



Environmental Protection Agency

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

7/25/2012

Certified Mail

John Van Wingerden
Green Circle Growers
15650 State Route 511
Oberlin, OH 44074

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED
No	MAJOR GHG
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0247101010
Permit Number: P0110185
Permit Type: Administrative Modification
County: Lorain

Dear Permit Holder:

Enclosed please find a final Air Pollution Permit-to-Install (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it 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

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. If you have any questions regarding this permit, please contact the Ohio EPA DAPC, Northeast District Office. This permit can be accessed electronically on the Division of Air Pollution Control (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: U.S. EPA
Ohio EPA-NEDO; Canada



FINAL

**Division of Air Pollution Control
Permit-to-Install
for
Green Circle Growers**

Facility ID:	0247101010
Permit Number:	P0110185
Permit Type:	Administrative Modification
Issued:	7/25/2012
Effective:	7/25/2012



Division of Air Pollution Control
Permit-to-Install
for
Green Circle Growers

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Authorization

Facility ID: 0247101010
Facility Description: Greenhouse
Application Number(s): M0001735
Permit Number: P0110185
Permit Description: Administrative modification of the boilers. P0104498 and P0107348 needed to be modified to correct BAT language due to SB 265. And the facility requested the other boilers from PTI 02-22434 be included.
Permit Type: Administrative Modification
Permit Fee: \$3,800.00
Issue Date: 7/25/2012
Effective Date: 7/25/2012

This document constitutes issuance to:

Green Circle Growers
15650 State Route 511
Oberlin, OH 44074

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

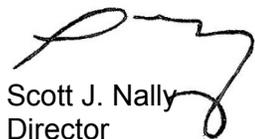
Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northeast District Office
2110 East Aurora Road
Twinsburg, OH 44087
(330)425-9171

The above named entity is hereby granted a Permit-to-Install for the 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 emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency



Scott J. Nally
Director



Authorization (continued)

Permit Number: P0110185

Permit Description: Administrative modification of the boilers. P0104498 and P0107348 needed to be modified to correct BAT language due to SB 265. And the facility requested the other boilers from PTI 02-22434 be included.

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

Emissions Unit ID:	B001
Company Equipment ID:	C1
Superseded Permit Number:	02-22434
General Permit Category and Type:	Not Applicable

Emissions Unit ID:	B002
Company Equipment ID:	C2
Superseded Permit Number:	02-22434
General Permit Category and Type:	Not Applicable

Emissions Unit ID:	B003
Company Equipment ID:	C3
Superseded Permit Number:	02-22434
General Permit Category and Type:	Not Applicable

Emissions Unit ID:	B004
Company Equipment ID:	C4
Superseded Permit Number:	02-22434
General Permit Category and Type:	Not Applicable

Emissions Unit ID:	B005
Company Equipment ID:	C5
Superseded Permit Number:	02-22434
General Permit Category and Type:	Not Applicable

Emissions Unit ID:	B006
Company Equipment ID:	A3
Superseded Permit Number:	02-22434
General Permit Category and Type:	Not Applicable

Emissions Unit ID:	B007
Company Equipment ID:	A4
Superseded Permit Number:	02-22434
General Permit Category and Type:	Not Applicable

Emissions Unit ID:	B008
Company Equipment ID:	D1
Superseded Permit Number:	02-22434
General Permit Category and Type:	Not Applicable

Emissions Unit ID:	B009
Company Equipment ID:	D2
Superseded Permit Number:	02-22434
General Permit Category and Type:	Not Applicable



Emissions Unit ID:	B010
Company Equipment ID:	D3
Superseded Permit Number:	02-22434
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B011
Company Equipment ID:	B1
Superseded Permit Number:	02-22434
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B012
Company Equipment ID:	B2
Superseded Permit Number:	02-22434
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B013
Company Equipment ID:	B3
Superseded Permit Number:	02-22434
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B015
Company Equipment ID:	VB1 in Plant 2
Superseded Permit Number:	P0104498
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B016
Company Equipment ID:	VB2 in Plant 2
Superseded Permit Number:	P0104498
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B017
Company Equipment ID:	VB3 in Plant 2
Superseded Permit Number:	P0104498
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B018
Company Equipment ID:	VB4 in Plant 2
Superseded Permit Number:	P0104498
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B019
Company Equipment ID:	VB5 in Plant 2
Superseded Permit Number:	P0104498
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B020
Company Equipment ID:	B020
Superseded Permit Number:	P0107348
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
 - (1) Standard Term and Condition A.2.a), Severability Clause
 - (2) Standard Term and Condition A.3.c) through A. 3.e) General Requirements
 - (3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements
 - (4) Standard Term and Condition A.9., Reporting Requirements
 - (5) Standard Term and Condition A.10., Applicability
 - (6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
 - (7) Standard Term and Condition A.14., Public Disclosure
 - (8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
 - (9) Standard Term and Condition A.16., Fees
 - (10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

- a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. General Requirements

- a) The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification.

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

4. Monitoring and Related Record Keeping and Reporting Requirements

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - (1) The date, place (as defined in the permit), and time of sampling or measurements.
 - (2) The date(s) analyses were performed.
 - (3) The company or entity that performed the analyses.
 - (4) The analytical techniques or methods used.
 - (5) The results of such analyses.
 - (6) The operating conditions existing at the time of sampling or measurement.
- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Northeast District Office.

- (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Ohio EPA DAPC, Northeast District Office. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.
 - (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the Ohio EPA DAPC, Northeast District Office every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
 - (4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

5. Scheduled Maintenance/Malfunction Reporting

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

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

6. Compliance Requirements

- a) The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.
- b) Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

- c) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- d) The permittee shall submit progress reports to the Ohio EPA DAPC, Northeast District Office concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

7. Best Available Technology

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

8. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Northeast District Office.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have

been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA DAPC, Northeast District Office. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

10. Applicability

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

11. Construction of New Sources(s) and Authorization to Install

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.
- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., 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) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in Ohio EPA's "Air Services" 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).

- d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., 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). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

No emissions unit certified by the authorized official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

- e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a deviation report, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

12. Permit-To-Operate Application

The permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77. The permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

13. Construction Compliance Certification

The applicant shall identify the following dates in the online facility profile for each new emissions unit identified in this permit.

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.
- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. Public Disclosure

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

15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

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

16. Fees

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

17. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the "Owner/Contact Change" functionality in Air Services once the transfer is legally completed. The change must be submitted through Air Services within thirty days of the ownership transfer date.

18. Risk Management Plans

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

19. Title IV Provisions

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

B. Facility-Wide Terms and Conditions



1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

a) None.

2. Voluntary Restrictions to Avoid PSD and Major Stationary Source

a) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitutes 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 from following the table.

Applicable Rules/Requirements	Applicable Emissions Limitations/ Control Measures
OAC rule 3745-31-05(D)(1)	Hydrochloric acid (HCl) emissions shall not exceed 9.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B020, combined.

b) Operational Restrictions

(1) In order to limit the HCl emissions from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B013 and B015 through B020, combined, such that the emissions of HCl shall not exceed 9.9 tons per year, and shall be calculated in accordance with the formula in e)(1)a.

The quality of fuel burned in these emissions units shall meet a chlorine content that is sufficient to comply with the allowable hydrochloric acid emission limitation specified in this permit.

c) Monitoring and/or Record Keeping Requirements

(1) The permittee shall calculate and record each month:

- a. the total quantity of each fuel burned during the previous month, in appropriate units (i.e., pounds, million cubic feet, or gallons);
- b. the actual HCl emissions for the month, calculated according to e)(1)a, and
- c. the actual HCl emissions for the previous 12-month period, as a summation of the monthly emissions from the previous 12 month period.

(2) For each shipment of used oil received for burning in each emissions unit, the permittee shall maintain records of:

- a. the total quantity of used oil received;
- b. the permittee's or used oil supplier's analyses for:
 - i. sulfur content;
 - ii. heat content;
 - iii. chlorine content; and
 - iv. ash content; and
- c. the calculated chlorine content, in weight percent.

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 quantity of the oil for those loads or pipeline deliveries may be represented by a single batch analyses from the supplier.

The permittee shall perform or require the supplier to perform the analyses 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, or equivalent methods as approved by the Director.

- (3) The permittee shall maintain monthly records of the total quantity of wood burned, and the results of the analyses for ash content, moisture content and heat content.

The permittee shall collect representative grab samples of the wood burned in B015 through B020 on a daily basis. The wood sampling shall be performed in accordance with ASTM method D2234, Collection of a Gross Sample of Coal. At the end of each calendar month, all of the grab samples which were collected during that calendar month shall be combined into one composite sample.

Each monthly composite sample of wood shall be analyzed for ash content (percent), moisture content (percent), and heat content (Btu/pound of wood). The analytical methods for ash content, moisture content and heat content shall be:

ASTM E871 Standard Test Method for Moisture Analysis of Particulate Wood Fuels;

ASTM E711 Standard Test Methods for Gross Caloric Value of Refuse-Derived Fuel by the Bomb Calorimeter; and

ASTM D1102 Standard Test Method for Ash in Wood.

Alternatively, equivalent methods may be used upon written approval by the Ohio EPA, Northeast District Office.

d) 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. any exceedance of the 9.9 tons per year HCl, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B020, combined;
- 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 (excursion) 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).

e) Testing Requirements

(1) Compliance with the allowable emission limitations in B.2.a)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

HCl emissions shall not exceed 9.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B020, combined.

Applicable Compliance Method:

The HCl emissions shall be determined by the value recorded in B.2.c)(1)c, based upon the following equation:

$$\sum_{n=B001}^{n=B019} (M_{uo} \times C_{luo} \times EF_{uo}) + (M_{wood} \times H_{wood} \times EF_{wood})$$

where:

M_{uo} = the total used oil burned, in gallons per month;

Cl_{uo} = the weight percent of chlorine in the fuel oil, as a volume-weighted average for the month, i.e., if chlorine is 1%, then $Cl=1$;

EF_{uo} = 66 is the Cl to HCl emission factor per AP-42, Chapter 1.11, Table 1.11-3 (10/96), which results in pound of HCl emissions per 1000 gallons of used oil burned);

M_{wood} = the total wood waste burned, in pounds per month;

H_{wood} = heat content determined during the most recent fuel analysis, or in the absence of data, assumed to be 6500 Btu per pound of wood; and

EF_{wood} = 0.019 pound of HCl per million Btu, which is the emission factor for HCl per AP-42, Chapter 1.6, Table 1.6-3 (9/03).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 26A.

C. Emissions Unit Terms and Conditions

1. B001, C1

Operations, Property and/or Equipment Description:

12.6 mmBtu/hr Boiler (Boiler C1 in Plant 1) permitted to burn natural gas, on-spec used oil, and number two fuel oil.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

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) as effective 11/30/2001	Visible particulate emissions shall not exceed 10% opacity, as a 6-minute average. See b)(2)a, b)(2)b and b)(2)d.
b.	OAC rule 3745-31-05(A)(3) as effective 12/01/2006	See b)(2)c.
c.	OAC rule 3745-17-10(B)(1)	The emission limitation required by this applicable 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 required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
e.	OAC rule 3745-17-07(A)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
f.	OAC rule 3745-18-53	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
g.	OAC rule 3745-31-05(D)	rticulate emissions (PE) and particulate matter emissions less than 10 microns in diameter (PM ₁₀) shall not exceed 99.9 tons per year, as a rolling, 12-month



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>summation, from emissions units B001 through B013 and B015 through B019, combined.</p> <p>olatile organic compound (VOC) emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.</p> <p>rogen oxide (NO_x) emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.</p> <p>arbon monoxide (CO) emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.</p>
h.	OAC rule 3745-110-02	empt per OAC rule 3745-110-03(J)(16), the emissions unit does not have the ability to emit 25 TPY of NO _x .

(2) Additional Terms and Conditions

- a. When burning the following fuels, the mass emission limitations shall not exceed the accompanying emission levels:

Natural Gas

PE/PM₁₀: 0.09 pound per hour and 0.39 ton per year
 VOC: 0.14 pound per hour and 0.61 ton per year
 NO_x: 1.24 pounds per hour and 5.43 tons per year
 CO: 1.04 pounds per hour and 4.56 tons per year
 SO₂: 0.01 pound per hour and 0.04 ton per year

#2 Fuel Oil

PE/PM₁₀: 0.30 pound per hour and 1.31 tons per year
 VOC: 0.05 pound per hour and 0.22 ton per year
 NO_x: 1.80 pounds per hour and 7.88 tons per year

CO: 0.45 pound per hour and 1.97 tons per year
SO₂: 6.48 pounds per hour and 28.38 tons per year

On-Spec Used Oil

PE/PM₁₀: 4.21 pounds per hour and 18.44 tons per year
VOC: 0.09 pound per hour and 0.39 ton per year
NO_x: 1.71 pounds per hour and 7.49 tons per year
CO: 0.45 pound per hour and 1.97 tons per year
SO₂: 6.62 pounds per hour 29.0 tons per year

b. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for 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 emission limits/control measures no longer apply.

c. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the CO, NO_x and VOC emissions from this air contaminant source since the uncontrolled potential to emit is less than 10 tons per year.

d. When oil is used as a fuel, the sulfur content shall not be greater than 0.5 weight percent sulfur.

e. Each shipment of oil burned in this emissions unit shall be "on-specification" (on-spec) oil and shall meet the used oil specifications contained in OAC rule 3745-279-11. The permittee shall determine that the used fuel oil meets these specifications by performing analyses or obtaining copies of analyses or other information from the supplier documenting that the used fuel oil does not exceed (except for flash point which shall not fall below) the following limitations:

Property/Contaminant Allowable Specifications

arsenic	5 ppm, maximum
cadmium	2 ppm, maximum
chromium	10 ppm, maximum
lead	100 ppm, maximum
total halogens	less than 1,000 ppm; or 4,000 ppm maximum if the presumption that the used oil contains hazardous waste is

flash point rebutted, as described below
 100°F, minimum

The used oil burned in this emissions unit shall contain less than the quantifiable levels of PCBs as defined in 40 CFR 761.3, and also shall not exceed the following mercury limitation nor fall below the following heating value:

PCB's less than 2 ppm
heat content 135,000 Btu/gallon, minimum
mercury 1 ppm, maximum

Used oil containing 1,000 ppm or greater total halogens is presumed to be a hazardous waste under the rebuttable presumption provided under paragraph (B)(1) of rule 3745-279-10 of the Administrative Code. The permittee may receive and burn used oil equaling or exceeding 1,000 ppm total halogens, but less than 4,000 ppm, only if the permittee has successfully demonstrated, pursuant to OAC rule 3745-279-63, that the used oil does not contain a listed hazardous waste, by either acquiring and maintaining source process information which demonstrates that the used oil was contaminated by halogenated constituents that would not be listed hazardous waste or by demonstrating that the used oil does not contain significant concentrations of halogens by acquiring and maintaining representative analytical data. Acceptable analytical test protocols that can be used to analyze used oil for halogenated hazardous constituents include SW-846 Test Methods 9075, 9076, and 9077.*

If analytical results demonstrate that used oil containing 1,000 ppm or more total halogens, but less than 4,000 total halogens, does not contain greater than 100 ppm of any individual halogenated hazardous constituent found in the F001 and F002 listings in OAC rule 3745-51-31 and there is no information suggesting that any other halogenated hazardous constituent (e.g., chlorinated pesticides) has come in contact with the oil, then the presumption that the oil contains hazardous waste has been successfully rebutted.** The rebuttable presumption does not apply to either metal working oils/fluids containing chlorinated paraffins, if processed through a tolling arrangement as described in OAC rule 3745-279-24(C), or used oils contaminated with chlorofluorocarbons removed from refrigeration units.

