



**Environmental
Protection Agency**

Ted Strickland, Governor
Lee Fisher, Lt. Governor
Chris Korleski, Director

1/7/2011

Dennis Koshmider
HOLMES BY-PRODUCTS INC.
3175 TWP RD 411
Route 5
MILLERSBURG, OH 44654

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0238000004
Permit Number: P0106367
Permit Type: OAC Chapter 3745-31 Modification
County: Holmes

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
Yes	MODELING SUBMITTED
Yes	SYNTHETIC MINOR TO AVOID TITLE V
Yes	FEDERALLY ENFORCABLE PTIO (FEPTIO)

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 Kevin Boyce," 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 Ohio EPA DAPC, Northeast District Office at (330)425-9171 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. This permit can be accessed electronically on the DAPC Web 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: Ohio EPA-NEDO



Response to Comments

Response to comments for: Permit-To-Install and Operate

Facility ID:	0238000004
Facility Name:	HOLMES BY-PRODUCTS INC.
Facility Description:	Rendering plant for animal feed products
Facility Address:	3175 TWP RD 411 Millersburg, OH 44654 Holmes County
Permit #:	P0106367, OAC Chapter 3745-31 Modification
A public notice for the draft permit issuance was published in the Ohio EPA Weekly Review and appeared in the Holmes County Hub on 12/02/2010. The comment period ended on 01/01/2011.	
Hearing date (if held)	None.
Hearing Public Notice Date (if different from draft public notice)	Not Applicable.

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.

1. Topic: **None – (No comments received from the public.)**
 - a. Comment: **None**
 - b. Response: **None**



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
HOLMES BY-PRODUCTS INC.**

Facility ID: 0238000004
Permit Number: P0106367
Permit Type: OAC Chapter 3745-31 Modification
Issued: 1/7/2011
Effective: 1/7/2011
Expiration: 1/7/2016



Division of Air Pollution Control
Permit-to-Install and Operate
for
HOLMES BY-PRODUCTS INC.

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Authorization

Facility ID: 0238000004

Application Number(s): A0038945, A0039514

Permit Number: P0106367

Permit Description: Installation of second burner to allow natural gas, #2 fuel oil & tallow fuel combustion.
Only one burner may be used at a time.

Permit Type: OAC Chapter 3745-31 Modification

Permit Fee: \$400.00

Issue Date: 1/7/2011

Effective Date: 1/7/2011

Expiration Date: 1/7/2016

Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

HOLMES BY-PRODUCTS INC.
3175 TWP RD 411
Millersburg, OH 44654

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

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

Ohio EPA DAPC, Northeast District Office
2110 East Aurora Road
Twinsburg, OH 43087
(330)425-9171

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency



Chris Korleski
Director



Authorization (continued)

Permit Number: P0106367
Permit Description: Installation of second burner to allow natural gas, #2 fuel oil & tallow fuel combustion.
Only one burner may be used at a time.

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

Emissions Unit ID:	B006
Company Equipment ID:	Boiler (Wickes)
Superseded Permit Number:	P0084646
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 Ohio EPA DAPC, Northeast District Office in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed

permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred. If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

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

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

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

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

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

¹ Permittees 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).

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) B.2 through B.9
 - (2) The Ohio EPA has determined that this facility may in the future be subject to the requirements of a proposed area source MACT/GACT rule, 40 CFR Part 63, Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources, 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) NSPS Rule(s) Applicability - The following emissions unit(s) contained in this permit are subject to 40 CFR Part 60, Subpart Dc: B006. The complete New Source Performance Standards (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 Ohio EPA, Northeast District Office.
2. Federally Enforceable Permit to Install and Operate P0106367 for this air contaminant source takes into account the following voluntary restrictions, regarding the emissions units specified in B.3.a and B.3.b, as proposed by the permittee for the purpose of avoiding Title V requirements under OAC rules 3745-77-02 through 3745-77-10:
 - a) The emissions of carbon monoxide (CO) from the emissions units specified in B.3 shall not exceed 98.28 tons per year, based on a rolling, 12-month summation of the monthly emissions.
 - b) The emissions of nitrogen oxides (NO_x) from the emissions units specified in B.3 shall not exceed 80.26 tons per year, based on a rolling, 12-month summation of the monthly emissions.
 - c) The emissions of sulfur dioxide (SO₂) from the emissions units specified in B.3 shall not exceed 98.19 tons per year, based on a rolling, 12-month summation of the monthly emissions.
3. Voluntary restrictions to limit potential facility-wide emissions of CO, NO_x and SO₂ by operating hours restrictions, include the following emissions units:

- a) (B006) Boiler with a 20 mmBtu/hr wood-fired burner and a 37.8 mmBtu/hr natural gas, no. 2 fuel oil or tallow burner with a cyclone that is vented to a baghouse to control particulate emissions. (Only one burner may be operated at a time.); and
- b) (B007) 30 mmBtu/hr wood or coal-fired boiler with a cyclone that is vented to a baghouse to control particulate emissions.

Any new operation that has the potential to emit CO, NO_x or SO₂ located at this facility, including any de minimis air contaminant sources, as defined in OAC rule 3745-15-05, and any permanent exemption air contaminant sources installed subsequent to the issuance of this permit is subject to the rolling, 12-month emissions limitation(s) on CO, NO_x or SO₂ specified in B.2.

Operational Restrictions

4. If no coal is burned at emissions unit B007 during a rolling, 12-month period, then the combined maximum operating hours for the emissions units specified in B.3.a) and B.3.b) shall not exceed 12,000 hours per rolling, 12-month summation of the operating hours.
5. If coal is burned at emissions unit B007 during a rolling, 12-month period, then the emissions units specified in B.3.a) and B.3.b) are subject to the following operating restrictions:
 - a) the maximum operating hours for emissions unit B006 shall not exceed 3,240 hours, employing no. 2 oil as the combustion fuel, per rolling, 12-month summation of the operating hours; and
 - b) the maximum operating hours for emissions unit B007 shall not exceed 3,240 hours, employing coal as the combustion fuel, per rolling, 12-month summation of the operating hours.

Monitoring & Record Keeping

6. The permittee shall maintain the following monthly records for the emissions units identified in B.3.a) and B.3.b):
 - a) the operating hours for each fuel type (i.e. wood, coal, no. 2 fuel oil, natural gas or tallow) combusted in each emissions unit for each month;
 - b) the total operating hours of each emissions unit for each month;
 - c) the rolling, 12-month summation of the operating hours of each emissions unit for each month;
 - d) if no coal is burned at emissions unit B007 during a rolling, 12-month period, the combined rolling, 12-month summation of the operating hours for the emissions units specified in B.3.a) and B.3.b); and
 - e) if coal is burned at emissions unit B007 during a rolling, 12-month period, the following records shall be maintained:
 - (1) the rolling, 12-month summation of the operating hours for emissions unit B006, employing no. 2 oil; and
 - (2) the rolling, 12-month summation of the operating hours for emissions unit B007, employing coal.

