



State of Ohio Environmental Protection Agency

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Columbus, OH 43216-1049

8/12/2008

Certified Mail

Richard Pucak
Akron Thermal Energy Corporation
226 Opportunity Parkway
Akron, OH 44307-2232

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 1677010757
Permit Number: 16-02294
Permit Type: Initial installation
County: Summit

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

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.

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

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

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 Akron Regional Air Quality Management District. This permit has been posted to the Division of Air Pollution Control (DAPC) Web page <http://www.epa.state.oh.us/dapc>.

Sincerely,

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

Cc: U.S. EPA Region 5 *Via E-Mail Notification*
Akron Regional Air Quality Management District

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



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

FINAL

**Air Pollution Permit-to-Install
for
Akron Thermal Energy Corporation**

Facility ID: 1677010757
Permit Number: 16-02294
Permit Type: Initial installation
Issued: 8/12/2008
Effective: 8/12/2008



Air Pollution Permit-to-Install
for
Akron Thermal Energy Corporation

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State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Final Permit-to-Install
Permit Number: 16-02294
Facility ID: 1677010757
Effective Date: 8/12/2008

Authorization

Facility ID: 1677010757
Facility Description: Steam and Air Conditioning Supply.
Application Number(s): A0012238
Permit Number: 16-02294
Permit Description: Administrative modification of PTI 16-02294 issued final on December 16, 2003.
Permit Type: Initial installation
Permit Fee: \$800.00
Issue Date: 8/12/2008
Effective Date: 8/12/2008

This document constitutes issuance to:

Akron Thermal Energy Corporation
226 Opportunity Parkway
Akron, OH 44307-2232

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:

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

The above named entity is hereby granted 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

Chris Korleski
Director



State of Ohio Environmental Protection Agency
 Division of Air Pollution Control

Final Permit-to-Install
Permit Number: 16-02294
Facility ID: 1677010757
Effective Date: 8/12/2008

Authorization (continued)

Permit Number: 16-02294

Permit Description: administrative modification of PTI 16-02294 issued final on December 16, 2003.

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

Emissions Unit ID:	B003
Company Equipment ID:	Boiler #1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B004
Company Equipment ID:	Boiler #2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Final Permit-to-Install
Permit Number: 16-02294
Facility ID: 1677010757
Effective Date: 8/12/2008

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 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 Akron Regional Air Quality Management District.



(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 Akron Regional Air Quality Management District. 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 Akron Regional Air Quality Management District 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 Akron Regional Air Quality Management District 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 Akron Regional Air Quality Management District 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 Akron Regional Air Quality Management District.
- 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 Akron Regional Air Quality Management District. 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 through completion of the annual PER covering the last period of operation 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 PER 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 PER, 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 Akron Regional Air Quality Management District must be notified in writing of any transfer of this permit.

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.



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Final Permit-to-Install
Permit Number: 16-02294
Facility ID: 1677010757
Effective Date: 8/12/2008

B. Facility-Wide Terms and Conditions



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Final Permit-to-Install
Permit Number: 16-02294
Facility ID: 1677010757
Effective Date: 8/12/2008

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) B.3

2. OAC rule 3745-31-28

This facility is a major MACT source as described in section 112 of the Clean Air Act (CAA). As such, the permittee shall comply with the requirements of section 112 of CAA. OAC rule 3745-31-28 applies to a facility where a specific MACT category does not apply to it in section 112(D) of CAA, due to the decision to vacate 40 CFR Part 63, Subpart DDDDD. To comply with the requirements of OAC rule 3745-31-28, the permittee has committed to and shall comply with the requirements of 40 CFR Part 63, Subpart DDDDD.