The burning of used oil not meeting the above limitations is prohibited in this emissions unit and the fuel oil analyses shall document compliance with each limitation before it is burned. The management and burning of used oil is subject to the Standards for the Management of Used Oil, OAC Chapter 3745-279, and the permittee shall document and assure that used oils burned in this emissions unit meet all of the applicable requirements of this Chapter. If the used oil analyses shows total halogens of 1,000 ppm or greater, the permittee shall obtain and maintain all the necessary records to successfully rebut the presumption that the used oil contains or has been mixed with a listed hazardous waste in accordance with this permit.

*EPA publication SW-846, 3rd (or most current) edition, is available from the Government Printing Office, P.O. Box 371954, Pittsburgh, PA 15250-7954; 202/512-1800, document number 955-001-00000-1.

**DMWM policy documented in "Used Oil Burners - New Guidance for Rebuttable Presumption", published April 2008 or most current policy

c) Operational Restrictions

- (1) In order to limit the PE/PM₁₀ emissions from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B013 and B015 through B019, combined, such that the emissions of PE/PM₁₀ shall not exceed 99.9 tons per year, and shall be calculated in accordance with the formula in f)(1)e.

Limiting the emissions of PE to less than 99.9 tons per year shall inherently limit the PM₁₀ emissions to less than 99.9 tons per year; therefore, no additional monitoring, record keeping, reporting or testing for PM₁₀ will be required.

- (2) In order to limit the VOC emissions from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B013 and B015 through B019, combined, such that the emissions of VOC shall not exceed 99.9 tons per year, and shall be calculated in accordance with the formula in f)(1)f.
- (3) In order to limit the NO_x emissions from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B013 and B015 through B019, combined, such that the emissions of NO_x shall not exceed 99.9 tons per year, and shall be calculated in accordance with the formula in f)(1)g.
- (4) In order to limit the CO emissions from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B013 and B015 through B019, combined, such that the emissions of CO shall not exceed 99.9 tons per year, and shall be calculated in accordance with the formula in f)(1)h.
- (5) In order to limit the SO₂ emissions from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B013 and B015 through B019, combined, such that the emissions of SO₂ shall not exceed 99.9 tons per year, and shall be calculated in accordance with the formula in f)(1)i.
- The quality of the fuel burned in these emissions units shall meet a sulfur content that is sufficient to comply with the allowable SO₂ emission limitation specified in this permit.
- (6) The permittee shall burn only natural gas, #2 fuel oil, or on-spec used oil in this emissions unit.
- (7) The permittee may not receive or burn any used oil which does not meet the standards in OAC rule 3745-279-11 and the specifications listed in this permit without first obtaining a permit-to-install or permit-to-install and operate that authorizes the burning of off-specification used oil. The burning of off-specification used oil, subject to OAC rule 3745-279-60 through 67, is prohibited as a fuel in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the following information:
 - a. the total volume of natural gas (MCF) burned in this emissions unit;
 - b. the total number of gallons of on-spec used oil burned in this emissions unit;
 - c. the total number of gallons of #2 fuel oil burned in this emissions unit;
 - d. the total number of hours the emissions unit was in operation;
 - e. the total summation of the amount of PE/PM₁₀ emitted, from emissions units B001 through B013 and B015 through B019, combined, per rolling, 12-month period;
 - f. the total summation of the amount of NO_x emitted, from emissions units B001 through B013 and B015 through B019, combined, per rolling, 12-month period;
 - g. the total summation of the amount of SO₂ emitted, from emissions units B001 through B013 and B015 through B019, combined, per rolling, 12-month period;
 - h. the total summation of the amount of CO emitted, from emissions units B001 through B013 and B015 through B019, combined, per rolling, 12-month period; and
 - i. the total summation of the amount of VOC emitted, from emissions units B001 through B013 and B015 through B019, combined, per rolling, 12-month period.
- (2) For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the fuel oil type (number 2, 4, or 6), 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.
- (3) The permittee shall receive and maintain the chemical analyses from the supplier/marketer for each shipment of used oil burned in this emissions unit (or if the oil is generated on site, the permittee shall conduct the chemical analyses), which shall contain the following information:

- a. the date the used oil was received at the facility and the amount received;
- b. the name, address, and U.S. EPA identification number (if applicable) of the generator, transporter, processor/refiner, supplier, and/or marketer;
- c. the results of the following chemical analyses, demonstrating that the used oil meets the standards in OAC rule 3745-279-11:
 - i. arsenic content, in ppm;
 - ii. the cadmium content, in ppm;
 - iii. the chromium content, in ppm;
 - iv. the lead content, in ppm;
 - v. total halogens, in ppm; and
 - vi. the flash point;
- d. where the chemical analysis shows a total halogen content between 1,000 ppm, and below 4,000 ppm, the successful demonstration for the rebuttal of the presumption that the used oil contains or has been mixed with a listed hazardous waste, as described in OAC rule 3745-279-63(C); and
- e. the results of the analyses demonstrating that the used oil meets the heating value and the mercury and PCB limitations contained in this permit.

Each analysis shall be kept in a readily accessible location for a period of not less than 5 years* following the receipt of each shipment of used oil and shall be made available to the Ohio EPA Division of Materials and Waste Management and/or the Division of Air Pollution Control (the appropriate Ohio EPA District Office or local air agency) upon verbal or written request. Any authorized representative of the Ohio EPA may sample or require sampling of any used oil shipments received, stored, or burned by/at this facility for periodic detailed chemical analyses through an independent laboratory.

*The Division of Air Pollution Control requires these records to be maintained for 5 years.

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. any exceedance of the 99.9 tons per year PE/PM₁₀, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined;

- ii. any exceedance of the 99.9 tons per year VOC, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined;
 - iii. any exceedance of the 99.9 tons per year NO_x, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined;
 - iv. any exceedance of the 99.9 tons per year CO, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined; and
 - v. any exceedance of the 99.9 tons per year SO₂, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined;
- 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);
 - d. the magnitude and duration of each deviation (excursion);
 - e. any exceedance of the used oil standards in OAC rule 3745-279-11;
 - f. any occasion where used oil containing 1,000 ppm or more total halogens was burned prior to receiving information demonstrating a successful rebuttal of the presumption that the used oil contains or has been mixed with a listed hazardous waste;
 - g. any exceedance of the limitations for mercury and/or PCBs;
 - h. any deviation from the minimum heat content of 135,000 Btu/gallon; and
 - i. any deviation from the minimum heat content limitation on the oil, Btu/gallon.

If no deviations (excursion) 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).

- (2) Where the analytical results for any shipment of used oil burned in this emissions unit establish that the used oil contains total halogens greater than 1,000 ppm, but less than 4,000 ppm, the results of the analysis for total halogens (from the appropriate test Method 9075, 9076, or 9077) and the information obtained to rebut the presumption that the used oil contains or has been mixed with a listed hazardous waste shall be

submitted to the appropriate District Office or local air agency. Each rebuttal demonstration shall include:

- a. the date the used oil was received;
- b. the facility location or identification number where the oil was or will be burned;
- c. the amount of oil in the shipment; and
- d. all information, including all the analytical results, relied upon by the permittee to rebut the presumption that the used oil contains or has been mixed with a listed hazardous waste.

The rebuttal demonstrations for used oil received from October to December shall be submitted by January 31; used oil received from January to March, by April 30; used oil received from April to June, by July 31; and used oil received from July to September, by October 31.

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:

When burning natural gas:

PE/PM₁₀ emissions shall not exceed 0.09 lb/hr.
 VOC emissions shall not exceed 0.14 lb/hr.
 NO_x emissions shall not exceed 1.24 lbs/hr.
 CO emissions shall not exceed 1.04 lbs/hr.
 SO₂ emissions shall not exceed 0.01 lb/hr.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation:

$$E_p = EF_p \times NG/H$$

where:

E_p = emissions (of pollutant p), lb/hr;
 EF_p = emission factor (for pollutant p) from AP-42, "Compilation of Air Pollutant Emission Factors", fifth edition, section 1.4-2 (7/98);
 pollutant(PE/PM₁₀) = 7.6 lbs of PE/10⁶ scf of gas burned
 pollutant(VOC) = 11 lbs of VOC/10⁶ scf of gas burned
 pollutant(NO_x) = 100 lbs of NO_x/10⁶ scf of gas burned
 pollutant(CO) = 84 lbs of CO/10⁶ scf of gas burned
 pollutant(SO₂) = 0.6 lb of SO₂/10⁶ scf of gas burned

NG = amount of gas burned in the emissions unit (CF), per d)(1)a; and
H = number of hours boiler was burning natural gas.

b. Emission Limitations:

When burning #2 fuel oil:

PE/PM₁₀ emissions shall not exceed 0.30 lb/hr.

VOC emissions shall not exceed 0.05 lb/hr.

NO_x emissions shall not exceed 1.80 lbs/hr.

CO emissions shall not exceed 0.45 lb/hr.

SO₂ emissions shall not exceed 6.48 lbs/hr.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation for PE/PM₁₀, VOC, NO_x and CO:

$$E_p = EF_p \times F/H$$

where:

E_p = emissions (of pollutant p), lb/hr;

EF_p = emission factor (for pollutant p) from AP-42, "Compilation of Air Pollutant Emission Factors", fifth edition, section 1.3, Table 1.3-1 through Table 1.3-3 (9/98);

pollutant(PE/PM₁₀) = 3.3 lbs of PE/1000 gallons of #2 fuel oil burned

pollutant(VOC) = 0.556 lb of VOC/1000 gallons of #2 fuel oil burned

pollutant(NO_x) = 20 lbs of NO_x/1000 gallons of #2 fuel oil burned

pollutant(CO) = 5 lbs of CO/1000 gallons of #2 fuel oil burned

F = amount of #2 fuel oil burned in this emissions unit (gallons); and

H = number of hours boiler was burning #2 fuel oil.

Compliance shall be demonstrated by using the following equation for SO₂:

$$E = EF \times S \times F/H$$

where:

E = emissions of sulfur dioxide, lb/hr;

EF = emission factor of 144 lbs of SO₂/1000 gallons from AP-42, "Compilation of Air Pollutant Emission Factors", fifth edition, section 1.3, Table 1.3-1 and Table 1.3-2 (9/98);

S = weight percent sulfur in used oil, if sulfur content is 0.5% then S = 0.5;

F = amount of #2 fuel oil burned in this emissions unit (gallons); and

H = number of hours boiler was burning #2 fuel oil.

c. Emission Limitations:

When burning on-spec used oil:

PE/PM₁₀ emissions shall not exceed 4.21 lbs/hr.
VOC emissions shall not exceed 0.09 lb/hr.
NO_x emissions shall not exceed 1.71 lbs/hr.
CO emissions shall not exceed 0.45 lb/hr.
SO₂ emissions shall not exceed 6.62 lbs/hr.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation for PE/PM₁₀:

$$E = EF \times A \times U/H$$

where:

E = emissions of particulate emissions, lb/hr;
EF = emission factor of 64 lbs of PE/1000 gallons of on-spec used oil burned from AP-42, "Compilation of Air Pollutant Emission Factors", fifth edition, section 1.11, Table 1.11-1, (10/96);
A = weight percent ash in on-spec used oil, if ash content is 0.73% then A= 0.73;
U = amount of on-spec oil burned in this emissions unit (gallons); and
H = number of hours boiler was burning on-spec fuel oil.

Compliance shall be demonstrated by using the following equation for VOC, NO_x and CO:

$$E_p = EF_p \times U/H$$

where:

E_p = emissions (of pollutant p), lb/hr;
EF_p = emission factor (for pollutant p) from AP-42, "Compilation of Air Pollutant Emission Factors", fifth edition, section 1.11, Table 1.11-2, Table 1.11-3, (10/96);
pollutant(VOC) = 1 lb of VOC/1000 gallons of on-spec used oil burned
pollutant(NO_x) = 19 lbs of NO_x/1000 gallons of on-spec used oil burned
pollutant(CO) = 5 lbs of CO/1000 gallons of on-spec used oil burned
U = amount of on-spec oil burned in this emissions unit (gallons); and
H = number of hours boiler was burning on-spec fuel oil.

Compliance shall be demonstrated by using the following equation for SO₂:

$$E = EF \times S \times F/H$$

where:

E = emissions of sulfur dioxide, lb/hr;
EF = emission factor of 147 lbs of SO₂/1000 gallons from AP-42, "Compilation of

Air Pollutant Emission Factors”, fifth edition, section 1.11, Table 1.11-1 (10/96);
 S = weight percent sulfur in on-spec used oil, if sulfur content is 0.5% then S=0.5;
 F = amount of on-spec used oil burned in this emissions unit (gallons); and
 H = number of hours boiler was burning on-spec used oil.

d. Emission Limitation:

Visible particulate emissions shall not exceed 10% opacity, as a 6-minute average.

Applicable Compliance Method:

Compliance shall be demonstrated based upon visible emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

e. Emission Limitation:

PE/PM₁₀ emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.

Applicable Compliance Method:

The PE/PM₁₀ emissions shall be determined by the value recorded in d)(1)e, based upon the following equation:

$$\sum_{B=B001}^{n=B019} (M_{oil} \times E_{Foil}) + (M_{uo} \times A_{uo} \times E_{Fuo}) + (M_{ng} \times E_{Fng}) + (M_{wood} \times H_{wood} \times E_{Fwood})$$

where:

M_{oil} = the total #2 fuel oil burned, in gallons per month;

E_{Foil} = 2 pounds of filterable PM per 1000 gallons of #2 fuel oil burned, which is the emission factor for filterable PM per AP-42, Chapter 1.3, Table 1.3-1 (9/98);

M_{uo} = the total used oil burned, in gallons per month;

A_{uo} = the percent ash content of used oil burned, i.e., if ash content is 1%, then A = 1;

E_{Fuo} = 64 pounds of PM per 1000 gallons of used oil burned, which is the emission factor for PM per AP-42, Chapter 1.11, Table 1.11-1 (10/96);

M_{ng} = the total natural gas burned, in million cubic feet per month;

EFng = 1.9 pounds of filterable PM per million cubic feet of natural gas burned, which is the emission factor for filterable PM total per AP-42, Chapter 1.4, Table 1.4-2 (7/98);

Mwood = the total wood waste burned, in pounds per month;

Hwood = heat content determined during the most recent fuel analysis, or in the absence of data, assumed to be 6500 Btu per pound of wood; and

EFwood = 0.054 pound of filterable PM per million Btu, which is the emission factor for PM per AP-42, Chapter 1.6, Table 1.6-1 (9/03) for wood boilers controlled by and ESP, or the emission rate determined by the most recent emission test of this or an identical emissions unit.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.

f. Emission Limitation:

VOC emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.

Applicable Compliance Method:

The VOC emissions shall be determined by the value recorded in d)(1)i, based upon the following equation:

$$\sum_{B=B001}^{n=B019} (M_{oil} \times E_{Foil}) + (M_{uo} \times A_{uo} \times E_{Fu_o}) + (M_{ng} \times E_{Fng}) + (M_{wood} \times H_{wood} \times E_{Fwood})$$

where:

Moil = the total #2 fuel oil burned, in gallons per month;

Efoil = 0.34 pound of NMTOC* per 1000 gallons of #2 fuel oil burned, which is the emission factor for commercial/institutional/residential combustors for non-methane total organic compounds per AP-42, Chapter 1.3, Table 1.3-1 (9/98);

Muo = the total used oil burned, in gallons per month;

EFuo = 1.0 pound of TOC* per 1000 gallons of used oil burned, which is the emission factor for TOC per AP-42, Chapter 1.11, Table 1.11-3 (10/96);

Mng = the total natural gas burned, in million cubic feet per month;

EFng = 5.5 pounds of VOC per million cubic feet of natural gas burned, which is the emission factor for VOC total per AP-42, Chapter 1.4, Table 1.4-2 (7/98);

Mwood = the total wood waste burned, in pounds per month;

Hwood = the average heat content of wood waste, assumed to be 6500 Btu per pound of wood, or the heat content determined during the most recent fuel analysis; and

EFwood = 0.017 pound of VOC per million Btu, which is the emission factor for PM per AP-42, Chapter 1.6, Table 1.6-3 (9/03).