7. The permittee shall maintain monthly records of the following information for the emissions units identified in B.3:
- a) the emissions of CO, NO_x and SO₂ for each emissions unit for each month, in tons;
 - b) the rolling, 12-month summation of the emissions of CO, NO_x and SO₂ for each emissions unit, in tons; and
 - c) the combined rolling, 12-month summation of the emissions of CO, NO_x and SO₂ for all the emissions units specified in B.3, in tons.

Reporting Requirements

8. 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:
 - (1) the 98.28 tons CO emissions limit as a rolling, 12-month summation, from the emissions units specified in B.3;
 - (2) the 80.26 tons NO_x emissions limit as a rolling, 12-month summation, from the emissions units specified in B.3;
 - (3) the 98.19 tons SO₂ emissions as a rolling, 12-month summation, from the emissions units specified in B.3;
 - (4) if no coal is burned at emissions unit B007 during a rolling, 12-month period, the 12,000 combined operating hours limit, as a rolling, 12-month summation, for the emissions units specified in B.3.a) and B.3.b);
 - (5) if coal is burned at emissions unit B007 during a rolling, 12-month period, the 3,240 operating hours limit, employing no. 2 oil, as a rolling, 12-month summation, for emissions unit B006; and
 - (6) if coal is burned at emissions unit B007 during a rolling, 12-month period, the 3,240 operating hours limit, employing coal, as a rolling, 12-month summation, for emissions unit B007.
 - 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 Ohio EPA Northeast District Office).

Testing Requirements

9. Compliance with the allowable emission limitations in B.2 of these terms and conditions shall be determined in accordance with the following methods:

a) Emission Limitations:

98.28 tons CO emissions, as a rolling, 12-month summation, from the emissions units specified in B.3;

80.26 tons NO_x emissions, as a rolling, 12-month summation, from the emissions units specified in B.3; and

98.19 tons SO₂ emissions, as a rolling, 12-month summation, from the emissions units specified in B.3.

Applicable Compliance Method:

Compliance may be based on the following equation(s):

- (1) Determination of the monthly emissions of CO, NO_x and SO₂ from wood combustion at each emissions unit or tallow combustion at B006:

$$\text{Pollutant}_{\text{MONTH}} = \text{EF}_{\text{POLLUTANT LB/MMBTU}} \times \text{H} \times \text{HRS/month} \times \text{ton}_{\text{POLLUTANT}} / 2,000_{\text{LB POLLUTANT}}$$

where:

Pollutant_{MONTH} = the monthly emissions of CO, NO_x and SO₂ each, in tons, at each emissions unit.

EF_{POLLUTANT LB/MMBTU} = an emissions factor of a pollutant, in lb(s) per million Btu heat input.

The following emissions factors were employed in the application for FEPTIO P0106368:

EF_{CO WOOD} = 0.60 lb CO/mmBtu for combustion of bark & wet wood as found in Table 1.6-2, AP-42 Chap. 1.6 (9/03).

EF_{CO TALLOW} = 0.012 lb CO/mm Btu for combustion of tallow at B006 as found in page 6-2, A Demonstration of Fat and Grease as an Industrial Boiler Fuel, Engineering Outreach Service, The University of Georgia, June 30, 2002.

EF_{NOX WOOD} = 0.49 lb NO_x/mmBtu for combustion of dry wood as found in Table 1.6-2, AP-42 Chap. 1.6 (9/03), as employed in the application for FEPTIO P0106368.

$EF_{NOX_TALLOW} = 0.118 \text{ lb NO}_x/\text{mm Btu}$ as found in page 6-2, A Demonstration of Fat and Grease as an Industrial Boiler Fuel, Engineering Outreach Service, The University of Georgia, June 30, 2002.

$EF_{SO2_WOOD} = 0.025 \text{ lb SO}_2/\text{mmBtu}$ for combustion of bark & wet wood as well as dry wood as found in Table 1.6-2, AP-42 Chap. 1.6 (9/03), as employed in the application for FEPTIO P0106368.

$EF_{SO2_TALLOW} = 0.002 \text{ lb SO}_2/\text{mm Btu}$ in page 6-2, A Demonstration of Fat and Grease as an Industrial Boiler Fuel, Engineering Outreach Service, The University of Georgia, June 30, 2002.

H = maximum rated heat input, in million Btu/hr, which is 20 mmBtu/hr and 30 mmBtu/hr for wood combustion at B006 and B007, respectively; as stated in the application for FEPTIO P0106368. For combustion of tallow, natural gas or no. 2 fuel oil the maximum rated heat input of B006 is 37.8 mmBtu/hr; as stated in the application for FEPTIO P0106367.

HRS = actual, monthly hours of operation for combustion of a specified fuel at each emissions unit; as specified in B.6.a).

- (2) Determination of the monthly emissions of CO and NO_x from coal combustion at B007:

$$\text{Pollutant}_{\text{MONTH}} = EF_{\text{POLLUTANT LB/TON}} \times W \times \text{HRS}/\text{month} \times \text{ton}_{\text{POLLUTANT}}/2,000_{\text{LB POLLUTANT}}$$

where:

$\text{Pollutant}_{\text{MONTH}}$ = the monthly emissions of CO and NO_x each, in tons, at B007.

$EF_{\text{POLLUTANT LB/TON}}$ = an emissions factor of a pollutant, in lb(s) per ton of fuel (i.e. coal).

The following emissions factors were employed in the application for FEPTIO P0106368:

$EF_{CO_COAL} = 6 \text{ lb CO}/\text{ton}_{\text{COAL}}$ for combustion at an overfeed stoker coal-fired boiler as found in Table 1.1-3, AP-42 Chap. 1.1(9/98).

$EF_{NOX_COAL} = 7.5 \text{ lb NO}_x/\text{ton}_{\text{COAL}}$ for combustion at an overfeed stoker coal-fired boiler as found in Table 1.1-3, AP-42 Chap. 1.1(9/98).

W = maximum, hourly fuel input, which is 1.25 ton/hr of coal at B007, as stated in the application for FEPTIO P0106368.

- (3) Determination of the monthly SO₂ emissions from oil combustion at B006:

$$\text{SO}_2_{\text{LB/MONTH}} = (\sum(142 \times S_i/10^3 \text{ gal} \times V_i)/\text{month} \times \text{ton}_{\text{SO}_2}/2,000_{\text{LB SO}_2})$$

where:

$\text{SO}_2_{\text{LB/MONTH}}$ = the monthly SO₂ emissions from oil combustion at B006, in tons, as derived from Table 1.3-1 AP-42 Chap. 1.3 (9/98).