3. This permit shall become effective only after the permittee has paid this permit's permit-to-install fee.



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Final Permit-to-Install
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C. Emissions Unit Terms and Conditions



1. B003, Unit #1

Operations, Property and/or Equipment Description:

B003 - Unit #1, Babcock and Wilcox 180 MMBTU/hr wood, natural gas, and tire derived fuel (TDF) fired boiler for steam generation, controlled with an electrostatic precipitator - modification to combust TDF with wood and avoid PSD review for PM/PM-10, NOx, and CO

- 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) Section d.9 – d.12, e.14.
- b) Applicable Emissions Limitations and/or Control Requirements
 - (1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
(a)	OAC rule 3745-31-05(A)(3)	<p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A), 3745-17-09, 3745-17-1(B), 3745-18-06(D), 3745-31-05(D), 3745-31- (13) thru (20), and 40 CFR 60 Subpart Db.</p> <p>When burning natural gas exclusively, particulate emissions (PE) shall not exceed 0.02 lb/MMBtu of actual heat input.</p> <p>When burning a combination of the following fuels: natural gas, TDF and/or wood (as described in term A.II.3), PE shall not exceed 0.08 lb/MMBtu of actual heat input, and 14.4 lbs/hr of PE;</p> <p>nitrogen oxides (NO_x) emissions shall not exceed 0.24 lb/MMBtu of actual heat input, and 43.2 lbs/hr;</p> <p>sulfur dioxide (SO₂) emissions shall not exceed 0.28 lb/MMBtu of actual heat input, and 50.4 lbs/hr;</p> <p>carbon monoxide (CO) emissions shall not exceed 18.0 lbs/hr;</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>organic compounds (OC) emissions shall not exceed 0.36 lb/hr and 1.58 tpy of OC;</p> <p>hydrogen chloride (HCl) emissions shall not exceed 0.09 lb/mmBtu, 16.2 lb/hr and 19.87 tpy of HCl;</p> <p>sulfuric acid mist emissions shall not exceed 0.053 lb/MMBtu of actual heat input, and 9.56 lbs/hr; and,</p> <p>See b.2.d below.</p> <p>20% opacity as a 6-minute average, (except for one 6-minute period per hour of not more than 27% opacity).</p> <p>See c.1 below.</p> <p>maximum hourly TDF and wood usage shall be limited by the equation found in section A.II.2.c and a limitation of no more than 3,220 lbs of TDF burned per hour.</p>
(b)	OAC rule 3745-17-07(A)	See b.2.a below.
(c)	OAC rule 3745-17-10(B)	Applicable PE rule when burning natural gas, see A.I.2.a below.
(d)	OAC rule 3745-18-06(D)	Applicable SO ₂ rule when burning natural gas, see A.I.2.a below.
(e)	OAC rule 3745-21-07(B) OAC rule 3745-21-08(B) OAC rule 3745-23-06(B)	See b.2.f below
(f)	40 CFR 60, Subpart Db	See b.2.a and c below.
(g)	OAC rule 3745-31-(13) thru (20)	<p>The tons of emissions per rolling 12-month period for emissions units B003 and B004 combined shall not exceed:</p> <p>SO₂ - 135.5 Sulfuric Acid Mist - 23.4.</p> <p>See b.2.e below.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
(h)	OAC rule 3745-31-05(D)	<p>This emissions unit is limited to burning natural gas, TDF, and/or wood (as described in term A.II.3), or a combination of these fuels. The amount of these fuels for emissions units B003 and B004 is limited by the equations found in paragraph A.II.2 and limitations of no more than 8,655 tons of TDF and no more than 106,818 tons of wood burned per rolling 12-month period.</p> <p>36.22 tons of particulate matter* (PM) per rolling 12-month period for emissions units B003 and B004 combined.</p> <p>130.24 tons of NO_x per rolling 12-month period for emissions units B003 and B004 combined.</p> <p>56.29 tons of CO per rolling 12-month period for emissions units B003 and B004 combined.</p> <p>See b.2.b below.</p> <p>The annual capacity factor for natural gas shall be limited to 10 percent (0.10) or less for this emissions unit per rolling 12-month period.</p> <p>*All particulate matter less than 10 microns (PM₁₀) is considered to be PM.</p>

(2) Additional Terms and Conditions

- a. The emissions limitation established by this rule is less stringent than the emission limitation established by OAC rule 3745-31-05.
- b. Based upon information submitted by the applicant in their permit application, the annual actual emissions for B003 and B004 based upon years 2001 and 2002 reporting are as follows:
 - PM - 13.76 tpy;
 - NO_x - 91.64 tpy; and
 - CO - 43.10 tpy.