* in the absence of VOC emission data, TOC or NMTOC emission factors shall be used.

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 25, 25A or 18.

g. Emission Limitation:

NO_x emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.

Applicable Compliance Method:

The NO_x emissions shall be determined by the value recorded in d)(1)f, based upon the following equation:

$$\sum_{n=B001}^{n=B019} (Moil \times Efoil) + (Mu_o \times EFu_o) + (Mng \times EFng) + (Mwood \times Hwood \times EFwood)$$

where:

Moil = the total #2 fuel oil burned, in gallons per month;

Efoil = 20 pounds of NO_x per 1000 gallons of #2 fuel oil burned, which is the emission factor for NO_x per AP-42, Chapter 1.3, Table 1.3-1 (9/98);

Mu_o = the total used oil burned, in gallons per month;

EFu_o = 19 pounds of NO_x per 1000 gallons of used oil burned, which is the emission factor for NO_x per AP-42, Chapter 1.11, Table 1.11-2 (10/96);

- Mng = the total natural gas burned, in million cubic feet per month;
- EFng = 100 pounds of NO_x per million cubic feet of natural gas burned, which is the emission factor for NO_x per AP-42, Chapter 1.4, Table 1.4-2 (7/98);
- Mwood = the total wood waste burned, in pounds per month;
- Hwood = the average heat content of wood waste, assumed to be 6500 Btu per pound of wood, or the heat content determined during the fuel analysis of the monthly composite sample; and
- EFwood = 0.49 pound of NO_x per million Btu, which is the emission factor for NO_x per AP-42, Chapter 1.6, Table 1.6-2 (9/03) for dry wood, or the emission rate determined during the most recent emission test event for the representative the fuel moisture content.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 7.

h. Emission Limitation:

CO emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.

Applicable Compliance Method:

The CO emissions shall be determined by the value recorded in d)(1)h, based upon the following equation:

$$\sum_{n=B001}^{n=B019} (\text{Moil} \times \text{EFoil}) + (\text{Mu} \times \text{EFu}) + (\text{Mng} \times \text{EFng}) + (\text{Mwood} \times \text{Hwood} \times \text{EFwood})$$

where:

- Moil = the total #2 fuel oil burned, in gallons per month;
- EFoil = 5 pounds of CO per 1000 gallons of #2 fuel oil burned, which is the emission factor for CO per AP-42, Chapter 1.3, Table 1.3-1 (9/98);
- Mu = the total used oil burned, in gallons per month;
- EFu = 5.0 pounds of CO per 1000 gallons of used oil burned, which is the emission factor for CO per AP-42, Chapter 1.11-2 (10/96);
- Mng = the total natural gas burned, in million cubic feet per month;

EFng = 84 pounds of CO per million cubic feet of natural gas burned, which is the emission factor for CO per AP-42, Chapter 1.4, Table 1.4-1 (7/98);

Mwood = the total wood waste burned, in pounds per month;

Hwood = the average heat content of wood waste, assumed to be 6500 Btu per pound of wood, or the heat content determined during the most recent fuel analysis; and

EFwood = 0.60 pound of CO per million Btu, which is the emission factor for CO per AP-42, Chapter 1.6, Table 1.6-2 (9/03).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 10.

i. Emission Limitation:

SO₂ emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.

Applicable Compliance Method:

The SO₂ emissions shall be determined by the value recorded in d)(1)g, based upon the following equation:

$$\sum_{n=B001}^{n=B019} (M_{oil} \times S_{oil} \times E_{foil}) + (M_{uo} \times S_{uo} \times E_{fuo}) + (M_{ng} \times E_{fng}) + (M_{wood} \times H_{wood} \times E_{fwood})$$

where:

M_{oil} = the total #2 fuel oil burned, in gallons per month;

S_{oil} = the weight percent of sulfur in the fuel oil, as a volume-weighted average for the month, i.e., if sulfur is 1%, then S=1;

E_{foil} = 144 pounds of SO₂ and SO₃ per 1000 gallons of #2 fuel oil burned, which is the emission factors for SO₂ per AP-42, Chapter 1.3, Table 1.3-1 (9/98);

M_{uo} = the total used oil burned, in gallons per month;

S_{uo} = the weight percent of sulfur in the used oil, as a volume-weighted average for the month, i.e., if sulfur is 1%, then S=1;

EF_{Fuo} = 147 pounds of SO₂ per 1000 gallons of used oil burned, which is the emission factor for SO₂ per AP-42, Chapter 1.11, Table 1.11-2 (10/96);

M_{ng} = the total natural gas burned, in million cubic feet per month;

EF_{ng} = 0.6 pound of SO₂ per million cubic feet of natural gas burned, which is the emission factor for SO₂ per AP-42, Chapter 1.4, Table 1.4-2 (7/98);

M_{wood} = the total wood waste burned, in pounds per month;

H_{wood} = the average heat content of wood waste, assumed to be 6500 Btu per pound of wood, or the heat content determined during the most recent fuel analysis; and

EF_{wood} = 0.025 pound of SO₂ per million Btu, which is the emission factor for SO₂ per AP-42, Chapter 1.6, Table 1.6-2 (9/03).

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

j. Emission Limitation:

When burning natural gas:

PE/PM₁₀ emissions shall not exceed 0.39 ton per year.

VOC emissions shall not exceed 0.61 ton per year.

NO_x emissions shall not exceed 5.43 tons per year.

CO emissions shall not exceed 4.56 tons per year.

SO₂ emissions shall not exceed 0.04 ton per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable emission limitation by the annual hours of operation (8,760 hours), and then dividing by 2,000 pounds per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

k. Emission Limitation:

When burning #2 fuel oil:

PE/PM₁₀ emissions shall not exceed 1.31 tons per year.

VOC emissions shall not exceed 0.22 ton per year.

NO_x emissions shall not exceed 7.88 tons per year.

CO emissions shall not exceed 1.97 tons per year.

SO₂ emissions shall not exceed 28.38 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable emission limitation by the annual hours of operation (8,760 hours), and then dividing by 2,000 pounds per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

I. Emission Limitation:

When burning on-spec used oil:

PE/PM₁₀ emissions shall not exceed 18.44 tons per year.
VOC emissions shall not exceed 0.39 ton per year.
NO_x emissions shall not exceed 7.49 tons per year.
CO emissions shall not exceed 1.97 tons per year.
SO₂ emissions shall not exceed 29.0 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable emission limitation by the annual hours of operation (8,760 hours), and then dividing by 2,000 pounds per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

m. Emission Limitation:

When oil is used as a fuel, the sulfur content shall not be greater than 0.5 weight percent sulfur.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(2).

- (2) The concentrations of contaminants (arsenic, barium, cadmium, chromium, lead, mercury, PCBs, and total halogens) in the used oil shall be analyzed using a "total constituent analysis" method, as specified in U.S. EPA publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods." The applicable test methods that should be used are as follows:

Arsenic, barium, cadmium, chromium, and lead: SW-846, Method 3031 or 3051 (digestion procedures) followed by analysis using Method 6010B or 6020;

Mercury: SW-846, Method 7471A;

PCBs: SW-846, Method 8270C or 8082; and

Total halogens: SW-846, Method 9075, 9076, or 9077.

The permittee shall submit a written request and receive approval from Ohio EPA Division of Materials and Waste Management and/or the Division of Air Pollution Control, of Central Office, before an alternative test method, not listed above, can be used for the total constituent analysis of the above-mentioned used oil contaminants.

- g) Miscellaneous Requirements
 - (1) None.



2. **B002, C2; B003, C3; B004, C4; B006, A3; B007, A4; B008, D1; B009, D2; B010, D3; B011, B1; B012, B2; B013, B3**

Operations, Property and/or Equipment Description:

B002	21 mmBtu/hr Boiler (Boiler C2 in Plant 1) permitted to burn natural gas, on-spec used oil and number two fuel oil.
B003	21 mmBtu/hr Boiler (Boiler C3 in Plant 1) permitted to burn natural gas, on-spec used oil and number two fuel oil.
B004	21 mmBtu/hr Boiler (Boiler C4 in Plant 1) permitted to burn natural gas, on-spec used oil and number two fuel oil.
B006	21 mmBtu/hr Boiler (Boiler A3 in Plant 1A) permitted to burn natural gas, on-spec used oil and number two fuel oil.
B007	21 mmBtu/hr Boiler (Boiler A4 in Plant 1A) permitted to burn natural gas, on-spec used oil and number two fuel oil.
B008	21 mmBtu/hr Boiler (Boiler D1 in Plant 2) permitted to burn natural gas, on-spec used oil and number two fuel oil.
B009	21 mmBtu/hr Boiler (Boiler D2 in Plant 2) permitted to burn natural gas, on-spec used oil and number two fuel oil.
B010	21 mmBtu/hr Boiler (Boiler D3 in Plant 2) permitted to burn natural gas, on-spec used oil and number two fuel oil.
B011	21 mmBtu/hr Boiler (Boiler B1 in Plant 6) permitted to burn natural gas, on-spec used oil and number two fuel oil.
B012	21 mmBtu/hr Boiler (Boiler B2 in Plant 6) permitted to burn natural gas, on-spec used oil and number two fuel oil.
B013	21 mmBtu/hr Boiler (Boiler B3 in Plant 6) permitted to burn natural gas, on-spec used oil and number two fuel oil.

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

- 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) as effective 11/30/2001	Visible particulate emissions shall not exceed 10% opacity, as a 6-minute average. See b)(2)a, b)(2)b and b)(2)d.

b.	OAC rule 3745-31-05(A)(3) as effective 12/1/2006	See b)(2)c.
c.	OAC rule 3745-31-05(D)	<p>particulate emissions (PE) and particulate matter emissions less than 10 microns in diameter (PM₁₀) shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.</p> <p>volatile organic compound (VOC) emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.</p> <p>nitrogen oxide (NO_x) emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.</p> <p>carbon monoxide (CO) emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.</p>
d.	OAC rule 3745-17-10(B)(1)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
e.	OAC rule 3745-17-10(C)(1)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
f.	40 CFR Part 60, Subpart Dc (applicable to B006 through B013)	The emission limitation required by this applicable rule is equivalent to the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
g.	OAC rule 3745-17-07(A)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

h.	OAC rule 3745-18-53	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
i.	OAC rule 3745-110-02	Exempt, per OAC rule 3745-110-03(J)(16), the emissions unit does not have the ability to emit 25 tons per year of NO _x .

(2) Additional Terms and Conditions

- a. When burning the following fuels, the mass emission limitations shall not exceed the accompanying emission levels:

Natural Gas

PE/PM₁₀: 0.16 pound per hour and 0.71 ton per year
 VOC: 0.23 pound per hour and 1.01 tons per year
 NO_x: 2.06 pounds per hour and 9.02 tons per year
 CO: 1.73 pounds per hour and 7.58 tons per year
 SO₂: 0.01 pound per hour and 0.04 ton per year

#2 Fuel Oil

PE/PM₁₀: 0.50 pound per hour and 2.19 tons per year
 VOC: 0.08 pound per hour and 0.35 ton per year
 NO_x: 3.00 pounds per hour and 13.14 tons per year
 CO: 0.75 pound per hour and 3.29 tons per year
 SO₂: 10.8 pounds per hour and 47.30 tons per year

On-Spec Used Oil

PE/PM₁₀: 7.01 pounds per hour and 30.71 tons per year
 VOC: 0.15 pound per hour and 0.66 ton per year
 NO_x: 2.85 pounds per hour and 12.48 tons per year
 CO: 0.75 pound per hour and 3.29 tons per year
 SO₂: 11.03 pounds per hour and 48.31 tons per year

- b. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutant 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 emission limits/control measures no longer apply.

- c. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the CO and VOC emissions from this air contaminant source since the uncontrolled potential to emit is less than 10 tons per year.

- d. When oil is used as a fuel, the sulfur content shall not be greater than 0.5 weight percent sulfur.
- e. Each shipment of oil burned in this emissions unit shall be “on-specification” (on-spec) oil and shall meet the used oil specifications contained in OAC rule 3745-279-11. The permittee shall determine that the used fuel oil meets these specifications by performing analyses or obtaining copies of analyses or other information from the supplier documenting that the used fuel oil does not exceed (except for flash point which shall not fall below) the following limitations:

Property/Contaminant Allowable Specifications

arsenic	5 ppm, maximum
cadmium	2 ppm, maximum
chromium	10 ppm, maximum
lead	100 ppm, maximum
total halogens	less than 1,000 ppm; or 4,000 ppm maximum if the presumption that the used oil contains hazardous waste is rebutted, as described below
flash point	100°F, minimum

The used oil burned in this emissions unit shall contain less than the quantifiable levels of PCBs as defined in 40 CFR 761.3, and also shall not exceed the following mercury limitation nor fall below the following heating value:

PCB's	less than 2 ppm
heat content	135,000 Btu/gallon, minimum
mercury	1 ppm, maximum

Used oil containing 1,000 ppm or greater total halogens is presumed to be a hazardous waste under the rebuttable presumption provided under paragraph (B)(1) of rule 3745-279-10 of the Administrative Code. The permittee may receive and burn used oil equaling or exceeding 1,000 ppm total halogens, but less than 4,000 ppm, only if the permittee has successfully demonstrated, pursuant to OAC rule 3745-279-63, that the used oil does not contain a listed hazardous waste, by either acquiring and maintaining source process information which demonstrates that the used oil was contaminated by halogenated constituents that would not be listed hazardous waste or by demonstrating that the used oil does not contain significant concentrations of halogens by acquiring and maintaining representative analytical data. Acceptable analytical test protocols that can be used to analyze used oil for halogenated hazardous constituents include SW-846 Test Methods 9075, 9076, and 9077.*

If analytical results demonstrate that used oil containing 1,000 ppm or more total halogens, but less than 4,000 total halogens, does not contain greater than 100 ppm of any individual halogenated hazardous constituent found in the F001 and F002 listings in OAC rule 3745-51-31 and there is no information suggesting that any other halogenated hazardous constituent (e.g., chlorinated pesticides) has come in contact with the oil, then the presumption that the oil contains hazardous waste has been successfully rebutted.** The rebuttable presumption does not apply to either metal working oils/fluids containing chlorinated paraffins, if processed through a tolling arrangement as described in OAC rule 3745-279-24(C), or used oils contaminated with chlorofluorocarbons removed from refrigeration units.

The burning of used oil not meeting the above limitations is prohibited in this emissions unit and the fuel oil analyses shall document compliance with each limitation before it is burned. The management and burning of used oil is subject to the Standards for the Management of Used Oil, OAC Chapter 3745-279, and the permittee shall document and assure that used oils burned in this emissions unit meet all of the applicable requirements of this Chapter. If the used oil analyses shows total halogens of 1,000 ppm or greater, the permittee shall obtain and maintain all the necessary records to successfully rebut the presumption that the used oil contains or has been mixed with a listed hazardous waste in accordance with this permit.

*EPA publication SW-846, 3rd (or most current) edition, is available from the Government Printing Office, P.O. Box 371954, Pittsburgh, PA 15250-7954; 202/512-1800, document number 955-001-00000-1.

**DMWM policy documented in "Used Oil Burners - New Guidance for Rebuttable Presumption", published April 2008 or most current policy.

c) Operational Restrictions

- (1) In order to limit the PE/PM₁₀ emissions from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B013 and B015 through B019, combined, such that the emissions of PE/PM₁₀ shall not exceed 99.9 tons per year, and shall be calculated in accordance with the formula in f)(1)e.

Limiting the emissions of PE to less than 99.9 tons per year shall inherently limit the PM₁₀ emissions to less than 99.9 tons per year; therefore, no additional monitoring, record keeping, reporting or testing for PM₁₀ will be required.