S_i = the sulfur content of oil, in percent by weight, as determined from the fuel supplier certification, required by C.1.d)(7) in PTIO# P0106367 for B006.

V_i = the actual volume of oil, from each shipment that is combusted, in gallons, based on records required by C.1.d)(8) in PTIO# P0106367.

- (4) Determination of the monthly SO_2 emissions from coal combustion at B007:

$$SO_{2\text{ LB/MONTH}} = (\sum SO_{2\text{ LB/MMBTU}_i} \times H_i \times W_i) / \text{month} \times \text{ton}_{SO_2} / 2,000_{\text{LB } SO_2}$$

where:

$SO_{2\text{ LB/MONTH}}$ = the monthly SO_2 emissions from coal combustion at B007, in tons.

$SO_{2\text{ LB/MMBTU COAL}}$ = the actual SO_2 content of each shipment of coal, in lb/mmBtu, as determined from the analysis of each coal shipment, as required by C.1.d)(7) in FEPTIO P0106368 for B007.

H_{COAL} = the actual heat content of each shipment of coal, in Btu/lb, as determined from the analysis of each coal shipment, as required by C.1.d)(7) in PTIO# P0106368 for B007.

W_{COAL} = the actual weight of coal from each shipment that is combusted, in lbs, based on records required by C.1.d)(8) in FEPTIO P0106368.

- (5) Determination of the monthly emissions of CO and NO_x from no. 2 oil combustion at B006:

$$\text{Pollutant}_{\text{MONTH}} = EF_{\text{POLLUTANT LB/1000 GAL}} \times V \times \text{HRS/month} \times \text{ton}_{\text{POLLUTANT}} / 2,000_{\text{LB POLLUTANT}}$$

where:

$\text{Pollutant}_{\text{MONTH}}$ = the monthly emissions of CO and NO_x each, in tons, at B006.

$EF_{\text{POLLUTANT LB/1000 GAL}}$ = an emissions factor of a pollutant, in lb(s) per 1,000 gallons of fuel (i.e. no. 2 oil).

The following emissions factors were employed in the application for FEPTIO P0106368:

$EF_{\text{CO LB/1000 GAL}} = 5 \text{ lbs CO/1000 gal}_{\text{OIL}}$ for no. 2 oil combustion, as found in Table 1.3-1 AP-42 Chap. 1.3 (9/98).

$EF_{\text{NOX LB/1000 GAL}} = 20 \text{ lbs NO}_x/1000 \text{ gal}_{\text{OIL}}$ for no. 2 oil combustion, as found in Table 1.3-1 AP-42 Chap. 1.3 (9/98).

V = the maximum volume usage of no. 2 oil, which is 266 gal_{OIL}/hr as stated in the application for FEPTIO P0106367.

- (6) Determination of the monthly emissions of CO, NO_x and SO_2 from natural gas combustion at B006:

$$\text{Pollutant}_{\text{MONTH}} = EF_{\text{POLLUTANT LB/MMCF}} \times V \times \text{HRS/month} \times \text{ton}_{\text{POLLUTANT}} / 2,000_{\text{LB POLLUTANT}}$$

where:

$Pollutant_{MONTH}$ = the monthly emissions of CO, NO_x and SO₂ each, in tons, at B006.

$EF_{POLLUTANT\ LB/MMCF}$ = an emissions factor of a pollutant, in lb(s) per million cubic feet of fuel (i.e. natural gas).

The following emissions factors were employed in the application for FEPTIO P0106367:

$EF_{CO\ LB/MMCF} = 84\ lbs\ CO/mmcf\ (0.084\ lb\ CO/mmBtu)$ for natural gas combustion as found in Table 1.4-2 AP-42 Chap. 1.4 (7/98).

$EF_{NOX\ LB/MMCF} = 50\ lbs\ NO_x/mmcf\ (0.05\ lb\ NO_x/mmBtu)$ for natural gas combustion with a low NO_x burner as found in Table 1.4-1 AP-42 Chap. 1.4 (7/98).

$EF_{SO2\ LB/MMCF} = 0.6\ lb\ SO_2/mmcf\ (0.0006\ lb\ SO_2/mmBtu)$ for natural gas combustion with as found in Table 1.4-2 AP-42 Chap. 1.4 (7/98).

V = maximum volume usage of gas fuel, which is 0.0378 cf/hr as stated in the application for FEPTIO P0106367.

- (7) Determination of the total emissions of CO, NO_x and SO₂ each from each emissions unit from the combustion of all fuels for each month:

$$Pollutant_{MONTH} = \sum Pollutant_{MONTH - FUEL\ i}$$

where:

$Pollutant_{MONTH}$ = total pollutant emissions, in tons/month, from the combustion of all fuels.

$Pollutant_{MONTH - FUEL\ i}$ = total pollutant emissions in tons/month from specified fuel i.

For B006 the fuel may be wood, tallow, no. 2 oil or natural gas. For B007 the fuel may be wood or coal.

- (8) The determination of the rolling, 12-month summations of the emissions of CO, NO_x and SO₂ for each emissions unit, in tons, may be demonstrated by the record keeping requirement(s) in B.7.b).
- (9) The determination of the combined rolling, 12-month summations of the emissions of CO, NO_x and SO₂ for all emissions units specified in B.3, in tons, may be demonstrated by the record keeping requirement(s) in B.7.c).

10. Miscellaneous Requirements

- a) None.

C. Emissions Unit Terms and Conditions

1. B006, Boiler (Wickes)

Operations, Property and/or Equipment Description:

Boiler with a 20 mmBtu/hr wood-fired burner and a 37.8 mmBtu/hr natural gas, no. 2 fuel oil or tallow burner with a cyclone that is vented to a baghouse to control particulate emissions. Only one burner may be operated at a time.