- c. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.
- d. The hourly mass emission limitations (PE, NO_x, SO₂, CO, HCl, and sulfuric acid mist) are based upon maximum values and therefore the permittee does not need to keep hourly records to show compliance with those limitations.
- e. The permittee performed a Best Available Control Technology (BACT) review for SO₂ and sulfuric acid mist. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(13) through(20) above. The following determinations have been made for each pollutant:
 - SO₂ - Restricting the amount of TDF burned in this emissions unit; and
 - Sulfuric acid mist - Restricting the amount of TDF burned in this emissions unit.
- f. The permittee satisfies the ~~A~~best available control techniques and operating practices~~@~~ and ~~A~~latest available control techniques and operating practices~~@~~ required pursuant to OAC rule 3745-21-08 and 3745-21-07(B), respectively, by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3).
- g. On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the 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 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

c) Operational Restrictions

- (1) The permittee shall not burn any oil in this emissions unit.
- (2) Emission, Natural Gas, TDF/Wood Mix, and Wood Burned Restrictions:

In order to avoid applicability of the federal Prevention of Significant Deterioration and state OAC 3745-31-13 thru 20 rules for PM/PM-10, NO_x, and CO, Akron Thermal shall restrict the use of fuels burned in emissions units B003 through B004 combined by the following formula#:



a.

$$\left(\frac{X \text{ lbs of wood burned}}{\text{rolling 12 - month period}} \right) \left(\frac{0.10 \text{ lb of CO}}{10^6 \text{ BTU}} \right) \left(\frac{5500 \text{ BTU}}{\text{lbs of wood}} \right) +$$

$$\left(\frac{Y \text{ lbs of TDF / wood burned}}{\text{rolling 12 - month period}} \right) \left(\frac{0.08 \text{ lb of CO}}{10^6 \text{ BTU}} \right) \left(\frac{7161 \text{ BTU}}{\text{lbs of TDF / wood}} \right) +$$

$$\left(\frac{Z \text{ CF natural gas burned}}{\text{rolling 12 - month period}} \right) \left(\frac{84 \text{ lbs of CO}}{10^6 \text{ CF of natural gas}} \right) \leq$$

$$\left(\frac{112,580 \text{ lbs of CO}}{\text{rolling 12 - month period}} \right)$$

Where:

X is the pounds of pure wood burned per rolling 12 - month period

Y is the pounds of TDF / wood mix burned per rolling 12 - month period

Z is the cubic feet of natural gas burned per rolling 12 - month period

b. If the rolling 12-month TDF usage is less than 8,655 tons, the rolling 12-month wood usage rate is the lesser of 106,818 tons or the amount determined from the following equation:

$$\text{Tons of wood allowed} = 2,463,636 - 276.5 * \text{actual tons of TDF}$$

c. If the maximum hourly TDF usage is less than 3,220 lbs, the maximum hourly wood usage rate is determined from the following equation:

$$\text{Pounds of wood allowed} = 916,364 - 276.5 * \text{actual lbs of TDF}$$

note that stack testing and/or fuel analysis required in this permit might change the emission factors used to calculate the above PM, NO_x, and CO lbs value based upon a rolling 12-month period listed above. Should more accurate emission factors be developed, the permittee shall use them, provided the new emission factors are mutually agreeable to the Ohio EPA, Akron RAQMD, and the permittee.