- (2) In order to limit the VOC emissions from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B013 and B015 through B019, combined, such that the emissions of VOC shall not exceed 99.9 tons per year, and shall be calculated in accordance with the formula in f)(1)f.
- (3) In order to limit the NO_x emissions from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B013 and B015 through B019, combined, such that the emissions of NO_x shall not exceed 99.9 tons per year, and shall be calculated in accordance with the formula in f)(1)g.

- (4) In order to limit the CO emissions from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B013 and B015 through B019, combined, such that the emissions of CO shall not exceed 99.9 tons per year, and shall be calculated in accordance with the formula in f)(1)h.
- (5) In order to limit the SO₂ emissions from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B013 and B015 through B019, combined, such that the emissions of SO₂ shall not exceed 99.9 tons per year, and shall be calculated in accordance with the formula in f)(1)i.

The quality of the fuel burned in these emissions units shall meet a sulfur content that is sufficient to comply with the allowable SO₂ emission limitation specified in this permit.

- (6) The permittee shall burn only natural gas, #2 fuel oil, or on-spec used oil in this emissions unit.
 - (7) The permittee may not receive or burn any used oil which does not meet the standards in OAC rule 3745-279-11 and the specifications listed in this permit without first obtaining a permit-to-install or permit-to-install and operate that authorizes the burning of off-specification used oil. The burning of off-specification used oil, subject to OAC rule 3745-279-60 through 67, is prohibited as a fuel in this emissions unit.
- d) Monitoring and/or Recordkeeping Requirements
- (1) The permittee shall maintain monthly records of the following information:
 - a. the total volume of natural gas (MCF) burned in this emissions unit;
 - b. the total number of gallons of on-spec used oil burned in this emissions unit;
 - c. the total number of gallons of #2 fuel oil burned in this emissions unit;
 - d. the total number of hours the emissions unit was in operation;
 - e. the total summation of the amount of PE/PM₁₀ emitted, from emissions units B001 through B013 and B015 through B019, combined, per rolling, 12-month period;
 - f. the total summation of the amount of NO_x emitted, from emissions units B001 through B013 and B015 through B019, combined, per rolling, 12-month period;
 - g. the total summation of the amount of SO₂ emitted, from emissions units B001 through B013 and B015 through B019, combined, per rolling, 12-month period;
 - h. the total summation of the amount of CO emitted, from emissions units B001 through B013 and B015 through B019, combined, per rolling, 12-month period; and
 - i. the total summation of the amount of VOC emitted, from emissions units B001 through B013 and B015 through B019, combined, per rolling, 12-month period.

- (2) For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the fuel oil type (number 2, 4, or 6), 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.

- (3) The permittee shall receive and maintain the chemical analyses from the supplier/marketer for each shipment of used oil burned in this emissions unit (or if the oil is generated on site, the permittee shall conduct the chemical analyses), which shall contain the following information:
- a. the date the used oil was received at the facility and the amount received;
 - b. the name, address, and U.S. EPA identification number (if applicable) of the generator, transporter, processor/refiner, supplier, and/or marketer;
 - c. the results of the following chemical analyses, demonstrating that the used oil meets the standards in OAC rule 3745-279-11:
 - i. arsenic content, in ppm;
 - ii. the cadmium content, in ppm;
 - iii. the chromium content, in ppm;
 - iv. the lead content, in ppm;
 - v. total halogens, in ppm; and
 - vi. the flash point;
 - d. where the chemical analysis shows a total halogen content between 1,000 ppm, and below 4,000 ppm, the successful demonstration for the rebuttal of the presumption that the used oil contains or has been mixed with a listed hazardous waste, as described in OAC rule 3745-279-63(C); and
 - e. the results of the analyses demonstrating that the used oil meets the heating value and the mercury and PCB limitations contained in this permit.

Each analysis shall be kept in a readily accessible location for a period of not less than 5 years* following the receipt of each shipment of used oil and shall be made available to the Ohio EPA Division of Materials and Waste Management and/or the Division of Air Pollution Control (the appropriate Ohio EPA District Office or local air agency) upon verbal or written request. Any authorized representative of the Ohio EPA may sample or require sampling of any used oil shipments received, stored, or burned by/at this facility for periodic detailed chemical analyses through an independent laboratory.

*The Division of Air Pollution Control requires these records to be maintained for 5 years.

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. any exceedance of the 99.9 tons per year PE/PM₁₀, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined;
 - ii. any exceedance of the 99.9 tons per year VOC, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined;
 - iii. any exceedance of the 99.9 tons per year NO_x, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined;
 - iv. any exceedance of the 99.9 tons per year CO, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined; and
 - v. any exceedance of the 99.9 tons per year SO₂, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.
- 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);
- d. the magnitude and duration of each deviation (excursion);
- e. any exceedance of the used oil standards in OAC rule 3745-279-11;
- f. any occasion where used oil containing 1,000 ppm or more total halogens was burned prior to receiving information demonstrating a successful rebuttal of the

presumption that the used oil contains or has been mixed with a listed hazardous waste;

- g. any exceedance of the limitations for mercury and/or PCBs;
- h. any deviation from the minimum heat content of 135,000 Btu/gallon; and
- i. any deviation from the minimum heat content limitation on the oil, Btu/gallon.

If no deviations (excursion) 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).

- (2) Where the analytical results for any shipment of used oil burned in this emissions unit establish that the used oil contains total halogens greater than 1,000 ppm, but less than 4,000 ppm, the results of the analysis for total halogens (from the appropriate test Method 9075, 9076, or 9077) and the information obtained to rebut the presumption that the used oil contains or has been mixed with a listed hazardous waste shall be submitted to the appropriate District Office or local air agency. Each rebuttal demonstration shall include:

- a. the date the used oil was received;
- b. the facility location or identification number where the oil was or will be burned;
- c. the amount of oil in the shipment; and
- d. all information, including all the analytical results, relied upon by the permittee to rebut the presumption that the used oil contains or has been mixed with a listed hazardous waste.

The rebuttal demonstrations for used oil received from October to December shall be submitted by January 31; used oil received from January to March, by April 30; used oil received from April to June, by July 31; and used oil received from July to September, by October 31.

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:

When burning natural gas:

PE/PM₁₀ emissions shall not exceed 0.16 lb/hr.
VOC emissions shall not exceed 0.23 lb/hr.
NO_x emissions shall not exceed 2.06 lbs/hr.
CO emissions shall not exceed 1.73 lbs/hr.
SO₂ emissions shall not exceed 0.01 lb/hr.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation:

$$E_p = EF_p \times NG/H$$

where:

E_p = emissions (of pollutant p), lb/hr;
EF_p = emission factor (for pollutant p) from AP-42, "Compilation of Air Pollutant Emission Factors", fifth edition, section 1.4-2 (7/98);
pollutant(PE/PM₁₀) = 7.6 lbs of PE/10⁶ scf of gas burned
pollutant(VOC) = 11 lbs of VOC/10⁶ scf of gas burned
pollutant(NO_x) = 100 lbs of NO_x/10⁶ scf of gas burned
pollutant(CO) = 84 lbs of CO/10⁶ scf of gas burned
pollutant(SO₂) = 0.6 lb of SO₂/10⁶ scf of gas burned
NG = amount of gas burned in the emissions unit (CF), per d)(1)a; and
H = number of hours boiler was burning natural gas.

b. Emission Limitations:

When burning #2 fuel oil:

PE/PM₁₀ emissions shall not exceed 0.50 lb/hr.
VOC emissions shall not exceed 0.08 lb/hr.
NO_x emissions shall not exceed 3.00 lbs/hr.
CO emissions shall not exceed 0.75 lb/hr.
SO₂ emissions shall not exceed 10.80 lbs/hr.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation for PE/PM₁₀, VOC, NO_x and CO:

$$E_p = EF_p \times F/H$$

where:

E_p = emissions (of pollutant p), lb/hr;
EF_p = emission factor (for pollutant p) from AP-42, "Compilation of Air Pollutant

Emission Factors”, fifth edition, section 1.3, Table 1.3-1 through Table 1.3-3 (9/98);

pollutant(PE/PM₁₀) = 3.3 lbs of PE/1000 gallons of #2 fuel oil burned

pollutant(VOC) = 0.556 lb of VOC/1000 gallons of #2 fuel oil burned

pollutant(NO_x) = 20 lbs of NO_x/1000 gallons of #2 fuel oil burned

pollutant(CO) = 5 lbs of CO/1000 gallons of #2 fuel oil burned

F = amount of #2 fuel oil burned in this emissions unit (gallons); and

H = number of hours boiler was burning #2 fuel oil.

Compliance shall be demonstrated by using the following equation for SO₂:

$$E = EF \times S \times F/H$$

where:

E = emissions of sulfur dioxide, lb/hr;

EF = emission factor of 144 lbs of SO₂/1000 gallons from AP-42, “Compilation of Air Pollutant Emission Factors”, fifth edition, section 1.3, Table 1.3-1 and Table 1.3-2 (9/98);

S = weight percent sulfur in used oil, if sulfur content is 0.5% then S = 0.5;

F = amount of #2 fuel oil burned in this emissions unit (gallons); and

H = number of hours boiler was burning #2 fuel oil.

c. Emission Limitations:

When burning on-spec used oil:

PE/PM₁₀ emissions shall not exceed 7.01 lbs/hr.

VOC emissions shall not exceed 0.15 lb/hr.

NO_x emissions shall not exceed 2.85 lbs/hr.

CO emissions shall not exceed 0.75 lb/hr.

SO₂ emissions shall not exceed 11.03 lbs/hr.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation for PE/PM₁₀:

$$E = EF \times A \times U/H$$

where:

E = emissions of particulate emissions, lb/hr;

EF = emission factor of 64 lbs of PE/1000 gallons of on-spec used oil burned from AP-42, “Compilation of Air Pollutant Emission Factors”, fifth edition, section 1.11, Table 1.11-1, (10/96);

A = weight percent ash in on-spec used oil, if ash content is 0.73% then A = 0.73;

U = amount of on-spec oil burned in this emissions unit (gallons); and

H = number of hours boiler was burning on-spec fuel oil.

Compliance shall be demonstrated by using the following equation for VOC, NO_x and CO:

$$E_p = EF_p \times U/H$$

where:

E_p = emissions (of pollutant p), lb/hr;
 EF_p = emission factor (for pollutant p) from AP-42, "Compilation of Air Pollutant Emission Factors", fifth edition, section 1.11, Table 1.11-2, Table 1.11-3, (10/96);
 pollutant(VOC) = 1 lb of VOC/1000 gallons of on-spec used oil burned
 pollutant(NO_x) = 19 lbs of NO_x/1000 gallons of on-spec used oil burned
 pollutant(CO) = 5 lbs of CO/1000 gallons of on-spec used oil burned
 U = amount of on-spec oil burned in this emissions unit (gallons); and
 H = number of hours boiler was burning on-spec fuel oil.

Compliance shall be demonstrated by using the following equation for SO₂:

$$E = EF \times S \times F/H$$

where:

E = emissions of sulfur dioxide, lb/hr;
 EF = emission factor of 147 lbs of SO₂/1000 gallons from AP-42, "Compilation of Air Pollutant Emission Factors", fifth edition, section 1.11, Table 1.11-1 (10/96);
 S = weight percent sulfur in on-spec used oil, if sulfur content is 0.5% then $S=0.5$;
 F = amount of on-spec used oil burned in this emissions unit (gallons); and
 H = number of hours boiler was burning on-spec used oil.

d. Emission Limitation:

Visible particulate emissions shall not exceed 10% opacity, as a 6-minute average.

Applicable Compliance Method:

Compliance shall be demonstrated based upon visible emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

e. Emission Limitation:

PE/PM₁₀ emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.

Applicable Compliance Method:

The PE/PM₁₀ emissions shall be determined by the value recorded in d)(1)e, based upon the following equation:

$$\sum_{B=B001}^{n=B019} (M_{oil} \times E_{Foil}) + (M_{uo} \times A_{uo} \times E_{Fuo}) + (M_{ng} \times E_{Fng}) + (M_{wood} \times H_{wood} \times E_{Fwood})$$

where:

M_{oil} = the total #2 fuel oil burned, in gallons per month;

E_{Foil} = 2 pounds of filterable PM per 1000 gallons of #2 fuel oil burned, which is the emission factor for filterable PM per AP-42, Chapter 1.3, Table 1.3-1 (9/98);

M_{uo} = the total used oil burned, in gallons per month;

A_{uo} = the percent ash content of used oil burned, i.e., if ash content is 1%, then $A = 1$;

E_{Fuo} = 64 pounds of PM per 1000 gallons of used oil burned, which is the emission factor for PM per AP-42, Chapter 1.11, Table 1.11-1 (10/96);

M_{ng} = the total natural gas burned, in million cubic feet per month;

E_{Fng} = 1.9 pounds of filterable PM per million cubic feet of natural gas burned, which is the emission factor for filterable PM total per AP-42, Chapter 1.4, Table 1.4-2 (7/98);

M_{wood} = the total wood waste burned, in pounds per month;

H_{wood} = heat content determined during the most recent fuel analysis, or in the absence of data, assumed to be 6500 Btu per pound of wood; and

E_{Fwood} = 0.054 pound of filterable PM per million Btu, which is the emission factor for PM per AP-42, Chapter 1.6, Table 1.6-1 (9/03) for wood boilers controlled by and ESP, or the emission rate determined by the most recent emission test of this or an identical emissions unit.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.

f. Emission Limitation:

VOC emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.

Applicable Compliance Method:

The VOC emissions shall be determined by the value recorded in d)(1)i, based upon the following equation:

$$\sum_{B=B001}^{n=B019} (\text{Moil} \times \text{EFoil}) + (\text{Muo} \times \text{Auo} \times \text{EFuo}) + (\text{Mng} \times \text{EFng}) + (\text{Mwood} \times \text{Hwood} \times \text{EFwood})$$

where:

Moil = the total #2 fuel oil burned, in gallons per month;

EFoil = 0.34 pound of NMTOC* per 1000 gallons of #2 fuel oil burned, which is the emission factor for commercial/institutional/residential combustors for non-methane total organic compounds per AP-42, Chapter 1.3, Table 1.3-1 (9/98);

Muo = the total used oil burned, in gallons per month;

EFuo = 1.0 pound of TOC* per 1000 gallons of used oil burned, which is the emission factor for TOC per AP-42, Chapter 1.11, Table 1.11-3 (10/96);

Mng = the total natural gas burned, in million cubic feet per month;

EFng = 5.5 pounds of VOC per million cubic feet of natural gas burned, which is the emission factor for VOC total per AP-42, Chapter 1.4, Table 1.4-2 (7/98);

Mwood = the total wood waste burned, in pounds per month;

Hwood = the average heat content of wood waste, assumed to be 6500 Btu per pound of wood, or the heat content determined during the most recent fuel analysis; and

EFwood = 0.017 pound of VOC per million Btu, which is the emission factor for PM per AP-42, Chapter 1.6, Table 1.6-3 (9/03).

* in the absence of VOC emission data, TOC or NMTOC emission factors shall be used.

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 25, 25A or 18.

g. Emission Limitation:

NO_x emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.

Applicable Compliance Method:

The NO_x emissions shall be determined by the value recorded in d)(1)f, based upon the following equation:

$$\sum_{n=B001}^{n=B019} (M_{oil} \times E_{Foil}) + (M_{uo} \times E_{Fuo}) + (M_{ng} \times E_{Fng}) + (M_{wood} \times H_{wood} \times E_{Fwood})$$

where:

M_{oil} = the total #2 fuel oil burned, in gallons per month;

E_{Foil} = 20 pounds of NO_x per 1000 gallons of #2 fuel oil burned, which is the emission factor for NO_x per AP-42, Chapter 1.3, Table 1.3-1 (9/98);

M_{uo} = the total used oil burned, in gallons per month;

E_{Fuo} = 19 pounds of NO_x per 1000 gallons of used oil burned, which is the emission factor for NO_x per AP-42, Chapter 1.11, Table 1.11-2 (10/96);

M_{ng} = the total natural gas burned, in million cubic feet per month;

E_{Fng} = 100 pounds of NO_x per million cubic feet of natural gas burned, which is the emission factor for NO_x per AP-42, Chapter 1.4, Table 1.4-2 (7/98);

M_{wood} = the total wood waste burned, in pounds per month;

H_{wood} = the average heat content of wood waste, assumed to be 6500 Btu per pound of wood, or the heat content determined during the fuel analysis of the monthly composite sample; and

E_{Fwood} = 0.49 pound of NO_x per million Btu, which is the emission factor for NO_x per AP-42, Chapter 1.6, Table 1.6-2 (9/03) for dry wood, or the emission rate determined during the most recent emission test event for the representative the fuel moisture content.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 7.

h. Emission Limitation:

CO emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.