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. b)(1)g and b)(2)g regarding the NO_x RACT rule and d)(10) regarding the Toxic Air Contaminant Statute

(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. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) as effective 11/30/01 established in PTI 02-06868 as issued on 9/30/92 and as modified in FEPTIO P0106367	<p>Particulate emissions (PE) shall not exceed 0.2 lb/mmBtu of actual heat input during wood firing. See b)(2)a.</p> <p>Carbon monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu of actual heat input and 13.9 tons/year during natural gas firing.</p> <p>Nitrogen oxides (NO_x) emissions shall not exceed 0.118 lb/mmBtu of actual heat input and 19.5 tons/year during tallow firing.</p> <p>NO_x emissions shall not exceed 0.14 lb/mmBtu of actual heat input and 23.3 tons/year during no. 2 oil firing.</p>

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>See b)(2)f.i. through. b)(2)f.xi.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A) and 3745-17-10(B)(1) and 40 CFR Part 60, Subpart Dc.</p>
	<p>OAC rule 3745-31-05(A)(3)(b) as effective 12/01/06 established in PTI 02-06868 as issued on 9/30/92 and as modified in FEPTIO P0106367</p>	<p>The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to limits specified in b)(2)f.i through b)(2)f.xi since the uncontrolled potential to emit is less than 10 tons/year.</p>
b.	<p>OAC rule 3745-17-07(A)</p>	<p>See b)(2)b and b)(2)c.</p>
c.	<p>OAC rule 3745-17-10(B)(1)</p>	<p>The PE rate shall not exceed 0.020 lb/mmBtu of actual heat input during natural gas or no. 2 oil firing.</p>
d.	<p>OAC rule 3745-17-10(C)(2)</p>	<p>The PE limitation specified by this rule is less stringent than the PE limitations for wood or tallow firing, established pursuant to OAC rule 3745-31-05(A)(3).</p>
e.	<p>OAC rule 3745-18-06(D)</p>	<p>The sulfur dioxide (SO₂) emissions limitation specified by this rule is less stringent than the SO₂ limitations for no. 2 oil firing, established pursuant to OAC rule 3745-31-05(A)(3) and less stringent than the SO₂ limitations for oil firing, pursuant to 40 CFR 60.42c.</p>
f.	<p>OAC rule 3745-18-06(H)</p>	<p>The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart Dc.</p>
g.	<p>OAC rule 3745-110-03(A)</p>	<p>See b)(2)g and d)(9).</p>
h.	<p>40 CFR 60.40c – 60.48c (40 CFR Part 60, Subpart Dc)</p>	<p>In accordance with 40 CFR 60.43c(e)(1), the PE rate shall not exceed 0.030 lb/mmBtu of actual heat input during firing of oil, as defined in 40 CFR 60.41c, or a mixture of oil and any other fuel, except as provided in paragraphs (e)(2), (e)(3) and (e)(4) of 40 CFR 60.43c. The PE limitation specified by this rule is less stringent than the particulate emissions limitations for no. 2 oil firing, established pursuant to OAC rule 3745-17-10(B)(1). See b)(2)d and b)(2)e.</p> <p>In accordance with 40 CFR 60.42c(d), the</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		sulfur dioxide (SO ₂) emissions shall not exceed 0.50 lb/mmBtu of actual heat input, as a 30-day rolling average, during firing with oil, as defined in 40 CFR 60.41c, or a mixture of oil and any other fuel, or as an alternative to the SO ₂ emissions requirement the fuel sulfur content shall not exceed 0.50%, by weight, as a 30-day rolling average. See b)(2)h and b)(2)i. The SO ₂ emissions limitation specified by this rule is less stringent than the SO ₂ limitations for no. 2 oil firing, established pursuant to OAC rule 3745-31-05(A)(3). See b)(2)f.iv.
i.	OAC rule 3745-31-05(D)(1)(b) voluntary restriction to avoid Title V requirements	See B.2 through B.9.

(2) Additional Terms and Conditions

- a. The emissions from this emissions unit shall be vented to a cyclone (i.e. cyclone-W) at all times during wood combustion at the emissions unit. The cyclone exhaust gases shall be vented to a baghouse (i.e. baghouse-W) at all times during wood combustion at the emissions unit, except as specified in b)(2)c.
- b. Except as provided in OAC rule 3745-17-07(A)(3) and in 40 CFR 60.43c, visible particulate emissions from the stack shall not exceed 20 percent opacity as a six-minute average, except:
 - i. visible particulate emissions may exceed 20 percent opacity, as a six-minute average, for not more than six consecutive minutes in any 60 minutes; but
 - ii. shall not exceed 60 percent opacity, as a six-minute average, at any time; and
 - iii. the presence of uncombined water shall not be deemed a violation for failure of stack emissions meeting this requirement.
- c. As provided in OAC rule 3745-17-07(A)(3), the visible particulate emissions limitation specified in b)(2)b shall not apply to the following:
 - i. The permittee shall operate the baghouse (i.e. baghouse-W) during any wood combustion at the emissions unit, except the baghouse may not be operated during periods of (emissions unit) start up until the exhaust gases have achieved a temperature of 250 degrees Fahrenheit (121 degrees Celcius) at the inlet of the baghouse or during periods of (emissions unit) shutdown when the temperature of the exhaust gases

- has dropped below 250 degrees Fahrenheit (121 degrees Celcius) at the baghouse inlet; or
- ii. The malfunction of the emissions unit or the malfunction/shutdown of the air pollution control equipment associated with the emissions unit, if the permittee complies with the requirements of OAC rule 3745-15-06 and none of the conditions listed in paragraph (C) of OAC rule 3745-15-06 exist.
 - d. In accordance with 40 CFR 60.43c(c), except as provided in 40 CFR 60.43c(d) the visible particulate emissions from the stack shall not exceed 20 percent opacity as a six-minute average, during firing of oil, as defined in 40 CFR 60.41c, except visible particulate emissions shall not exceed 27 percent opacity, as a six-minute average, for no more than one 6-minute period per hour.
 - e. As provided in 40 CFR 60.43c(d), the visible particulate emissions limitation specified in b)(2)d shall apply at all times, except during periods of startup, shutdown or malfunction.
 - f. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, specified in C.1.b)(2)f.i. through C.1.b)(2)f.xi. in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutants less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emissions limits/control measures no longer apply and the following terms and conditions, shall become void after U.S. EPA approves the rule revision: b)(2)f, f)(1)b.iii, f)(1)c.i, f)(1)c.ii, f)(1)c.iii, f)(1)c.vi, f)(1)c.vii, f)(1)c.x., f)(1)c.xi, f)(1)c.xii and f)(1)c.xiii.
 - i. The PE rate shall not exceed 0.020 lb/mmBtu of actual heat input and 3.31 tons/year during tallow firing.
 - ii. The PE rate shall not exceed 3.31 tons/year during natural gas or no. 2 oil firing.
 - iii. The SO₂ emissions shall not exceed 0.006 lb/mmBtu of actual heat input and 1.0 ton/year during tallow firing.
 - iv. The SO₂ emissions shall not exceed 0.06 lb/mmBtu of actual heat input and 9.94 tons/year during no. 2 oil firing.
 - v. The SO₂ emissions shall not exceed 0.0018 lb/mmBtu of actual heat input and 0.30 ton/year during natural gas firing.