In addition, during the first 12 calendar months of operation while burning TDF following the issuance of this permit, the permittee shall not exceed the TDF burned limitations specified in the following table:



Month	Maximum Allowable TDF Burned (B003 - B004) (tons)
1	1730
1 - 2	1730
1 - 3	3460
1 - 4	3460
1 - 5	5190
1 - 6	5190
1 - 7	6910
1 - 8	6910
1 - 9	8655
1 - 10	8655
1 - 11	8655
1 - 12	8655



After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual used TDF limitation shall be based upon a rolling, 12-month summation of TDF burned, in tons.

The permittee has existing natural gas and wood usage records such that the permittee does not need to be limited on a monthly basis for the first year.

(3) Wood Burned Restrictions:

The permittee shall only burn live tree trimmings and whole, but chipped trees from area land clearing operations. The permittee shall not burn wood or wood waste derived from any manufacturing operations or any other operation which coats, treats, or otherwise contaminates the wood or wood waste.

The permittee shall only burn wet wood that has a moisture content of 20% or greater.

(4) ESP Restrictions:

The average total combined power input (in kilowatts) to all fields of the ESP, for any 3-hour block of time when the emissions unit is in operation, shall be no less than 90 percent of the total combined power input, as a 3-hour average, during the most recent emissions test that demonstrated the emissions unit was in compliance with the particulate emission limitation.

The permittee shall operate the ESP during any operation of this 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.

The operation of the 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 US EPA-approved methods and procedures. The results of any required emission 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 possible violation of the mass emission limitations.

(5) Natural Gas Annual Capacity Factor Limitation:

In order to comply with the NO_x lb/MMBTU limitation listed under OAC rule 3745-31-05(A)(5) in term A.I.1, the maximum annual natural gas capacity factor for this emissions unit shall not exceed 10 percent, based upon a rolling, 12-month calculation of the annual capacity factor.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the monthly natural gas capacity factor limitations specified in the following table:



<u>Month</u>	<u>Maximum Allowable</u> <u>Monthly Natural Gas Capacity Factor</u>
1	10 percent
1-2	10 percent
1-3	10 percent
1-4	10 percent
1-5	10 percent
1-6	10 percent
1-7	10 percent
1-8	10 percent
1-9	10 percent
1-10	10 percent
1-11	10 percent
1-12	10 percent

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual production rate limitation shall be based upon a rolling, 12-month summation of the production rates.

b) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall monitor and record the following information on a daily basis:

- a. the tons of wood that was fed to the boiler that day;
- b. the tons of TDF that was fed to the boiler that day;
- c. the natural gas consumption for each day (in million cubic feet); and
- d. the total actual heat input to the emissions unit, calculated as follows:

$$DI = DI_g + DI_w + DI_t$$

DI = Total heat input for each day, mmBtu

DI_g = Daily heat input rate from Gas



DI_w = Daily heat input rate from Wood

DI_t = Daily heat input rate from TDF

When the unit is combusting natural gas, use the following equation to calculate heat input rate:

$$DI_g = (Q_g * GCV_g) / 10^3$$

Where:

DI_g = Daily heat input rate from pipeline natural gas, mmBtu/day.

Q_g = Metered flow rate of gaseous fuel combusted during unit operation, thousand standard cubic feet per day.

GCV_g = Gross calorific value of natural gas, as determined by sampling (for each monthly sample of pipeline natural gas, or as verified by the contractual supplier at least once every month pipeline natural gas is combusted) using ASTM D1826-88, ASTM D3588-91, ASTM D4891-89, GPA Standard 2172-86 "Calculation of Gross Heating Value, Relative Density and Compressibility Factor for Natural Gas Mixtures from Compositional Analysis," or GPA Standard 2261-90 "Analysis for Natural Gas and Similar Gaseous Mixtures by Gas Chromatography," Btu/scf.

10^3 = Conversion of thousand Btu to mmBtu.