Applicable Compliance Method:

The CO emissions shall be determined by the value recorded in d)(1)h, based upon the following equation:

$$\sum_{n=B001}^{n=B019} (\text{Moil} \times \text{EFoil}) + (\text{Muo} \times \text{EFuo}) + (\text{Mng} \times \text{EFng}) + (\text{Mwood} \times \text{Hwood} \times \text{EFwood})$$

where:

Moil = the total #2 fuel oil burned, in gallons per month;

EFoil = 5 pounds of CO per 1000 gallons of #2 fuel oil burned, which is the emission factor for CO per AP-42, Chapter 1.3, Table 1.3-1 (9/98);

Muo = the total used oil burned, in gallons per month;

EFuo = 5.0 pounds of CO per 1000 gallons of used oil burned, which is the emission factor for CO per AP-42, Chapter 1.11-2 (10/96);

Mng = the total natural gas burned, in million cubic feet per month;

EFng = 84 pounds of CO per million cubic feet of natural gas burned, which is the emission factor for CO per AP-42, Chapter 1.4, Table 1.4-1 (7/98);

Mwood = the total wood waste burned, in pounds per month;

Hwood = the average heat content of wood waste, assumed to be 6500 Btu per pound of wood, or the heat content determined during the most recent fuel analysis; and

EFwood = 0.60 pound of CO per million Btu, which is the emission factor for CO per AP-42, Chapter 1.6, Table 1.6-2 (9/03).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 10.

i. Emission Limitation:

SO₂ emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.

Applicable Compliance Method:

The SO₂ emissions shall be determined by the value recorded in d)(1)g, based upon the following equation:

$$\sum_{n=B001}^{n=B019} (M_{oil} \times S_{oil} \times E_{Foil}) + (M_{uo} \times S_{uo} \times E_{Fuo}) + (M_{ng} \times E_{Fng}) + (M_{wood} \times H_{wood} \times E_{Fwood})$$

where:

M_{oil} = the total #2 fuel oil burned, in gallons per month;

S_{oil} = the weight percent of sulfur in the fuel oil, as a volume-weighted average for the month, i.e., if sulfur is 1%, then S=1;

E_{Foil} = 144 pounds of SO₂ and SO₃ per 1000 gallons of #2 fuel oil burned, which is the emission factors for SO₂ per AP-42, Chapter 1.3, Table 1.3-1 (9/98);

M_{uo} = the total used oil burned, in gallons per month;

S_{uo} = the weight percent of sulfur in the used oil, as a volume-weighted average for the month, i.e., if sulfur is 1%, then S=1;

E_{Fuo} = 147 pounds of SO₂ per 1000 gallons of used oil burned, which is the emission factor for SO₂ per AP-42, Chapter 1.11, Table 1.11-2 (10/96);

M_{ng} = the total natural gas burned, in million cubic feet per month;

E_{Fng} = 0.6 pound of SO₂ per million cubic feet of natural gas burned, which is the emission factor for SO₂ per AP-42, Chapter 1.4, Table 1.4-2 (7/98);

M_{wood} = the total wood waste burned, in pounds per month;

H_{wood} = the average heat content of wood waste, assumed to be 6500 Btu per pound of wood, or the heat content determined during the most recent fuel analysis; and

E_{Fwood} = 0.025 pound of SO₂ per million Btu, which is the emission factor for SO₂ per AP-42, Chapter 1.6, Table 1.6-2 (9/03).

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

j. Emission Limitation:**When burning natural gas:**

PE/PM₁₀ emissions shall not exceed 0.71 ton per year.
VOC emissions shall not exceed 1.01 tons per year.
NO_x emissions shall not exceed 9.02 tons per year.
CO emissions shall not exceed 7.58 tons per year.
SO₂ emissions shall not exceed 0.04 ton per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable emission limitation by the annual hours of operation (8,760 hours), and then dividing by 2,000 pounds per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

k. Emission Limitation:**When burning #2 fuel oil:**

PE/PM₁₀ emissions shall not exceed 2.19 tons per year.
VOC emissions shall not exceed 0.35 ton per year.
NO_x emissions shall not exceed 13.14 tons per year.
CO emissions shall not exceed 3.29 tons per year.
SO₂ emissions shall not exceed 47.30 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable emission limitation by the annual hours of operation (8,760 hours), and then dividing by 2,000 pounds per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

l. Emission Limitation:**When burning on-spec used oil:**

PE/PM₁₀ emissions shall not exceed 30.70 tons per year.
VOC emissions shall not exceed 0.66 ton per year.
NO_x emissions shall not exceed 12.48 tons per year.
CO emissions shall not exceed 3.29 tons per year.
SO₂ emissions shall not exceed 48.31 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable emission limitation by the annual hours of operation (8,760 hours), and then dividing by 2,000 pounds per ton. Therefore, if compliance is shown with

the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

m. Emission Limitation:

When oil is used as a fuel, the sulfur content shall not be greater than 0.5 weight percent sulfur.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(2).

- (2) The concentrations of contaminants (arsenic, barium, cadmium, chromium, lead, mercury, PCBs, and total halogens) in the used oil shall be analyzed using a "total constituent analysis" method, as specified in U.S. EPA publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods." The applicable test methods that should be used are as follows:

Arsenic, barium, cadmium, chromium, and lead: SW-846, Method 3031 or 3051 (digestion procedures) followed by analysis using Method 6010B or 6020;

Mercury: SW-846, Method 7471A;

PCBs: SW-846, Method 8270C or 8082; and

Total halogens: SW-846, Method 9075, 9076, or 9077.

The permittee shall submit a written request and receive approval from Ohio EPA Division of Materials and Waste Management and/or the Division of Air Pollution Control, of Central Office, before an alternative test method, not listed above, can be used for the total constituent analysis of the above-mentioned used oil contaminants.

g) Miscellaneous Requirements

- (1) None.

3. B005, C5

Operations, Property and/or Equipment Description:

25.1 mmBtu/hr Boiler (Boiler C5 in Plant 1) permitted to burn natural gas, on-spec used oil, and number two fuel oil.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

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) as effective 11/30/2001	Visible particulate emissions shall not exceed 10% opacity, as a 6-minute average. See b)(2)a, b)(2)b and b)(2)d.
b.	OAC rule 3745-31-05(A)(3) as effective 12/1/2006	See b)(2)c.
c.	OAC rule 3745-31-05(D)	Particulate emissions (PE) and particulate matter emissions less than 10 microns in diameter (PM ₁₀) shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined. Volatile organic compound (VOC) emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined. Nitrogen oxide (NO _x) emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Carbon monoxide (CO) emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined. Sulfur dioxide (SO ₂) emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.
d.	OAC rule 3745-17-10(B)(1)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
e.	OAC rule 3745-17-10(C)(1)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
f.	40 CFR Part 60, Subpart Dc	The emission limitation required by this applicable rule is equivalent to the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
g.	OAC rule 3745-17-07(A)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
h.	OAC rule 3745-18-53	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
i.	OAC rule 3745-110-02	Exempt, per OAC rule 3745-110-03(J)(16), the emissions unit does not have the ability to emit 25 tons per year of NO _x .

(2) Additional Terms and Conditions

- a. When burning the following fuels, the mass emission limitations shall not exceed the accompanying emission levels:

Natural Gas

PE/PM₁₀: 0.19 pound per hour and 0.83 ton per year

VOC: 0.27 pound per hour and 1.18 tons per year

NO_x: 2.46 pounds per hour and 10.77 tons per year
 CO 2.07 pounds per hour and 9.07 tons per year
 SO₂: 0.015 pound per hour and 0.66 ton per year

#2 Fuel Oil

PE/PM₁₀: 0.59 pound per hour and 2.58 tons per year
 VOC: 0.10 pound per hour and 0.44 ton per year
 NO_x: 3.59 pounds per hour and 15.72 tons per year
 CO: 0.90 pound per hour and 3.94 tons per year
 SO₂: 12.91 pounds per hour and 56.55 tons per year

On-Spec Used Oil

PE/PM₁₀: 8.38 pounds per hour and 36.70 tons per year
 VOC: 0.18 pound per hour and 0.79 ton per year
 NO_x: 3.41 pounds per hour and 14.94 tons per year
 CO: 0.90 pound per hour and 3.94 tons per year
 SO₂: 13.18 pounds per hour and 57.73 tons per year

- b. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutant 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 emission limits/control measures no longer apply.
- c. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.
- The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the CO and VOC emissions from this air contaminant source since the uncontrolled potential to emit is less than 10 tons per year.
- d. When oil is used as a fuel, the sulfur content shall not be greater than 0.5 weight percent sulfur.
- e. Each shipment of oil burned in this emissions unit shall be "on-specification" (on-spec) oil and shall meet the used oil specifications contained in OAC rule 3745-279-11. The permittee shall determine that the used fuel oil meets these specifications by performing analyses or obtaining copies of analyses or other information from the supplier documenting that the used fuel oil does not exceed (except for flash point which shall not fall below) the following limitations:

Property/Contaminant Allowable Specifications

arsenic	5 ppm, maximum
cadmium	2 ppm, maximum
chromium	10 ppm, maximum
lead	100 ppm, maximum
total halogens	less than 1,000 ppm; or 4,000 ppm maximum if the presumption that the used oil contains hazardous waste is rebutted, as described below
flash point	100°F, minimum

The used oil burned in this emissions unit shall contain less than the quantifiable levels of PCBs as defined in 40 CFR 761.3, and also shall not exceed the following mercury limitation nor fall below the following heating value:

PCB's	less than 2 ppm
heat content	135,000 Btu/gallon, minimum
mercury	1 ppm, maximum

Used oil containing 1,000 ppm or greater total halogens is presumed to be a hazardous waste under the rebuttable presumption provided under paragraph (B)(1) of rule 3745-279-10 of the Administrative Code. The permittee may receive and burn used oil equaling or exceeding 1,000 ppm total halogens, but less than 4,000 ppm, only if the permittee has successfully demonstrated, pursuant to OAC rule 3745-279-63, that the used oil does not contain a listed hazardous waste, by either acquiring and maintaining source process information which demonstrates that the used oil was contaminated by halogenated constituents that would not be listed hazardous waste or by demonstrating that the used oil does not contain significant concentrations of halogens by acquiring and maintaining representative analytical data. Acceptable analytical test protocols that can be used to analyze used oil for halogenated hazardous constituents include SW-846 Test Methods 9075, 9076, and 9077.*

If analytical results demonstrate that used oil containing 1,000 ppm or more total halogens, but less than 4,000 total halogens, does not contain greater than 100 ppm of any individual halogenated hazardous constituent found in the F001 and F002 listings in OAC rule 3745-51-31 and there is no information suggesting that any other halogenated hazardous constituent (e.g., chlorinated pesticides) has come in contact with the oil, then the presumption that the oil contains hazardous waste has been successfully rebutted.** The rebuttable presumption does not apply to either metal working oils/fluids containing chlorinated paraffins, if processed through a tolling arrangement as described in OAC rule 3745-279-24(C), or used oils contaminated with chlorofluorocarbons removed from refrigeration units.

The burning of used oil not meeting the above limitations is prohibited in this emissions unit and the fuel oil analyses shall document compliance with each limitation before it is burned. The management and burning of used oil is subject to the Standards for the Management of Used Oil, OAC Chapter 3745-279, and the permittee shall document and assure that used oils burned in this emissions unit meet all of the applicable requirements of this Chapter. If the used oil analyses shows total halogens of 1,000 ppm or greater, the permittee shall

obtain and maintain all the necessary records to successfully rebut the presumption that the used oil contains or has been mixed with a listed hazardous waste in accordance with this permit.

*EPA publication SW-846, 3rd (or most current) edition, is available from the Government Printing Office, P.O. Box 371954, Pittsburgh, PA 15250-7954; 202/512-1800, document number 955-001-00000-1.

**DMWM policy documented in "Used Oil Burners - New Guidance for Rebuttable Presumption", published April 2008 or most current policy

c) Operational Restrictions

- (1) In order to limit the PE/PM₁₀ emissions from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B013 and B015 through B019, combined, such that the emissions of PE/PM₁₀ shall not exceed 99.9 tons per year, and shall be calculated in accordance with the formula in f)(1)e.

Limiting the emissions of PE to less than 99.9 tons per year shall inherently limit the PM₁₀ emissions to less than 99.9 tons per year; therefore, no additional monitoring, record keeping, reporting or testing for PM₁₀ will be required.

- (2) In order to limit the VOC emissions from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B013 and B015 through B019, combined, such that the emissions of VOC shall not exceed 99.9 tons per year, and shall be calculated in accordance with the formula in f)(1)f.
- (3) In order to limit the NO_x emissions from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B013 and B015 through B019, combined, such that the emissions of NO_x shall not exceed 99.9 tons per year, and shall be calculated in accordance with the formula in f)(1)g.
- (4) In order to limit the CO emissions from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B013 and B015 through B019, combined, such that the emissions of CO shall not exceed 99.9 tons per year, and shall be calculated in accordance with the formula in f)(1)h.
- (5) In order to limit the SO₂ emissions from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B013 and B015 through B019, combined, such that the emissions of SO₂ shall not exceed 99.9 tons per year, and shall be calculated in accordance with the formula in f)(1)i.

The quality of the fuel burned in these emissions units shall meet a sulfur content that is sufficient to comply with the allowable SO₂ emission limitation specified in this permit.

- (6) The permittee shall burn only natural gas, #2 fuel oil, or on-spec used oil in this emissions unit.

- (7) The permittee may not receive or burn any used oil which does not meet the standards in OAC rule 3745-279-11 and the specifications listed in this permit without first obtaining a permit-to-install or permit-to-install and operate that authorizes the burning of off-specification used oil. The burning of off-specification used oil, subject to OAC rule 3745-279-60 through 67, is prohibited as a fuel in this emissions unit.
- d) Monitoring and/or Recordkeeping Requirements
- (1) The permittee shall maintain monthly records of the following information:
- the total volume of natural gas (MCF) burned in this emissions unit;
 - the total number of gallons of on-spec used oil burned in this emissions unit;
 - the total number of gallons of #2 fuel oil burned in this emissions unit;
 - the total number of hours the emissions unit was in operation;
 - the total summation of the amount of PE/PM₁₀ emitted, from emissions units B001 through B013 and B015 through B019, combined, per rolling, 12-month period;
 - the total summation of the amount of NO_x emitted, from emissions units B001 through B013 and B015 through B019, combined, per rolling, 12-month period;
 - the total summation of the amount of SO₂ emitted, from emissions units B001 through B013 and B015 through B019, combined, per rolling, 12-month period;
 - the total summation of the amount of CO emitted, from emissions units B001 through B013 and B015 through B019, combined, per rolling, 12-month period; and
 - the total summation of the amount of VOC emitted, from emissions units B001 through B013 and B015 through B019, combined, per rolling, 12-month period.
- (2) For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the fuel oil type (number 2, 4, or 6), 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.