- vi. The CO emissions shall not exceed 0.036 lb/mmBtu of actual heat input and 5.96 tons/year during tallow firing.
 - vii. The CO emissions shall not exceed 0.052 lb/mmBtu of actual heat input and 8.61 tons/year during no. 2 oil firing.
 - viii. The OC emissions shall not exceed 0.0042 lb/mmBtu of actual heat input and 0.70 ton/year during tallow firing.
 - ix. The OC emissions shall not exceed 0.0042 lb/mmBtu of actual heat input and 0.70 ton/year during no. 2 oil firing.
 - x. The OC emissions shall not exceed 0.033 lb/mmBtu of actual heat input and 5.46 tons/year during natural gas firing.
 - xi. The NO_x emissions shall not exceed 0.05 lb/mmBtu of actual heat input and 8.28 tons/year during natural gas firing.
- g. The permittee shall have a tune-up performed on the 37.8 mmBtu/hr burner on an annual basis if it was employed during the previous calendar year. Each tune-up shall consist of inspections in accordance with the manufacturer's recommendations and shall include an evaluation of the burner, control(s), damper(s), valves, monitoring equipment and recording equipment.
 - h. For affected facilities listed under paragraph (h)(1) for distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 MMBtu/hr), or paragraphs (h)(2) or (h)(3) of 40 CFR 60.42c, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under 40 CFR 60.48c(f), as applicable.
 - i. As provided in 40 CFR 60.42c(i), the SO₂ emission limits and fuel oil sulfur limits requirements under 40 CFR 60.42c apply at all times, including periods of startup, shutdown, and malfunction.
- c) Operational Restrictions
 - (1) None.
 - d) Monitoring and/or Recordkeeping Requirements

Visible Emissions

- (1) 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. Use of 40 CFR Part 60, Appendix A-4, Method 9 is not required for the daily check of visible emissions. 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 emissions incident; and
- e. any corrective actions taken to minimize or 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.

- (2) If exemptions from the visible particulate emissions limitations are requested during start up or shutdown of this emissions unit, the permittee shall operate and maintain a temperature monitor and recorder that measures and records the temperature of the boiler exhaust gases entering the baghouse and record the following information, if applicable:
 - a. during all periods of start up until the baghouse is operational or until the inlet temperature specified in b)(2)c.i; and
 - b. during all periods of shutdown until the inlet temperature to the baghouse drops below the temperature specified in b)(2)c.i.
- (3) In accordance with 40 CFR 60.47c(g), a permittee of an affected facility that is subject to an opacity standard in 40 CFR 60.43c(c) and that burns only gaseous fuels or fuel oils, as defined in as defined in 40 CFR 60.41c, that contain less than or equal to 0.50 percent weight sulfur and operates according to a written site-specific monitoring plan approved by the Ohio EPA is not required to operate a continuous opacity monitoring system (COMS). 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.

Until such time as Ohio EPA, Northeast District Office (NEDO) approves the plan, the original plan shall be implemented and followed as submitted. If the submitted plan is not acceptable, the facility shall continue to implement the submitted plan and submit any necessary changes or revisions until it is approved by NEDO.

After initial approval of the plan, any changes or revisions shall be submitted to NEDO for approval prior to implementing the change or revision. Until such time as any changes or revisions to the plan are approved, the facility shall continue to comply with the existing, approved plan.

Upon request, the facility shall submit an updated and augmented plan if Ohio EPA determines that the current plan is not adequate for controlling visible particulate emissions. This updated plan shall be submitted within thirty (30) days of receiving the request, or such time as requested by the permittee and approved by Ohio EPA. If the submitted augmented plan is not acceptable, the facility shall continue to implement the submitted augmented plan and submit any necessary changes or revisions until the plan is approved by NEDO.

Air Pollution Control Equipment Requirements

- (4) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range for the pressure drop across the baghouse shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and an alternative pressure drop range and/or limit is established.
- (5) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse during wood combustion when the emissions unit is in operation, including periods of startup and shutdown. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee. The acceptable pressure drop shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range is established to demonstrate compliance. The permittee shall record the following information for each day of operation:
 - a. the pressure drop across the baghouse, on a once/8-hour basis during wood combustion;
 - b. a daily log of the downtime for each capture (collection) system, the cyclone, the baghouse and monitoring equipment during wood combustion at the emissions unit;
 - c. an identification of which burner was employed (i.e. 20 mmBtu/hr burner or 37.8 mmBtu/hr burner); and
 - d. a log of operating hours for each fuel type (i.e. wood, tallow, no. 2 oil or natural gas) combusted in this emissions unit, on a daily basis.
- (6) Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:
 - a. the date and time the deviation began;
 - b. the magnitude of the deviation at that time;
 - c. the date the investigation was conducted;

- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- a. a description of the corrective action;
- b. the date corrective action was completed;
- c. the date and time the deviation ended;
- d. the total period of time (in minutes) during which there was a deviation;
- e. the pressure drop readings immediately after the corrective action was implemented; and
- f. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

Documentation of the oil fuel sulfur content, in percent by weight, and oil quantity

- (7) In accordance with 40 CFR 60.46c(e), the monitoring requirements of paragraphs (a) and (d) of 40 CFR 60.46c shall not apply to affected facilities subject to 40 CFR 60.42c(h)(1), (2), or (3) where the permittee seeks to demonstrate compliance with the SO₂ standards based on fuel supplier certification, as described under 40 CFR 60.48c(f), as applicable. In accordance with 40 CFR 60.48c(f)(1) fuel supplier certification shall include the following information for each distillate oil shipment:
 - a. the name of the oil supplier;
 - b. a statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in 40 CFR 60.41c;

- c. the sulfur content or maximum sulfur content of the oil (i.e. percent, by weight); and
 - d. the total quantity of oil received.
- (8) The permittee shall maintain monthly records of the actual volume, in gallons of oil that was combusted in this emissions unit so that the monthly SO₂ emissions rate may be determined as specified in B.9.a)(3).

Maintenance of the 37.8 mmBtu/hr burner

- (9) The permittee shall maintain monthly records of the following information regarding the 37.8 mmBtu/hr burner:
- a. the date of the previous tune-up;
 - b. the anticipated date of the next annual tune-up; and
 - c. for each maintenance task and each tune-up the following information:
 - i. the date, name, title and affiliation of the person(s) who performed the maintenance evaluation (preventative maintenance and tune-up);
 - ii. a description of the work performed or recommended work to be performed; and
 - iii. the completion date of the work performed.

