissions from the use of No. 2 fuel oil shall be determined by the fuel oil usage and sulfur content record keeping requirements specified in d)(3) and d)(6) and the emissions factor found in USEPA AP-42, Fifth Edition, Section 1.3 Fuel Oil Combustion in Boilers, Tables 1.3-1 and 1.3-3 (revised 5/2010), of 142 pounds SO₂ per 1000 gallons, multiplied by the weight percent of sulfur in the fuel oil, divided by 2,000 pounds per ton.

- j. Emission Limitation for wood and fuel oil combustion, combined:

Volatile organic compound (VOC) emissions shall not exceed 0.9 ton per year, as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the emission limitation specified above shall be based on the combined summation of emissions from the use of wood fuel and No. 2 fuel oil.

Emissions from the use of wood fuel shall be determined by the record keeping requirements specified in d)(1) and related emissions factors found in USEPA AP-42, Fifth Edition, Section 1.6 Wood Residue Combustion in Boilers, Tables 1.6-2 and 1.6-3 (revised 9/2003) using the following equation:

$(AP-42 \text{ emissions factor of } 0.017 \text{ lb VOC/mmBtu}) \times (13.68 \text{ mmBtu/hr maximum rated capacity of B003}) \times (\text{actual operating hours per year}) / (2000 \text{ lbs/ton}) = \text{TPY VOC emissions from wood fuel.}$

Emissions from the use of No. 2 fuel oil shall be determined by the fuel oil usage record keeping requirements specified in d)(3) and the emissions factor found in USEPA AP-42, Fifth Edition, Section 1.3 Fuel Oil Combustion in Boilers, Tables 1.3-1 and 1.3-3 (revised 5/2010), of 0.252 pound VOC per 1000 gallons, divided by 2,000 pounds per ton.

- k. Emissions Limitation for wood and fuel oil combustion, combined:

CO emissions shall not exceed 96 TPY for emissions units B001, B002, and B003 combined, as a rolling 12-month summation.

Applicable Compliance Method:

Compliance with the above CO emission limitation specified in b)(2)e. shall be demonstrated by the record keeping requirements in d)(5).

- l. Emissions Limitation:

Visible particulate emissions from any stack shall not exceed 10 percent opacity, as a six-minute average, except as specified by rule.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with 40 CFR 60, Appendix A, Method 9.

- m. Operating Restriction:

The maximum annual operating hours for this emissions unit shall not exceed 7600 hours, based upon a rolling, 12-month summation of the operating hours.

Applicable Compliance Method:

Compliance with the operating hours restriction shall be demonstrated by the record keeping requirements in d)(1).

n. Operating Restriction:

The maximum No. 2 fuel oil usage rate for this emissions unit shall not exceed 3,000 gallons/year, based upon a rolling, 12-month summation of fuel oil usage.

Applicable Compliance Method:

Compliance with the fuel oil usage restriction shall be demonstrated by the record keeping requirements in d)(3).

o. Operating Restriction:

The quality of the fuel oil burned in this emissions unit shall meet a sulfur content that is sufficient to comply with the allowable sulfur dioxide emission limitation specified in b)(1)a., not to exceed 0.5 percent by weight.

Applicable Compliance Method:

When firing No. 2 fuel oil, compliance with the allowable fuel oil sulfur content and sulfur dioxide emission limitation shall be demonstrated by the record keeping requirements in d)(6).

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted approximately 2.5 years after permit issuance and within 6 months prior to the permit-expiration;

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission limitations for particulate of 0.24 lb PM/mmBtu and for CO of 0.456 lb CO/mmBtu.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Methods 1-4 and 5 of 40 CFR Part 60, Appendix A for particulate; and

Methods 1-4 and 10 of 40 CFR Part 60, Appendix A for CO.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum

material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

- e. Test results shall also be reported in pounds of PE per ton of wood combusted and pounds of CO per ton of wood combusted.
- f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).
- g. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- h. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

g) **Miscellaneous Requirements**

- (1) None.