When the unit is combusting wood, use the following equation to calculate heat input rate:

$$DI_w = W_w * GCV_w / 10^6$$

Where:

DI_w = Daily heat input rate from wood, mmBtu/day.

V_w = Weight of wood consumed per day, measured in lbs/day

GCV_w = Gross calorific value of wood = 5,500 Btu/lb, or as measured by ASTM D2015 during most recent stack test, Btu/unit mass, in lbs.

10^6 = Conversion of Btu to mmBtu.

When the unit is combusting TDF, use the following equation to calculate heat input rate:

$$DI_t = W_t * GCV_t / 10^6$$

Where:

DI_t = Daily heat input rate from TDF, mmBtu/day.

V_t = Weight of TDF consumed per day, measured in lbs/day



GCV_t = Gross calorific value of TDF = 13,000 Btu/lb, or as measured by ASTM E711 during most recent stack test, Btu/unit mass, in lbs.

10⁶ = Conversion of Btu to mmBtu.

(2) Continuous Opacity Monitoring Requirements:

A statement of certification of the existing continuous opacity monitoring system shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 1. Proof of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

The permittee shall operate and maintain existing equipment to continuously monitor and record the opacity of the particulate emissions from this emissions unit. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The permittee shall maintain records of all data obtained by the continuous opacity monitoring system including, but not limited to, percent opacity on an instantaneous (one- minute) and 6-minute block average basis, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

The continuous emission monitoring system consists of all the equipment used to acquire data and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous opacity monitoring system designed to ensure continuous valid and representative readings of opacity. The plan shall include, as a minimum, conducting and recording daily automatic zero/span checks, provisions for conducting a quarterly audit of the continuous opacity monitoring system, and a description of preventive maintenance activities. The plan shall describe step by step procedures for ensuring that sections 7.1.4, 7.4.1, 7.4.2, and Table 1-1 of Performance Specification 1 are maintained on a continuous basis. The quality assurance/quality control plan and a logbook dedicated to the continuous opacity monitoring system must be kept on site and available for inspection during regular office hours.

(3) ESP Requirements:

The permittee shall monitor and record the following on an hourly basis during any operation of the 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 permittee shall record the following information for each day:

- a. all 3-hour blocks of time during which the average total combined power input to the ESP, when the emissions unit was in operation, was less than 90 percent of the total combined power input, as a 3-hour average, during the most recent emissions test that demonstrated the emissions unit was in compliance with the particulate emission limitation; and
 - b. the duration of any downtime for the ESP monitoring equipment for secondary voltage and current specified above, the ESP sections that are out of service, and the duration of the downtime for each section, when the associated emissions unit was in operation.
- (4) The permittee shall operate and maintain a temperature monitor and recorder that measures and records the temperature of the boiler exhaust gases entering the ESP as follows:
- a. during all periods of start-up until the ESP is operational or until the inlet temperature of the ESP achieves the temperature level specified in OAC rule 3745-17-07(A)(3)(a)(i); and
 - b. during all periods of shutdown until the inlet temperature to the ESP drops below the temperature level specified in OAC rule 3745-17-07(A)(3)(b)(i).

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.

- (5) The permittee shall maintain monthly records of the following information in emission units B003 - B004:
- a. the pounds of wood burned;
 - b. the pounds of TDF burned;
 - c. the cubic feet of natural gas burned;
 - d. the rolling, 12-month summation of TDF, natural gas and wood used;
 - e. the calculations and the results of the determination that the formulas in term A.II.2 were met;
 - f. beginning after the first 12 calendar months of operation, the rolling, 12-month summation of the TDF burned ; and



- g. the rolling, 12-month summation of SO₂ and Sulfuric Acid Mist emission limitations.

Also, during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative TDF burned for each calendar month.

The permittee shall calculate the annual capacity factor as defined in 40 CFR Part 60.41b individually for each fuel burned each calendar quarter pursuant to 40 CFR Part 60.49b.