Toxic Air Contaminant Evaluation

- (10) Modeling to demonstrate compliance with, the Toxic Air Contaminant Statute, ORC 3704.03(F)(4)(b), was not necessary because the emissions unit maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, from the physical change in operations to combust natural gas, no. 2 fuel oil or tallow will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified Federally Enforceable Permit to Install/Operate (FEPTIO) prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new FEPTIO.
- e) Reporting Requirements
- (1) The permittee shall identify in the annual permit evaluation report the following information during the 12-month reporting period for this emissions unit:
- a. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the cyclone and the baghouse during wood combustion;
 - b. all days during which any visible particulate emissions were observed from the stack serving this emissions unit, including all periods of time during startup, and

shutdown of the emissions unit when the baghouse was not in operation during wood combustion and the temperature of the baghouse inlet gases exceeded the levels specified in b)(2)c;

- c. any corrective actions taken to minimize or eliminate the visible particulate emissions;
- d. Each period of time (start time and date, and end time and date) when the sulfur content of the oil fuel employed at this emissions unit exceeded the limit specified in b)(1)h.
- e. each period of time (start time and date, and end time and date) during wood combustion when the pressure drop across the baghouse was outside of the range specified by the manufacturer and outside of the acceptable range following any required compliance demonstration;
- f. each incident of deviation described in e)(1)e where a prompt investigation was not conducted;
- g. each incident of deviation described in e)(1)e where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken;
- h. each incident of deviation described in e)(1)f and e)(1)g where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit;
- i. any exceedance of the sulfur content limitation, in percent by weight, specified in b)(1)h; and
- j. a report of the most recent tune-up performed on the 37.8 mmBtu/hr burner shall include the following information:
 - i. the date of the previous tune-up;
 - ii. a statement of whether the 37.8 mmBtu/hr burner was operated during the 12-month reporting period; and
 - iii. the date of the most recent tune-up performed or scheduled to be performed and a brief summary of the tune-up tasks performed.

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

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 allowable emission limitations and control measures requirements in b)(1) and b)(2) shall be determined in accordance with the following methods:

a. Emission Limitation(s)

Except as provided in OAC rule 3745-17-07(A)(3), visible particulate emissions from the stack shall not exceed 20 percent opacity as a six-minute average, except visible particulate emissions may exceed 20 percent opacity, as a six-minute average, for not more than six consecutive minutes in any 60 minutes; but shall not exceed 60 percent opacity, as a six-minute average, at any time wood is combusted in the 20 mmBtu/hr burner or any time tallow or natural gas is combusted in the 37.8 mmBtu/hr burner.

Except as provided in 40 CFR 60.43c(d) the visible particulate emissions from the stack shall not exceed 20 percent opacity as a six-minute average, during firing of oil, as defined in 40 CFR 60.41c, except visible particulate emissions shall not exceed 27 percent opacity, as a six-minute average, for no more than one 6-minute period per hour.

Applicable Compliance Method

Compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A-4, Method 9.

b. Emission Limitation(s)

- i. The PE rate shall not exceed 0.020 lb/mmBtu of actual heat input during natural gas or no. 2 oil firing.
- ii. The PE rate shall not exceed 0.2 lb/mmBtu of actual heat input during wood firing.
- iii. The PE rate shall not exceed 0.020 lb/mmBtu of actual heat input during tallow firing.
- iv. The PE rate shall not exceed 0.030 lb/mmBtu of actual heat input during firing of oil, as defined in 40 CFR 60.41c, or a mixture of oil and any other fuel, except for firing of number 2 oil and as provided in paragraphs (e)(2), (e)(3) and (e)(4) of 40 CFR 60.43c.

Applicable Compliance Method

Compliance may be based on the following equation(s):

$$PE_i = EF_{PE_i} \times H \times (1 - CE_{CYCLONE}) \times (1 - CE_{BAGHOUSE})$$

where:

PE_i = the PE rate from combustion of specified fuel i , in lb PE/mmBtu of actual heat input.

EF_{PE_i} = an emission factor for specified fuel i .

$EF_{PE_{WOOD}}$ = 0.56 lb PE/mmBtu for filterable PE for the combustion of wood as well as dry wood as found in Table 1.6-1, AP-42 Chap. 1.6 (9/03).

$EF_{PE_{TALLOW}}$ = 0.014 lb PE/mmBtu as filterable PE for combustion of tallow at B006 as found in page 5-3, A Demonstration of Fat and Grease as an Industrial Boiler Fuel, Engineering Outreach Service, The University of Georgia, June 30, 2002.

$EF_{PE_{OIL}}$ = the factor for the PE rate from oil combustion, in lb PE/mmBtu, as determined from the required performance testing during oil firing of the 37.8 mmBtu/hr burner as required by 40 CFR 60.45c and specified in f)(2)a. Until a performance test that demonstrates compliance is performed, the emissions factor of 0.014 lb PE/mmBtu of filterable PE, as developed from an emissions factor of 2 lbs PE/1,000 gallon of oil found in Table 1.3-2 AP42 Chap. 1.3 (9/98) may be employed.

$EF_{PE_{NATURAL GAS}}$ = the factor for the filterable PE rate from natural gas combustion, is 0.0019 lb PE/mmBtu, as developed from an emissions factor of 1.9 lbs PE per million standard cubic feet found in Table 1.4-2, AP42 Chap 1.4 (7/98).

H = maximum rated heat input, in million Btu/hr, which is 20 mmBtu/hr for wood combustion and 37.8 mmBtu/hr for combustion of tallow, natural gas or no. 2 fuel oil as stated in the application for FEPTIO P0106367.

$CE_{CYCLONE}$ = control efficiency of the cyclone, which is 80% for the PE rate reduction, as stated in the application for FEPTIO P0106367.

$CE_{BAGHOUSE}$ = control efficiency of the baghouse, which is 99% for the PE rate reduction, as stated in the application for FEPTIO P0106367.

[Note: After the revision to OAC rule 3745-31-05(A)(3)(a)(ii) is approved into the Ohio SIP, f)(1)b.iii shall be voided entirely.]

c. Emission Limitation(s)

- i. The SO₂ emissions shall not exceed 0.006 lb/mmBtu of actual heat input during tallow firing.
- ii. The SO₂ emissions shall not exceed 0.06 lb/mmBtu of actual heat input during no. 2 oil firing.
- iii. The SO₂ emissions shall not exceed 0.0018 lb/mmBtu of actual heat input during natural gas firing.

- iv. The SO₂ emissions shall not exceed 0.50 lb/mmBtu of actual heat input, as a 30-day rolling average, during firing with oil, as defined in 40 CFR 60.41c, or a mixture of oil and any other fuel or compliance with f(1)d.
- v. The CO emissions shall not exceed 0.084 lb/mmBtu of actual heat input during natural gas firing.
- vi. The CO emissions shall not exceed 0.036 lb/mmBtu of actual heat input during tallow firing.
- vii. The CO emissions shall not exceed 0.052 lb/mmBtu of actual heat input during no. 2 oil firing.
- viii. The NO_x emissions shall not exceed 0.118 lb/mmBtu of actual heat input during tallow firing.
- ix. The NO_x emissions shall not exceed 0.14 lb/mmBtu of actual heat input during no. 2 oil firing.
- x. The NO_x emissions shall not exceed 0.05 lb/mmBtu of actual heat input during natural gas firing.
- xi. The OC emissions shall not exceed 0.0042 lb/mmBtu of actual heat input during tallow firing.
- xii. The OC emissions shall not exceed 0.0042 lb/mmBtu of actual heat input during no. 2 oil firing.
- xiii. The OC emissions shall not exceed 0.033 lb/mmBtu of actual heat input during natural gas firing.