- (3) The permittee shall receive and maintain the chemical analyses from the supplier/marketer for each shipment of used oil burned in this emissions unit (or if the oil is generated on site, the permittee shall conduct the chemical analyses), which shall contain the following information:
- a. the date the used oil was received at the facility and the amount received;
 - b. the name, address, and U.S. EPA identification number (if applicable) of the generator, transporter, processor/refiner, supplier, and/or marketer;
 - c. the results of the following chemical analyses, demonstrating that the used oil meets the standards in OAC rule 3745-279-11:
 - i. arsenic content, in ppm;
 - ii. the cadmium content, in ppm;
 - iii. the chromium content, in ppm;
 - iv. the lead content, in ppm;
 - v. total halogens, in ppm; and
 - vi. the flash point;
 - d. where the chemical analysis shows a total halogen content between 1,000 ppm, and below 4,000 ppm, the successful demonstration for the rebuttal of the presumption that the used oil contains or has been mixed with a listed hazardous waste, as described in OAC rule 3745-279-63(C); and
 - e. the results of the analyses demonstrating that the used oil meets the heating value and the mercury and PCB limitations contained in this permit.

Each analysis shall be kept in a readily accessible location for a period of not less than 5 years* following the receipt of each shipment of used oil and shall be made available to the Ohio EPA Division of Materials and Waste Management and/or the Division of Air Pollution Control (the appropriate Ohio EPA District Office or local air agency) upon verbal or written request. Any authorized representative of the Ohio EPA may sample or require sampling of any used oil shipments received, stored, or burned by/at this facility for periodic detailed chemical analyses through an independent laboratory.

*The Division of Air Pollution Control requires these records to be maintained for 5 years.

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. any exceedance of the 99.9 tons per year PE/PM₁₀, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined;
 - ii. any exceedance of the 99.9 tons per year VOC, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined;
 - iii. any exceedance of the 99.9 tons per year NO_x, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined;
 - iv. any exceedance of the 99.9 tons per year CO, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined; and
 - v. any exceedance of the 99.9 tons per year SO₂, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.
- 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);
 - d. the magnitude and duration of each deviation (excursion);
 - e. any exceedance of the used oil standards in OAC rule 3745-279-11;
 - f. any occasion where used oil containing 1,000 ppm or more total halogens was burned prior to receiving information demonstrating a successful rebuttal of the presumption that the used oil contains or has been mixed with a listed hazardous waste;
 - g. Any exceedance of the limitations for mercury and/or PCBs;
 - h. Any deviation from the minimum heat content of 135,000 Btu/gallon; and
 - i. Any deviation from the minimum heat content limitation on the oil, Btu/gallon.

If no deviations (excursion) 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).

- (2) Where the analytical results for any shipment of used oil burned in this emissions unit establish that the used oil contains total halogens greater than 1,000 ppm, but less than

4,000 ppm, the results of the analysis for total halogens (from the appropriate test Method 9075, 9076, or 9077) and the information obtained to rebut the presumption that the used oil contains or has been mixed with a listed hazardous waste shall be submitted to the appropriate District Office or local air agency. Each rebuttal demonstration shall include:

- a. the date the used oil was received;
- b. the facility location or identification number where the oil was or will be burned;
- c. the amount of oil in the shipment; and
- d. all information, including all the analytical results, relied upon by the permittee to rebut the presumption that the used oil contains or has been mixed with a listed hazardous waste.

The rebuttal demonstrations for used oil received from October to December shall be submitted by January 31; used oil received from January to March, by April 30; used oil received from April to June, by July 31; and used oil received from July to September, by October 31.

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:

When burning natural gas:

PE/PM₁₀ emissions shall not exceed 0.19 lb/hr.
VOC emissions shall not exceed 0.27 lb/hr.
NO_x emissions shall not exceed 2.46 lbs/hr.
CO emissions shall not exceed 2.07 lbs/hr.
SO₂ emissions shall not exceed 0.015 lb/hr.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation:

$$E_p = EF_p \times NG/H$$

where:

E_p = emissions (of pollutant p) , lb/hr;
 EF_p = emission factor (for pollutant p) from AP-42, "Compilation of Air Pollutant Emission Factors", fifth edition, section 1.4-2 (7/98);
pollutant(PE/PM₁₀) = 7.6 lbs of PE/10⁶ scf of gas burned
pollutant(VOC) = 11 lbs of VOC/10⁶ scf of gas burned
pollutant(NO_x) = 100 lbs of NO_x/10⁶ scf of gas burned

pollutant(CO) = 84 lbs of CO/10⁶ scf of gas burned
 pollutant(SO₂) = 0.6 lb of SO₂/10⁶ scf of gas burned
 NG = amount of gas burned in the emissions unit (CF), per Section A.III.1.a; and
 H = number of hours boiler was burning natural gas.

b. Emission Limitations:

When burning #2 fuel oil:

PE/PM₁₀ emissions shall not exceed 0.59 lb/hr.
 VOC emissions shall not exceed 0.10 lb/hr.
 NO_x emissions shall not exceed 3.59 lbs/hr.
 CO emissions shall not exceed 0.90 lb/hr.
 SO₂ emissions shall not exceed 12.91 lbs/hr.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation for PE/PM₁₀, VOC, NO_x and CO:

$$E_p = EF_p \times F/H$$

where:

E_p = emissions (of pollutant p), lb/hr;
 EF_p = emission factor (for pollutant p) from AP-42, "Compilation of Air Pollutant Emission Factors", fifth edition, section 1.3, Table 1.3-1 through Table 1.3-3 (9/98);
 pollutant(PE/PM₁₀) = 3.3 lbs of PE/1000 gallons of #2 fuel oil burned
 pollutant(VOC) = 0.556 lb of VOC/1000 gallons of #2 fuel oil burned
 pollutant(NO_x) = 20 lbs of NO_x/1000 gallons of #2 fuel oil burned
 pollutant(CO) = 5 lbs of CO/1000 gallons of #2 fuel oil burned
 F = amount of #2 fuel oil burned in this emissions unit (gallons); and
 H = number of hours boiler was burning #2 fuel oil.

Compliance shall be demonstrated by using the following equation for SO₂:

$$E = EF \times S \times F/H$$

where:

E = emissions of sulfur dioxide, lb/hr;
 EF = emission factor of 144 lbs of SO₂/1000 gallons from AP-42, "Compilation of Air Pollutant Emission Factors", fifth edition, section 1.3, Table 1.3-1 and Table 1.3-2 (9/98);
 S = weight percent sulfur in used oil, if sulfur content is 0.5% then S = 0.5;
 F = amount of #2 fuel oil burned in this emissions unit (gallons); and
 H = number of hours boiler was burning #2 fuel oil.

c. Emission Limitations:

When burning on-spec used oil:

PE/PM₁₀ emissions shall not exceed 8.38 lbs/hr.
VOC emissions shall not exceed 0.18 lb/hr.
NO_x emissions shall not exceed 3.41 lbs/hr.
CO emissions shall not exceed 0.90 lb/hr.
SO₂ emissions shall not exceed 13.18 lbs/hr.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation for PE/PM₁₀:

$$E = EF \times A \times U/H$$

where:

E = emissions of particulate emissions, lb/hr;
EF = emission factor of 64 lbs of PE/1000 gallons of on-spec used oil burned from AP-42, "Compilation of Air Pollutant Emission Factors", fifth edition, section 1.11, Table 1.11-1, (10/96);
A = weight percent ash in on-spec used oil, if ash content is 0.73% then A= 0.73;
U = amount of on-spec oil burned in this emissions unit (gallons); and
H = number of hours boiler was burning on-spec fuel oil.

Compliance shall be demonstrated by using the following equation for VOC, NO_x and CO:

$$E_p = EF_p \times U/H$$

where:

E_p = emissions (of pollutant p), lb/hr;
EF_p = emission factor (for pollutant p) from AP-42, "Compilation of Air Pollutant Emission Factors", fifth edition, section 1.11, Table 1.11-2, Table 1.11-3, (10/96);
pollutant(VOC) = 1 lb of VOC/1000 gallons of on-spec used oil burned
pollutant(NO_x) = 19 lbs of NO_x/1000 gallons of on-spec used oil burned
pollutant(CO) = 5 lbs of CO/1000 gallons of on-spec used oil burned
U = amount of on-spec oil burned in this emissions unit (gallons); and
H = number of hours boiler was burning on-spec fuel oil.

Compliance shall be demonstrated by using the following equation for SO₂:

$$E = EF \times S \times F/H$$

where:

E = emissions of sulfur dioxide, lb/hr;
EF = emission factor of 147 lbs of SO₂/1000 gallons from AP-42, "Compilation of

Air Pollutant Emission Factors”, fifth edition, section 1.11, Table 1.11-1 (10/96);
S = weight percent sulfur in on-spec used oil, if sulfur content is 0.5% then S=0.5;
F = amount of on-spec used oil burned in this emissions unit (gallons); and
H = number of hours boiler was burning on-spec used oil.

d. Emission Limitation:

Visible particulate emissions shall not exceed 10% opacity, as a 6-minute average.

Applicable Compliance Method:

Compliance shall be demonstrated based upon visible emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

e. Emission Limitation:

PE/PM₁₀ emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.

Applicable Compliance Method:

The PE/PM₁₀ emissions shall be determined by the value recorded in d)(1)e, based upon the following equation:

$$\sum_{B=B001}^{n=B019} (M_{oil} \times E_{Foil}) + (M_{uo} \times A_{uo} \times E_{Fuo}) + (M_{ng} \times E_{Fng}) + (M_{wood} \times H_{wood} \times E_{Fwood})$$

where:

M_{oil} = the total #2 fuel oil burned, in gallons per month;

E_{Foil} = 2 pounds of filterable PM per 1000 gallons of #2 fuel oil burned, which is the emission factor for filterable PM per AP-42, Chapter 1.3, Table 1.3-1 (9/98);

M_{uo} = the total used oil burned, in gallons per month;

A_{uo} = the percent ash content of used oil burned, i.e., if ash content is 1%, then A = 1;

E_{Fuo} = 64 pounds of PM per 1000 gallons of used oil burned, which is the emission factor for PM per AP-42, Chapter 1.11, Table 1.11-1 (10/96);

M_{ng} = the total natural gas burned, in million cubic feet per month;

EFng = 1.9 pounds of filterable PM per million cubic feet of natural gas burned, which is the emission factor for filterable PM total per AP-42, Chapter 1.4, Table 1.4-2 (7/98);

Mwood = the total wood waste burned, in pounds per month;

Hwood = heat content determined during the most recent fuel analysis, or in the absence of data, assumed to be 6500 Btu per pound of wood; and

EFwood = 0.054 pound of filterable PM per million Btu, which is the emission factor for PM per AP-42, Chapter 1.6, Table 1.6-1 (9/03) for wood boilers controlled by and ESP, or the emission rate determined by the most recent emission test of this or an identical emissions unit.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.

f. Emission Limitation:

VOC emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.

Applicable Compliance Method:

The VOC emissions shall be determined by the value recorded in d)(1)i based upon the following equation:

$$\sum_{B=B001}^{n=B019} (\text{Moil} \times \text{EFoil}) + (\text{Muo} \times \text{Auo} \times \text{EFuo}) + (\text{Mng} \times \text{EFng}) + (\text{Mwood} \times \text{Hwood} \times \text{EFwood})$$

where:

Moil = the total #2 fuel oil burned, in gallons per month;

Efoil = 0.34 pound of NMTOC* per 1000 gallons of #2 fuel oil burned, which is the emission factor for commercial/institutional/residential combustors for non-methane total organic compounds per AP-42, Chapter 1.3, Table 1.3-1 (9/98);

Muo = the total used oil burned, in gallons per month;

EFuo = 1.0 pound of TOC* per 1000 gallons of used oil burned, which is the emission factor for TOC per AP-42, Chapter 1.11, Table 1.11-3 (10/96);

Mng = the total natural gas burned, in million cubic feet per month;

EFng = 5.5 pounds of VOC per million cubic feet of natural gas burned, which is the emission factor for VOC total per AP-42, Chapter 1.4, Table 1.4-2 (7/98);

Mwood = the total wood waste burned, in pounds per month;

Hwood = the average heat content of wood waste, assumed to be 6500 Btu per pound of wood, or the heat content determined during the most recent fuel analysis; and

EFwood = 0.017 pound of VOC per million Btu, which is the emission factor for PM per AP-42, Chapter 1.6, Table 1.6-3 (9/03).

* in the absence of VOC emission data, TOC or NMTOC emission factors shall be used.

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 25, 25A or 18.

g. Emission Limitation:

NO_x emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.

Applicable Compliance Method:

The NO_x emissions shall be determined by the value recorded in d)(1)f, based upon the following equation:

$$\sum_{n=B001}^{n=B019} (Moil \times EFoil) + (Mu_o \times EFu_o) + (Mng \times EFng) + (Mwood \times Hwood \times EFwood)$$

where:

Moil = the total #2 fuel oil burned, in gallons per month;

EFoil = 20 pounds of NO_x per 1000 gallons of #2 fuel oil burned, which is the emission factor for NO_x per AP-42, Chapter 1.3, Table 1.3-1 (9/98);

Mu_o = the total used oil burned, in gallons per month;

EFu_o = 19 pounds of NO_x per 1000 gallons of used oil burned, which is the emission factor for NO_x per AP-42, Chapter 1.11, Table 1.11-2 (10/96);

Mng = the total natural gas burned, in million cubic feet per month;

EFng = 100 pounds of NO_x per million cubic feet of natural gas burned, which is the emission factor for NO_x per AP-42, Chapter 1.4, Table 1.4-2 (7/98);

Mwood = the total wood waste burned, in pounds per month;

Hwood = the average heat content of wood waste, assumed to be 6500 Btu per pound of wood, or the heat content determined during the fuel analysis of the monthly composite sample; and

EFwood = 0.49 pound of NO_x per million Btu, which is the emission factor for NO_x per AP-42, Chapter 1.6, Table 1.6-2 (9/03) for dry wood, or the emission rate determined during the most recent emission test event for the representative the fuel moisture content.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 7.

h. Emission Limitation:

CO emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.

Applicable Compliance Method:

The CO emissions shall be determined by the value recorded in d)(1)h, based upon the following equation:

$$\sum_{n=B001}^{n=B019} (\text{Moil} \times \text{EFoil}) + (\text{Mu} \times \text{EFu}) + (\text{Mng} \times \text{EFng}) + (\text{Mwood} \times \text{Hwood} \times \text{EFwood})$$

where:

Moil = the total #2 fuel oil burned, in gallons per month;

EFoil = 5 pounds of CO per 1000 gallons of #2 fuel oil burned, which is the emission factor for CO per AP-42, Chapter 1.3, Table 1.3-1 (9/98);

Mu = the total used oil burned, in gallons per month;

EFu = 5.0 pounds of CO per 1000 gallons of used oil burned, which is the emission factor for CO per AP-42, Chapter 1.11-2 (10/96);

Mng = the total natural gas burned, in million cubic feet per month;

EFng = 84 pounds of CO per million cubic feet of natural gas burned, which is the emission factor for CO per AP-42, Chapter 1.4, Table 1.4-1 (7/98);

Mwood = the total wood waste burned, in pounds per month;

Hwood = the average heat content of wood waste, assumed to be 6500 Btu per pound of wood, or the heat content determined during the most recent fuel analysis; and

EFwood = 0.60 pound of CO per million Btu, which is the emission factor for CO per AP-42, Chapter 1.6, Table 1.6-2 (9/03).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 10.

i. Emission Limitation:

SO₂ emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.