- (d). The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.
- (6) The permittee shall monitor steam generating unit operating conditions and predict nitrogen oxides emission rates as specified in section A.IV.10.
- (7) The permittee shall maintain daily records of the following information for each day:
 - a. the pounds of TDF burned; and
 - b. the pounds of wood burned in conjunction with TDF.
- (8) The permit-to-install (PTI) application for this/these emissions unit(s) B003 – B004 was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The ^AToxic Air Contaminant Statute[@], ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled ^AReview of New Sources of Air Toxic Emissions, Option A[@], as follows:
 - a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists= (ACGIH) ^AThreshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices[@]; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists= (ACGIH) ^AThreshold Limit Values for Chemical Substances and Physical Agents Biological



Exposure Indices; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., $\frac{A \times X}{Y}$ hours per day and $\frac{A \times Y}{Z}$ days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or worst case toxic contaminant(s):

Pollutant: Manganese

TLV (mg/m³): 0.2

Maximum Hourly Emission Rate (lbs/hr): 0.12

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.022

MAGLC (ug/m³): 0.714

Pollutant: Acrolein

TLV (mg/m³): 0.23

Maximum Hourly Emission Rate (lbs/hr): 0.89

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.167

MAGLC (ug/m³): 4.02

Pollutant: Benzene

TLV (mg/m³): 32

Maximum Hourly Emission Rate (lbs/hr): 0.37

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.070

MAGLC (ug/m³): 37.95



Pollutant: Biphenyl

TLV (mg/m³): 1.3

Maximum Hourly Emission Rate (lbs/hr): 3.31

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.264

MAGLC (ug/m³): 29.97

Pollutant: 1,3-Butadiene

TLV (mg/m³): 4.4

Maximum Hourly Emission Rate (lbs/hr): 1.40

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.264

MAGLC (ug/m³): 105.13

Pollutant: Ethylbenzene

TLV (mg/m³): 434

Maximum Hourly Emission Rate (lbs/hr): 0.37

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.070

MAGLC (ug/m³): 10,316.81

Pollutant: Formaldehyde

TLV (mg/m³): 0.27

Maximum Hourly Emission Rate (lbs/hr): 0.97

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.184

MAGLC (ug/m³): 6.45



Pollutant: Naphthalene

TLV (mg/m³): 52

Maximum Hourly Emission Rate (lbs/hr): 0.37

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.070

MAGLC (ug/m³): 1,245.77

Pollutant: Phenol

TLV (mg/m³): 19

Maximum Hourly Emission Rate (lbs/hr): 0.40

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.075

MAGLC (ug/m³): 457.29

Pollutant: Styrene

TLV (mg/m³): 213

Maximum Hourly Emission Rate (lbs/hr): 0.37

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.070

MAGLC (ug/m³): 2,024.49

Pollutant: Toluene

TLV (mg/m³): 188

Maximum Hourly Emission Rate (lbs/hr): 0.20

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.038

MAGLC (ug/m³): 4,476.68



Pollutant: Sulfuric Acid Mist

TLV (mg/m³): 1

Maximum Hourly Emission Rate (lbs/hr): 19.11

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 3.607

MAGLC (ug/m³): 23.81

Pollutant: Hydrogen Chloride

TLV (mg/m³): 5

Maximum Hourly Emission Rate (lbs/hr): 0.86

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.161

MAGLC (ug/m³): 130.60

Pollutant: Lead

TLV (mg/m³): 0.05

Maximum Hourly Emission Rate (lbs/hr): 0.04

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.01

MAGLC (ug/m³): 1.19

The permittee, has demonstrated that emissions, from emissions unit(s) B003 – B004, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the ^AToxic Air Contaminant Statute[@], ORC 3704.03(F).