Applicable Compliance Method

Compliance may be based on the following equation(s):

$$\text{Pollutant}_i = EF_{\text{POLLUTANT}_i} \times H$$

where:

Pollutant_i = the emissions rate of a pollutant from combustion of specified fuel i, in lb/mmBtu of actual heat input.

EF_i = an emissions factor for specified fuel i.

EF_{SO₂ TALLOW} = 0.014 lb SO₂/mmBtu for combustion of tallow at B006 as found in page 6-2, A Demonstration of Fat and Grease as an Industrial Boiler Fuel, Engineering Outreach Service, The University of Georgia, June 30, 2002.

EF_{SO₂ OIL} = in lb SO₂/mmBtu, as a 30-day rolling average, as determined from the required performance testing during oil firing of the 37.8 mmBtu/hr burner as required by 40 CFR 60.44c (a) through (d) and

specified in f)(2)a. Until a performance test that demonstrates compliance is performed, the emissions factor of $(142 \times S)$ lbs $\text{SO}_2/1000$ gal_{OIL} for no. 2 oil combustion, as found in Table 1.3-1 AP-42 Chap. 1.3 (9/98) where S = the decimal fraction of sulfur in the liquid fuel, as specified on the oil supplier's analysis or specifications, may be employed.

$EF_{\text{SO}_2 \text{ NATURAL GAS}} = 0.0006$ lb SO_2/mmBtu , as developed from an emissions factor of 0.6 lbs SO_2 per million standard cubic feet found in Table 1.4-2, AP42 Chap 1.4 (7/98).

$EF_{\text{CO TALLOW}} = 0.012$ lb CO/mmBtu for combustion of tallow at B006 as found in page 6-2, A Demonstration of Fat and Grease as an Industrial Boiler Fuel, Engineering Outreach Service, The University of Georgia, June 30, 2002.

$EF_{\text{CO OIL}} = 0.035$ lb CO/mmBtu, as determined from the emissions factor of 5 lbs CO/1000 gal_{OIL} for no. 2 oil combustion, as found in Table 1.3-1 AP-42 Chap. 1.3 (9/98).

$EF_{\text{CO NATURAL GAS}} = 0.084$ lb CO/mmBtu, as developed from an emissions factor of 84 lbs CO per million standard cubic feet found in Table 1.4-2, AP42 Chap 1.4 (7/98).

$EF_{\text{OC TALLOW}} = 0.0014$ lb OC/mmBtu, assuming that OC emissions for combustion of tallow are equivalent to OC emissions from no. 2 oil combustion as stated in the application for FEPTIO P0106367.

$EF_{\text{OC OIL}} = 0.0014$ lb OC/mmBtu, as determined from the emissions factor of 0.2 lb OC/1000 gal_{OIL} for no. 2 oil combustion, as found in Table 1.3-3 AP-42 Chap. 1.3 (9/98) and a maximum usage rate of 266 gal_{OIL}/hr, as stated in the application for FEPTIO P0106367.

$EF_{\text{OC NATURAL GAS}} = 0.011$ lb OC/mmBtu, as developed from an emissions factor of 11 lbs OC per million standard cubic feet found in Table 1.4-2, AP42 Chap 1.4 (7/98).

$EF_{\text{NOX TALLOW}} = 0.118$ lb NO_x/mmBtu for combustion of tallow at B006 as found in page 6-2, A Demonstration of Fat and Grease as an Industrial Boiler Fuel, Engineering Outreach Service, The University of Georgia, June 30, 2002.

$EF_{\text{NOX OIL}} = 0.14$ lb NO_x/mmBtu , as developed from an emissions factor of 20 lbs $\text{NO}_x/1000$ gal_{OIL} for no. 2 oil combustion, as found in Table 1.3-1 AP-42 Chap. 1.3 (9/98).

$EF_{\text{NOX NATURAL GAS}} = 0.05$ lb NO_x/mmBtu , as developed from an emissions factor of 50 lbs NO_x per million standard cubic feet found in Table 1.4-1, AP42 Chap 1.4 (7/98).

H = maximum rated heat input, in million Btu/hr, which is 20 mmBtu/hr for wood combustion and 37.8 mmBtu/hr for combustion of tallow, natural gas or no. 2 fuel oil as stated in the application for FEPTIO P0106367.

If required, the following test methods shall be employed to demonstrate compliance with the allowable mass emissions rate:

Method 10 for CO, as found in 40 CFR Part 60, Appendix A-4;

Method 7E for NO_x, as found in 40 CFR Part 60, Appendix A-4; and

Method 25, 25A or 25B, as appropriate for OC/VOC, as found in 40 CFR Part 60, Appendix A-7.

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

[Note: After the revision to OAC rule 3745-31-05(A)(3)(a)(ii) is approved into the Ohio SIP, f)(1)c.i, f)(1)c.ii, f)(1)c.iii, f)(1)c.vi, f)(1)c.vii, f)(1)c.x, f)(1)c.xi, f)(1)c.xii and f)(1)c.xiii shall be voided entirely.]

d. Emission Limitation(s)

The sulfur content of the oil, as defined in 40 CFR 60.41c, shall not exceed 0.50%, by weight, as a 30-day rolling average during firing with oil.

Applicable Compliance Method

Compliance may be based on the following method(s):

- i. The fuel oil sulfur content, S, may be determined as follows:
 - (a) The sulfur content, in percent by weight, during oil firing of the 37.8 mmBtu/hr burner as required by 40 CFR 60.44c(h), shall be based on the fuel supplier certification as required in 40 CFR 60.48c(f) and as specified in f)(2)(a)viii; or
 - (b) The sulfur content, in percent by weight, during oil firing of the 37.8 mmBtu/hr burner as required by 40 CFR 60.44c(g), shall be based on sampling and analysis of the oil in the fuel tank after each new shipment of oil is received and shall be used as the daily value, as described under 40 CFR 60.46c(d)(2) and as specified in f)(2)(a)viii.
- ii. The fuel oil sulfur content, percent by weight, as a 30-day rolling average during firing with oil may be based on the following equation(s):

$$S_{\text{Rolling 30 DAYS}} = (\sum S_i) / \text{rolling 30-days.}$$

where:

S_i = the daily value of the sulfur content, in percent by weight, for the specified day i , as determined in f)(1)(d)i.

i = a specified day from 1 through 30.

e. Emission Limitation(s)