Applicable Compliance Method:

The SO₂ emissions shall be determined by the value recorded in d)(1)g, based upon the following equation:

$$\sum_{n=B001}^{n=B019} (M_{oil} \times S_{oil} \times E_{foil}) + (M_{uo} \times S_{uo} \times E_{fuo}) + (M_{ng} \times E_{fng}) + (M_{wood} \times H_{wood} \times E_{fwood})$$

where:

M_{oil} = the total #2 fuel oil burned, in gallons per month;

S_{oil} = the weight percent of sulfur in the fuel oil, as a volume-weighted average for the month, i.e., if sulfur is 1%, then S=1;

E_{foil} = 144 pounds of SO₂ and SO₃ per 1000 gallons of #2 fuel oil burned, which is the emission factors for SO₂ per AP-42, Chapter 1.3, Table 1.3-1 (9/98);

M_{uo} = the total used oil burned, in gallons per month;

S_{uo} = the weight percent of sulfur in the used oil, as a volume-weighted average for the month, i.e., if sulfur is 1%, then S=1;

EF_{uo} = 147 pounds of SO₂ per 1000 gallons of used oil burned, which is the emission factor for SO₂ per AP-42, Chapter 1.11, Table 1.11-2 (10/96);

M_{ng} = the total natural gas burned, in million cubic feet per month;

EF_{ng} = 0.6 pound of SO₂ per million cubic feet of natural gas burned, which is the emission factor for SO₂ per AP-42, Chapter 1.4, Table 1.4-2 (7/98);

M_{wood} = the total wood waste burned, in pounds per month;

H_{wood} = the average heat content of wood waste, assumed to be 6500 Btu per pound of wood, or the heat content determined during the most recent fuel analysis; and

EF_{wood} = 0.025 pound of SO₂ per million Btu, which is the emission factor for SO₂ per AP-42, Chapter 1.6, Table 1.6-2 (9/03).

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

j. Emission Limitation:

When burning natural gas:

PE/PM₁₀ emissions shall not exceed 0.83 ton per year.

VOC emissions shall not exceed 1.18 tons per year.

NO_x emissions shall not exceed 10.77 tons per year.

CO emissions shall not exceed 9.07 tons per year.

SO₂ emissions shall not exceed 0.66 ton per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable emission limitation by the annual hours of operation (8,760 hours), and then dividing by 2,000 pounds per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

k. Emission Limitation:

When burning #2 fuel oil:

PE/PM₁₀ emissions shall not exceed 2.58 tons per year.

VOC emissions shall not exceed 0.44 ton per year.

NO_x emissions shall not exceed 15.72 tons per year.

CO emissions shall not exceed 3.94 tons per year.

SO₂ emissions shall not exceed 56.55 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable emission limitation by the annual hours of operation (8,760 hours), and then dividing by 2,000 pounds per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

I. Emission Limitation:

When burning on-spec used oil:

PE/PM₁₀ emissions shall not exceed 36.70 tons per year.
VOC emissions shall not exceed 0.79 ton per year.
NO_x emissions shall not exceed 14.94 tons per year.
CO emissions shall not exceed 3.94 tons per year.
SO₂ emissions shall not exceed 57.73 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable emission limitation by the annual hours of operation (8,760 hours), and then dividing by 2,000 pounds per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

m. Emission Limitation:

When oil is used as a fuel, the sulfur content shall not be greater than 0.5 weight percent sulfur.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(2).

- (2) The concentrations of contaminants (arsenic, barium, cadmium, chromium, lead, mercury, PCBs, and total halogens) in the used oil shall be analyzed using a "total constituent analysis" method, as specified in U.S. EPA publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods." The applicable test methods that should be used are as follows:

Arsenic, barium, cadmium, chromium, and lead: SW-846, Method 3031 or 3051 (digestion procedures) followed by analysis using Method 6010B or 6020;
Mercury: SW-846, Method 7471A;

PCBs: SW-846, Method 8270C or 8082; and

Total halogens: SW-846, Method 9075, 9076, or 9077.

The permittee shall submit a written request and receive approval from Ohio EPA Division of Materials and Waste Management and/or the Division of Air Pollution Control, of Central Office, before an alternative test method, not listed above, can be used for the total constituent analysis of the above-mentioned used oil contaminants.

- g) Miscellaneous Requirements
 - (1) None.

4. B015, VB1; B016, VB2; B017, VB3; B018, VB4; B019, VB5

Operations, Property and/or Equipment Description:

B015	29.7 mmBtu/hr heat input rated, Wood-fired Boiler #1 for hot water. Equipped with an Electrostatic Precipitator for particulate emission control.
B016	29.7 mmBtu/hr heat input rated, Wood-fired Boiler #2 for hot water. Equipped with an Electrostatic Precipitator for particulate emission control.
B017	29.7 mmBtu/hr heat input rated, Wood-fired Boiler #3 for hot water. Equipped with an Electrostatic Precipitator for particulate emission control.
B018	29.7 mmBtu/hr heat input rated, Wood-fired Boiler #4 for hot water. Equipped with an Electrostatic Precipitator for particulate emission control.
B019	29.7 mmBtu/hr heat input rated, Wood-fired Boiler #5 for hot water. Equipped with an Electrostatic Precipitator for particulate emission control.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

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) as effective 11/30/2001	<p>Particulate emissions (PE) shall not exceed 0.10 lb/mmBtu and 13.0 tons per year.</p> <p>Nitrogen oxides (NO_x) emissions shall not exceed 0.49 lb/mmBtu and 63.7 tons per year</p> <p>Carbon monoxide (CO) emissions shall not exceed 0.60 lb/mmBtu and 78.1 tons per year.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 0.74 pound per hour and 3.24 tons per year.</p> <p>Volatile organic compound (VOC) emissions shall not exceed 1.16 pounds</p>

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>per hour and 5.08 tons per year.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1).</p> <p>See b)(2)a.</p>
b.	OAC rule 3745-31-05(A)(3) as effective 12/01/2006	See b)(2)b.
c.	OAC rule 3745-31-05(D)(1)	<p>articulate emissions (PE) and particulate matter emissions less than 10 microns (PM₁₀) shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.</p> <p>olatile organic compound (VOC) emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.</p> <p>rogen oxide (NO_x) emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.</p> <p>arbon monoxide (CO) emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.</p>
d.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

e.	OAC rule 3745-17-10(C)(1)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
f.	OAC rule 3745-110-03	See b)(2)c.

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for 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 emission limits/control measures no longer apply.

b. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled volatile organic compounds (VOC) emissions and the sulfur dioxide (SO₂) emissions from this air contaminant source since the potential to emit for VOC and SO₂ is less than ten tons per year. Uncontrolled VOC and SO₂ emissions are calculated with the emission factors in AP-42, Chapter 1.6, Wood Residue Combustion.

c. The permittee shall annually perform or have performed a tune-up of this emissions unit.

c) Operational Restrictions

(1) In order to limit the PE/PM₁₀ emissions from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B013 and B015 through B019, combined, such that the emissions of PE/PM₁₀ shall not exceed 99.9 tons per year, and shall be calculated in accordance with the formula in f)(2)f.

Limiting the emissions of PE to less than 99.9 tons per year shall inherently limit the PM₁₀ emissions to less than 99.9 tons per year; therefore, no additional monitoring, record keeping, reporting or testing for PM₁₀ will be required.

(2) In order to limit the VOC emissions from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B013 and B015 through B019, combined, such that the emissions of VOC shall not exceed 99.9 tons per year, and shall be calculated in accordance with the formula in f)(2)g.

- (3) In order to limit the NO_x emissions from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B013 and B015 through B019, combined, such that the emissions of NO_x shall not exceed 99.9 tons per year, and shall be calculated in accordance with the formula in f)(2)h.
- (4) In order to limit the CO emissions from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B013 and B015 through B019, combined, such that the emissions of CO shall not exceed 99.9 tons per year, and shall be calculated in accordance with the formula in f)(2)i.
- (5) In order to limit the SO₂ emissions from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B013 and B015 through B019, combined, such that the emissions of SO₂ shall not exceed 99.9 tons per year, and shall be calculated in accordance with the formula in f)(2)j.

The quality of the fuel burned in these emissions units shall meet a sulfur content that is sufficient to comply with the allowable SO₂ emission limitation specified in this permit. The permittee shall only burn wood in this emissions unit.

- (6) The permittee shall only burn wood in this emissions unit
 - (7) The permittee shall not burn wood or wood waste derived from any operation which coats, treats, or otherwise contaminates the wood or wood waste.
 - (8) The permittee shall operate each ESP during any operation of the corresponding emissions unit, except the ESP may not be operated during periods of start-up until the exhaust gases have achieved a temperature of 250 degrees Fahrenheit at the inlet of the ESP or during periods of shutdown when the temperature of the exhaust gases has dropped below 250 degrees Fahrenheit at the inlet of the ESP.
- d) Monitoring and/or Recordkeeping Requirements
- (1) The permittee shall maintain monthly records of the following information:
 - a. the total weight, in tons, of wood burned in this emissions unit;
 - b. the total number of hours the emissions unit was in operation;
 - c. the total summation of the amount of particulate emissions (PE) and particulate matter less than 10 microns (PM₁₀) emitted, from emissions units B001 through B013 and B015 through B019, combined, per rolling, 12-month period;
 - d. the total summation of the amount of nitrogen oxides (NO_x) emitted, from emissions units B001 through B013 and B015 through B019, combined, per rolling, 12-month period;
 - e. the total summation of the amount of sulfur dioxide (SO₂) emitted, from emissions units B001 through B013 and B015 through B019, combined, per rolling, 12-month period;

- f. the total summation of the amount of carbon monoxide (CO) emitted, from emissions units B001 through B013 and B015 through B019, combined, per rolling, 12-month period; and
 - g. the total summation of the amount of volatile organic compounds (VOC) emitted, from emissions units B001 through B013 and B015 through B019, combined, per rolling, 12-month period.
- (2) In order to maintain compliance with the applicable emission limitations contained in this permit, the acceptable range of the secondary voltage and current for each field of the ESP shall be between 20 to 55 kilovolts and 5 to 300 milliamps.
 - (3) The operation of any control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by the Ohio EPA, compliance with the mass emission limitations shall be determined by performing concurrent mass emission tests and parameter readings, using USEPA - approved methods and procedures. The results of any required emissions tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a violation of the mass emission limitations.
 - (4) The permittee shall properly install, operate, and maintain equipment to continuously monitor and record the following on an hourly basis during any operation of each ESP:
 - a. the secondary voltage, in kilovolts, and the secondary current in amps, for each transformer rectifier (TR) set in the ESP;
 - b. the power input (in kilowatts) of each TR set for each hour (calculated by multiplying the secondary voltage (in kilovolts) by the secondary current (in amps) for each TR set); and
 - c. the total power input to the ESP for each hour (add together the power inputs for the TR sets operating during the hour).

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 secondary voltage and current settings shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range for each parameter is established to demonstrate compliance.

- (5) Whenever the monitored value for the voltage and/or current within a field deviates from the range(s) or minimum limit(s) 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(s) at or above the minimum voltage and current limit(s) 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:

- f. a description of the corrective action;
- g. the date the corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the secondary voltage and current readings for each field immediately after the corrective action; and
- k. 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.

- (6) These secondary voltage and current range(s) or minimum limit(s) for each ESP are 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 these range(s) or minimum voltage and current limits based upon information obtained during future tests that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to these range(s) or minimum voltage and current limit(s) 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.
- (7) The permittee shall operate and maintain a temperature monitor and recorder for each emissions unit that measures and records the temperature of the emissions unit exhaust gases entering each ESP as follows:
 - a. during all periods of start-up until the ESP is operational or until the exhaust gas prior to the inlet of the ESP achieves a temperature of 250 degrees Fahrenheit; and
 - b. during all periods of shutdown until the exhaust gas prior to the inlet of the ESP drops below 250 degrees Fahrenheit.

The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee, and shall be capable of accurately measuring the temperature of the emissions unit exhaust gases in degrees Fahrenheit.

- (8) The permittee shall maintain, in a permanently bound log book, or other format approved in writing by the Ohio EPA, the following:
- a. the date of the last tune-up;
 - b. the name, title, and affiliation of the person who performed the tune-up; and
 - c. a list of adjustments made during the annual tune-up.
- 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. any exceedance of the 99.9 tons per year PE/PM₁₀, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined;
 - ii. any exceedance of the 99.9 tons per year VOC, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined;
 - iii. any exceedance of the 99.9 tons per year NO_x, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined;
 - iv. any exceedance of the 99.9 tons per year CO, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined; and
 - v. any exceedance of the 99.9 tons per year SO₂, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined;
 - 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 (excursion) 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).

- (2) The permittee shall submit an annual report that includes the following information concerning the operations of the ESP during the 12-month reporting period for this/these emissions unit(s):
- a. each period of time (start time and date, and end time and date) when the secondary voltage and current for each field within the ESP was outside of the range(s) or at or above the minimum limit(s) specified by the manufacturer and outside of the acceptable range following any required compliance demonstration;
 - b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the ESP;
 - c. each incident of deviation described in "a" or "b" (above) where a prompt investigation was not conducted;
 - d. each incident of deviation described in "a" or "b" where prompt corrective action, that would bring the ESP into compliance with the acceptable range(s) or limit(s) for secondary voltage and current, was determined to be necessary and was not taken; and
 - e. each incident of deviation described in "a" or "b" 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.

f) **Testing Requirements**

- (1) The permittee shall conduct, or have conducted, emission testing for one emissions unit as a representative of this group of emissions units in accordance with the following requirements:
- a. The emission testing shall be conducted within 3 months after start-up.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for PE, NO_x and CO when burning wood.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

for PE - Method 5 of 40 CFR Part 60, Appendix A;

for NO_x - Method 7 of 40 CFR Part 60, Appendix A; and

for CO - Method 10 of 40 CFR Part 60, Appendix A.

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

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.
 - e. 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).
 - f. 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.
 - g. 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.
- (2) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
- a. Emission Limitation:

PE emissions shall not exceed 0.10 lb/mmBtu.
NO_x emissions shall not exceed 0.49 lb/mmBtu.
CO emissions shall not exceed 0.60 lb/mmBtu.

Applicable Compliance Method:

Compliance shall be demonstrated through the emission testing requirements specified in f)(1).

b. Emission Limitation:

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

Applicable Compliance Method:

Compliance shall be demonstrated through visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

c. Emission Limitation:

PE shall not exceed 13.0 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable emission limitation (0.10 lb/mmBtu) by the maximum heat input of the boiler (29.7 mmBtu/hr) and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

d. Emission Limitation:

NO_x emissions shall not exceed 63.7 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable emission limitation (0.49 lb/mmBtu) by the maximum heat input of the boiler (29.7 mmBtu/hr) and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

e. Emission Limitation:

CO emissions shall not exceed 78.1 tons per year

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable emission limitation (0.60 lb/mmBtu) by the maximum heat input of the boiler (29.7 mmBtu/hr) and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

f. Emission Limitation:

PE/PM₁₀ emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.

Applicable Compliance Method:

The PE/PM₁₀ emissions shall be determined by the value recorded in d)(1)c, based upon the following equation:

$$\sum_{B=B001}^{n=B019} (M_{oil} \times E_{Foil}) + (M_{uo} \times A_{uo} \times E_{Fuo}) + (M_{ng} \times E_{Fng}) + (M_{wood} \times H_{wood} \times E_{Fwood})$$

where:

M_{oil} = the total #2 fuel oil burned, in gallons per month;

E_{Foil} = 2 pounds of filterable PM per 1000 gallons of #2 fuel oil burned, which is the emission factor for filterable PM per AP-42, Chapter 1.3, Table 1.3-1 (9/98);

M_{uo} = the total used oil burned, in gallons per month;

A_{uo} = the percent ash content of used oil burned, i.e., if ash content is 1%, then A = 1;

E_{Fuo} = 64 pounds of PM per 1000 gallons of used oil burned, which is the emission factor for PM per AP-42, Chapter 1.11, Table 1.11-1 (10/96);

M_{ng} = the total natural gas burned, in million cubic feet per month;

E_{Fng} = 1.9 pounds of filterable PM per million cubic feet of natural gas burned, which is the emission factor for filterable PM total per AP-42, Chapter 1.4, Table 1.4-2 (7/98);

M_{wood} = the total wood waste burned, in pounds per month;

H_{wood} = heat content determined during the most recent fuel analysis, or in the absence of data, assumed to be 6500 Btu per pound of wood; and

E_{Fwood} = 0.054 pound of filterable PM per million Btu, which is the emission factor for PM per AP-42, Chapter 1.6, Table 1.6-1 (9/03) for wood boilers controlled by and ESP, or the emission rate determined by the most recent emission test of this or an identical emissions unit.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.

g. Emission Limitation:

VOC emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.