- i. The CO emissions shall not exceed 13.9 tons/year during natural gas firing.
- ii. The NO_x emissions shall not exceed 19.5 tons/year during tallow firing.
- iii. The NO_x emissions shall not exceed 23.3 tons/year during no. 2 oil firing.
- iv. The PE rate shall not exceed 3.31 tons/year during tallow firing.
- v. The PE rate shall not exceed 3.31 tons/year during natural gas or no. 2 oil firing.
- vi. The SO₂ emissions shall not exceed 1.0 ton/year during tallow firing.
- vii. The SO₂ emissions shall not exceed 9.94 tons/year during no. 2 oil firing.
- viii. The SO₂ emissions shall not exceed 0.30 ton/year during natural gas firing.
- ix. The CO emissions shall not exceed 5.96 tons/year during tallow firing.
- x. The CO emissions shall not exceed 8.61 tons/year during no. 2 oil firing.
- xi. The OC emissions shall not exceed 0.70 ton/year during tallow firing.
- xii. The OC emissions shall not exceed 0.70 ton/year during no. 2 oil firing.
- xiii. The OC emissions shall not exceed 5.46 tons/year during natural gas firing.
- xiv. The NO_x emissions shall not exceed 8.28 tons/year during natural gas firing.

Applicable Compliance Method

Compliance may be based on the following method(s):

- i. The annual CO, NO_x and SO₂ emissions for each fuel at each emissions unit shall be determined from the rolling, 12-month emissions rates, ending on December 31, as specified in B.9(a)(6).
- ii. The annual OC emissions for each fuel at this emissions unit may be determined from the following equation:

$$\text{Pollutant}_{\text{YEAR } i} = \text{EF}_{\text{OC LB/MMBTU}} \times \sum \text{HRS} \times \text{ton}_{\text{POLLUTANT}} / 2,000_{\text{LB POLLUTANT}}$$

where:

$\text{Pollutant}_{\text{YEAR}}$ = the annual emissions of OC at B006.

HRS = actual, monthly hours of operation for combustion of a specified fuel at this emissions unit; as specified in B.6.a).

[Note: After the revision to OAC rule 3745-31-05(A)(3)(a)(ii) is approved into the Ohio SIP, f(1)e.iv through f(1)e.xiv shall be voided entirely.]

- (2) The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirements:
- a. The initial emissions testing shall be conducted within 60 days after achieving the maximum production rate with the use of oil, as defined in 40 CFR 60.41c, within the 37.8 mmBtu/hr burner associated with this emissions unit, but not later than 180 days after initial startup with the use of oil of the 37.8 mmBtu/hr burner at this emissions unit.

Determination of the visible PE opacity

- i. U.S. EPA Method 9, 40 CFR Part 60, Appendix A-4 and 40 CFR 60.11 – percent opacity as a 6-minute average to determine compliance with the opacity limit specified in 40 CFR 60.43c(c), during firing of oil, as defined in 40 CFR 60.41c. If during the initial 60 minutes of observation all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent, the observation period may be reduced from 3 hours to 60 minutes.

Determination of the PE rate, in lb/mmBtu

- ii. US EPA Method 1, 40 CFR Part 60, Appendix A-1 - sample site selection and the number of traverse sampling points.
- iii. US EPA Method 3A or 3B, 40 CFR Part 60, Appendix A-2 – gas analysis as specified in 40 CFR 60.45c(a).
- iv. US EPA Method 4, 40 CFR Part 60, Appendix A-3 –moisture content analysis, as appropriate.
- v. US EPA Method 5 or 5B, 40 CFR Part 60, Appendix A-3 or US EPA Method 17, 40 CFR Part 60, Appendix A-6 - to determine the PE concentration as specified in 40 CFR 60.45c(a)(3)i through (a)(3)iii and 40 CFR 60.45c(a)(5) through (a)(7).
- vi. The sampling time for each run shall be at least 120 minutes and the minimum sampling volume shall be at least 1.7 dry standard cubic meters (60 dry standard cubic feet) except that smaller sampling times or volumes may be approved by the US EPA Administrator when necessitated by process variable or other factors.

- vii. In accordance with 40 CFR 60.45c(c) in place of the PE rate determination, in lb/mmBtu, via the methods specified in f)(2)a.v, the permittee of an affected facility may elect to install and operate a continuous emissions monitoring system (CEMS) and shall comply with the requirements specified in paragraphs (c)(1) through (c)(14) of 40 CFR 60.45c.

Determination of the fuel sulfur content, in percent by weight

- viii. In accordance with 40 CFR 60.44c(h), for affected facilities subject to 40 CFR 60.42c(h)(1), (2), or (3) where the permittee 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 40 CFR 60.48c(f), as applicable.

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

- b. Subsequent emissions testing for the opacity standard shall be conducted after the initial performance test specified in f)(2)a and shall be conducted in accordance with paragraphs (a)(1), (a)(2) or (a)(3) of 40 CFR 60.47c.
- c. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.
- d. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 Northeast District Office's refusal to accept the results of the emission test(s).
- e. Personnel from the Ohio EPA Northeast District Office 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.
- f. 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 Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office.

g) Miscellaneous Requirements

- (1) B006 was installed in 1992 with a 20 mmBtu/burner as permitted by PTI 02-06868 issued on 9/30/92 to allow combustion of wood. 40 CFR, Part 60, Subpart Dc is applicable to the 20 mmBtu/hr wood-fired burner according to 40 CFR 60.40c(a). There are no SO₂ standards in 40 CFR 60.42c for the combustion of only wood. The 20 mmBtu/hr wood-fired burner is exempt from the particulate matter standards in 40 CFR 60.43c since the burner is below the 30 mmBtu/hr threshold.
- (2) FEPTIO P0106367 is for a physical change to install a 37.8 mmBtu/hr burner to combust tallow, no. 2 oil or natural gas at B006. Only one burner may be operated at a time. The potential emissions of a regulated pollutant, SO₂, will increase during combustion of no. 2 oil in the 37.8 mmBtu/hr burner so that the physical change is a modification subject to the particulate matter standards and SO₂ standards in 40 CFR Part 60, Subpart Dc during firing of oil, as defined in 40 CFR 60.41c, or a mixture of oil and any other fuel.
- (3) The permittee has elected to comply with the sulfur content limit of 0.50%, by weight, as a 30-day rolling average rather than the SO₂ emissions limit of 0.50 lb/mmBtu of actual heat input, as a 30-day rolling average, during firing with oil as allowed in 40 CFR 60.42c(d).
- (4) Rendering exhaust gases (P001 & P002) must be routed to a condenser(s) which vent the non-condensable exhaust to the firebox of (B007) "Erie City" 30 mmBtu/hr wood or coal-fired boiler to control odors as required by the Director's Finding & Orders of December 20, 2005. FEPTIO P0106367 for the modification of B006 will allow the condenser exhaust from the rendering operations (P001 & P002) to be combusted at the firebox associated with B006.