Applicable Compliance Method:

The VOC emissions shall be determined by the value recorded in d)(1)g, based upon the following equation:

$$\sum_{B=B001}^{n=B019} (M_{oil} \times E_{Foil}) + (M_{uo} \times A_{uo} \times E_{Fuo}) + (M_{ng} \times E_{Fng}) + (M_{wood} \times H_{wood} \times E_{Fwood})$$

where:

M_{oil} = the total #2 fuel oil burned, in gallons per month;

E_{Foil} = 0.34 pound of NMTOC* per 1000 gallons of #2 fuel oil burned, which is the emission factor for commercial/institutional/residential combustors for non-methane total organic compounds per AP-42, Chapter 1.3, Table 1.3-1 (9/98);

M_{uo} = the total used oil burned, in gallons per month;

E_{Fuo} = 1.0 pound of TOC* per 1000 gallons of used oil burned, which is the emission factor for TOC per AP-42, Chapter 1.11, Table 1.11-3 (10/96);

M_{ng} = the total natural gas burned, in million cubic feet per month;

E_{Fng} = 5.5 pounds of VOC per million cubic feet of natural gas burned, which is the emission factor for VOC total per AP-42, Chapter 1.4, Table 1.4-2 (7/98);

M_{wood} = the total wood waste burned, in pounds per month;

H_{wood} = the average heat content of wood waste, assumed to be 6500 Btu per pound of wood, or the heat content determined during the most recent fuel analysis; and

E_{Fwood} = 0.017 pound of VOC per million Btu, which is the emission factor for PM per AP-42, Chapter 1.6, Table 1.6-3 (9/03).

* in the absence of VOC emission data, TOC or NMTOC emission factors shall be used.

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 25, 25A or 18.

h. Emission Limitation:

NO_x emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.

Applicable Compliance Method:

The NO_x emissions shall be determined by the value recorded in d)(1)d, based upon the following equation:

$$\sum_{n=B001}^{n=B019} (M_{oil} \times E_{Foil}) + (M_{uo} \times E_{Fuo}) + (M_{ng} \times E_{Fng}) + (M_{wood} \times H_{wood} \times E_{Fwood})$$

where:

M_{oil} = the total #2 fuel oil burned, in gallons per month;

E_{Foil} = 20 pounds of NO_x per 1000 gallons of #2 fuel oil burned, which is the emission factor for NO_x per AP-42, Chapter 1.3, Table 1.3-1 (9/98);

M_{uo} = the total used oil burned, in gallons per month;

E_{Fuo} = 19 pounds of NO_x per 1000 gallons of used oil burned, which is the emission factor for NO_x per AP-42, Chapter 1.11, Table 1.11-2 (10/96);

M_{ng} = the total natural gas burned, in million cubic feet per month;

E_{Fng} = 100 pounds of NO_x per million cubic feet of natural gas burned, which is the emission factor for NO_x per AP-42, Chapter 1.4, Table 1.4-2 (7/98);

M_{wood} = the total wood waste burned, in pounds per month;

H_{wood} = the average heat content of wood waste, assumed to be 6500 Btu per pound of wood, or the heat content determined during the fuel analysis of the monthly composite sample; and

E_{Fwood} = 0.49 pound of NO_x per million Btu, which is the emission factor for NO_x per AP-42, Chapter 1.6, Table 1.6-2 (9/03) for dry wood, or the emission rate determined during the most recent emission test event for the representative the fuel moisture content.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 7.

i. Emission Limitation:

CO emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.

Applicable Compliance Method:

The CO emissions shall be determined by the value recorded in d)(1)f, based upon the following equation:

$$\sum_{n=B001}^{n=B019} (M_{oil} \times E_{Foil}) + (M_{uo} \times E_{Fuo}) + (M_{ng} \times E_{Fng}) + (M_{wood} \times H_{wood} \times E_{Fwood})$$

where:

M_{oil} = the total #2 fuel oil burned, in gallons per month;

E_{Foil} = 5 pounds of CO per 1000 gallons of #2 fuel oil burned, which is the emission factor for CO per AP-42, Chapter 1.3, Table 1.3-1 (9/98);

M_{uo} = the total used oil burned, in gallons per month;

E_{Fuo} = 5.0 pounds of CO per 1000 gallons of used oil burned, which is the emission factor for CO per AP-42, Chapter 1.11-2 (10/96);

M_{ng} = the total natural gas burned, in million cubic feet per month;

E_{Fng} = 84 pounds of CO per million cubic feet of natural gas burned, which is the emission factor for CO per AP-42, Chapter 1.4, Table 1.4-1 (7/98);

M_{wood} = the total wood waste burned, in pounds per month;

H_{wood} = the average heat content of wood waste, assumed to be 6500 Btu per pound of wood, or the heat content determined during the most recent fuel analysis; and

E_{Fwood} = 0.60 pound of CO per million Btu, which is the emission factor for CO per AP-42, Chapter 1.6, Table 1.6-2 (9/03).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 10.

j. Emission Limitation:

SO₂ emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B013 and B015 through B019, combined.

Applicable Compliance Method:

The SO₂ emissions shall be determined by the value recorded in d)(1)e, based upon the following equation:

$$\sum_{n=B001}^{n=B019} (M_{oil} \times S_{oil} \times E_{Foil}) + (M_{uo} \times S_{uo} \times E_{Fuo}) + (M_{ng} \times E_{Fng}) + (M_{wood} \times H_{wood} \times E_{Fwood})$$

where:

M_{oil} = the total #2 fuel oil burned, in gallons per month;

S_{oil} = the weight percent of sulfur in the fuel oil, as a volume-weighted average for the month, i.e., if sulfur is 1%, then S=1;

E_{Foil} = 144 pounds of SO₂ and SO₃ per 1000 gallons of #2 fuel oil burned, which is the emission factors for SO₂ per AP-42, Chapter 1.3, Table 1.3-1 (9/98);

M_{uo} = the total used oil burned, in gallons per month;

S_{uo} = the weight percent of sulfur in the used oil, as a volume-weighted average for the month, i.e., if sulfur is 1%, then S=1;

E_{Fuo} = 147 pounds of SO₂ per 1000 gallons of used oil burned, which is the emission factor for SO₂ per AP-42, Chapter 1.11, Table 1.11-2 (10/96);

M_{ng} = the total natural gas burned, in million cubic feet per month;

E_{Fng} = 0.6 pound of SO₂ per million cubic feet of natural gas burned, which is the emission factor for SO₂ per AP-42, Chapter 1.4, Table 1.4-2 (7/98);

M_{wood} = the total wood waste burned, in pounds per month;

H_{wood} = the average heat content of wood waste, assumed to be 6500 Btu per pound of wood, or the heat content determined during the most recent fuel analysis; and

E_{Fwood} = 0.025 pound of SO₂ per million Btu, which is the emission factor for SO₂ per AP-42, Chapter 1.6, Table 1.6-2 (9/03).

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

k. Emission Limitation:

SO₂ emissions shall not exceed 0.74 pound per hour.

Applicable Compliance Method:

Compliance shall be demonstrated through the use of an SO₂ emission factor obtained from AP-42, 5th Edition, Volume 1, Chapter 1, table 1.6-2 equal to 0.025 lb/mmBtu of actual heat input multiplied by the emissions unit heat input of 29.7 mmBtu/hr.

If required, compliance shall be demonstrated in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 6.

l. Emission Limitation:

SO₂ emissions shall not exceed 3.24 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable emission limitation (0.74 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

m. Emission Limitation:

VOC emissions shall not exceed 1.16 pounds per hour.

Applicable Compliance Method:

Compliance shall be demonstrated through the use of an OC emission factor obtained from AP-42, 5th Edition, Volume 1, Chapter 1, table 1.6-3 equal to 0.039 lb/mmBtu of actual heat input multiplied by the emissions unit heat input of 29.7 mmBtu/hr.

If required, compliance shall be demonstrated in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 25 or 25A.

n. Emission Limitation:

VOC emissions shall not exceed 5.08 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable emission limitation (1.16 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

g) Miscellaneous Requirements

(1) None.



5. B020, VB6

Operations, Property and/or Equipment Description:

B020	29.7 mmBtu/hr heat input rated, Wood-fired Boiler #6 for hot water. Equipped with an Electrostatic Precipitator for particulate emission control.
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- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) None.
- 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.	ORC 3704.03(T)	<p>Particulate emissions (PE) shall not exceed 0.10 lb/mmBtu.</p> <p>Nitrogen oxides (NO_x) emissions shall not exceed 0.49 lb/mmBtu.</p> <p>Carbon monoxide (CO) emissions shall not exceed 0.60 lb/mmBtu.</p>
b.	OAC rule 3745-31-05(A)(3) as effective 11/30/2001	<p>Sulfur dioxide (SO₂) emissions shall not exceed 0.74 pound per hour and 3.24 tons per year.</p> <p>Volatile organic compound (VOC) emissions shall not exceed 1.16 pounds per hour and 5.08 tons per year.</p> <p>See b)(2)a and c)(2).</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1).</p>
c.	OAC rule 3745-31-05(A)(3) as effective 12/01/2006	See b)(2)b.

d.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
e.	OAC rule 3745-17-10(C)(1)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to ORC 3704.03(T).
f.	OAC rule 3745-110-03	See b)(2)c.

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (SB 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutants of 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 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 emission limits no longer apply.

b. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled VOC emissions and the SO₂ emissions from this air contaminant source since the potential to emit for VOC and SO₂ is less than ten tons per year. Uncontrolled VOC and SO₂ emissions are calculated with the emission factors in AP-42, Chapter 1.6, Wood Residue Combustion.

c. The permittee shall annually perform or have performed a tune-up of this emissions unit.

c) Operational Restrictions

(1) The permittee shall only burn wood in this emissions unit.

(2) The permittee shall not burn wood or wood waste derived from any operation which coats, treats, or otherwise contaminates the wood or wood waste.

(3) The permittee shall operate each electrostatic precipitator (ESP) during any operation of the corresponding emissions unit, except the ESP may not be operated during periods of start-up until the exhaust gases have achieved a temperature of 250 degrees Fahrenheit at the inlet of the ESP or during periods of shutdown when the temperature of the exhaust gases has dropped below 250 degrees Fahrenheit at the inlet of the ESP.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall operate and maintain a temperature monitor and recorder for each emissions unit that measures and records the temperature of the emissions unit exhaust gases entering each ESP as follows:
 - a. during all periods of start-up until the ESP is operational or until the exhaust gas prior to the inlet of the ESP achieves a temperature of 250 degrees Fahrenheit; and
 - b. during all periods of shutdown until the exhaust gas prior to the inlet of the ESP drops below 250 degrees Fahrenheit.

The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee, and shall be capable of accurately measuring the temperature of the emissions unit exhaust gases in degrees Fahrenheit.

- (2) In order to maintain compliance with the applicable emission limitations contained in this permit, the acceptable range of the secondary voltage and current for each field of the ESP shall be between 20 to 55 kilovolts and 5 to 300 milliamps.
- (3) The operation of any control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by the Ohio EPA, compliance with the mass emission limitations shall be determined by performing concurrent mass emission tests and parameter readings, using USEPA - approved methods and procedures. The results of any required emissions tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a violation of the mass emission limitations.
- (4) The permittee shall properly install, operate, and maintain equipment to continuously monitor and record the following on an hourly basis during any operation of each ESP:
 - a. the secondary voltage, in kilovolts, and the secondary current in amps, for each transformer rectifier (TR) set in the ESP;
 - b. the power input (in kilowatts) of each TR set for each hour (calculated by multiplying the secondary voltage (in kilovolts) by the secondary current (in amps) for each TR set); and
 - c. the total power input to the ESP for each hour (add together the power inputs for the TR sets operating during the hour).

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 secondary voltage and current settings shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range for each parameter is established to demonstrate compliance.

- (5) Whenever the monitored value for the voltage and/or current within a field deviates from the range(s) or minimum limit(s) 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(s) at or above the minimum voltage and current limit(s) 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:

- f. a description of the corrective action;
- g. the date the corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the secondary voltage and current readings for each field immediately after the corrective action; and
- k. 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.

- (6) These secondary voltage and current range(s) or minimum limit(s) for each ESP are 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 these range(s) or minimum voltage and current limits based upon information obtained during future tests that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to these range(s) or minimum voltage and current limit(s) 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.

- (7) The permittee shall maintain, in a permanently bound log book, or other format approved in writing by the Ohio EPA, the following:
- a. the date of the last tune-up;
 - b. the name, title, and affiliation of the person who performed the tune-up; and
 - c. a list of adjustments made during the annual tune-up.
- e) Reporting Requirements
- (1) The permittee shall submit an annual report that includes the following information concerning the operations of the ESP during the 12-month reporting period for this/these emissions unit(s):
- a. each period of time (start time and date, and end time and date) when the secondary voltage and current for each field within the ESP was outside of the range(s) or at or above the minimum limit(s) specified by the manufacturer and outside of the acceptable range following any required compliance demonstration;
 - b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the ESP;
 - c. each incident of deviation described in "a" or "b" (above) where a prompt investigation was not conducted;
 - d. each incident of deviation described in "a" or "b" where prompt corrective action, that would bring the ESP into compliance with the acceptable range(s) or limit(s) for secondary voltage and current, was determined to be necessary and was not taken; and
 - e. each incident of deviation described in "a" or "b" 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.
- f) Testing Requirements
- (1) The permittee shall conduct, or have conducted, emission testing for one emissions unit as a representative of this group of emissions units in accordance with the following requirements:
- a. The emission testing shall be conducted within 3 months after start-up.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for PE, NO_x and CO when burning wood.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

for PE - Method 5 of 40 CFR Part 60, Appendix A;

for NO_x - Method 7 of 40 CFR Part 60, Appendix A; and

for CO - Method 10 of 40 CFR Part 60, Appendix A.

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

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.
 - e. 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).
 - f. 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.
 - g. 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.
- (2) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
- a. Emission Limitation:

PE emissions shall not exceed 0.10 lb/mmBtu.
NO_x emissions shall not exceed 0.49 lb/mmBtu.
CO emissions shall not exceed 0.60 lb/mmBtu.

Applicable Compliance Method:

Compliance shall be demonstrated through the emission testing requirements specified in f)(1).

b. Emission Limitation:

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

Applicable Compliance Method:

Compliance shall be demonstrated through visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

c. Emission Limitation:

SO₂ emissions shall not exceed 0.74 pound per hour.

Applicable Compliance Method:

Compliance shall be demonstrated through the use of an SO₂ emission factor obtained from AP-42, 5th Edition, Volume 1, Chapter 1, Table 1.6-2 equal to 0.025 lb/mmBtu of actual heat input multiplied by the emissions unit heat input rating of 29.7 mmBtu/hr.

If required, compliance shall be demonstrated in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 6.

d. Emission Limitation:

SO₂ emissions shall not exceed 3.24 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable SO₂ emission limitation (0.74 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

e. Emission Limitation:

VOC emissions shall not exceed 1.16 pounds per hour

Applicable Compliance Method:

Compliance shall be demonstrated through the use of an OC emission factor obtained from AP-42, 5th Edition, Volume 1, Chapter 1, Table 1.6-3 equal to 0.039 lb/mmBtu of actual heat input multiplied by the emissions unit heat input rating of 29.7 mmBtu/hr.

If required, compliance shall be demonstrated in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 25 or 25A.

f. Emission Limitation:

VOC emissions shall not exceed 5.08 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable VOC emission limitation (1.16 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

g) Miscellaneous Requirements

(1) None.