- (9) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration[@], the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can

affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the AToxic Air Contaminant Statute will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the AToxic Air Contaminant Statute, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI, PTIO, or FEPTIO (as applicable) prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (10) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the AToxic Air Contaminant Statute, ORC 3704.03(F):
 - a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
 - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the AToxic Air Contaminant Statute, ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the AToxic Air Contaminant Statute, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
 - d. the documentation of the initial evaluation of compliance with the AToxic Air Contaminant Statute, ORC 3704.03(F), and documentation of any



determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

- (11) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the AToxic Air Contaminant Statute⁶, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

e) Reporting Requirements

- (1) The permittee shall submit reports (hardcopy and electronic) within 30 days following the end of each calendar quarter to the Akron Regional Air Quality Management District documenting all instances of opacity values in excess of the limitations specified above, detailing the date,

commencement and completion times, duration, magnitude (percent opacity), reason (if known), and corrective actions taken (if any) of each 6-minute block average above the applicable opacity limitation(s).

The reports shall also document any continuous opacity monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included in the quarterly report.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report.

These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

- (2) The permittee shall submit deviation (excursion) reports which identify:
 - a. all periods of time during start-up and shutdown of the emissions unit when the ESP was not in operation and the temperature of the emissions unit exhaust gases exceeded the temperature levels specified in OAC rule 3745-17-07(A)(3)(a)(i) and (b)(i);
 - b. all 3-hour blocks of time during which the average total combined power input to all fields of the ESP does not comply with the operational restriction specified in Section A.II of this permit; and
 - c. all periods in which the TDF usage exceeded 11% TDF by weight and the actual composition for that time period;



- (3) The permittee shall submit quarterly reports which identify the sections of the ESP that were out of service along with the time period(s) involved. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall address the information obtained during the previous calendar quarter.
- (4) The permittee shall submit deviation (excursion) reports which identify all exceedances of rolling, 12-month limitations and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative amounts of TDF and/or wood burned and PM, NO_x, and CO emission levels (compliance with PM, NO_x, and CO emissions levels are demonstrated thru the use of the formula described in term A.II.2) for emission units B003 - B004.
- (5) The permittee shall submit deviation (excursion) reports which identify all exceedances of rolling, 12-month limitations for SO₂ and sulfuric acid mist.
- (6) The permittee shall submit deviation (excursion) reports that identify all exceedances of the natural gas annual capacity factor limitation and, for the first 12 calendar months of operation following the issuance of the permit, all exceedances of the monthly allowable natural gas capacity factor.
- (7) The deviation reports shall be submitted as specified in General Condition A.1.c of this permit.
- (8) The permittee shall submit quarterly reports which specify the total quantity of each fuel combusted in this emissions unit for each calendar month during the calendar quarter. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter.
- (9) The permittee shall submit an initial notification of startup. This notification shall include:
 - a. the date of initial startup;
 - b. the design heat input capacity of the facility and an identification of the fuels to be combusted in the affected facility; and
 - c. the annual capacity factor at which the permittee anticipates operating the facility based on all fuels fired and based on each individual fuel fired.
- (10) The permittee shall submit for approval within 360 days of startup a plan that identifies the operating conditions to be monitored to demonstrate compliance with the nitrogen oxide emission limitations. The plan shall:
 - a. identify the specific operating conditions to be monitored and the relationship between these operating conditions and nitrogen oxide emission rates (i.e., ng/J or lbs/million Btu heat input). Steam generating unit operating conditions include, but are not limited to, the degree of staged combustion (i.e., the ratio of primary air to secondary and/or tertiary air) and the level of excess air (i.e., flue gas oxygen level);



- b. include the data and information that the owner or operator used to identify the relationship between nitrogen oxides emission rates and these operating conditions; and
 - c. identify how these operating conditions, including steam generating unit load, will be monitored on an hourly basis by the permittee during the period of operating of the affected facility; the quality assurance procedures or practices that will be employed to ensure that the data generated by monitoring these operating conditions will be representative and accurate; and the type and format of the records of these operating conditions, including steam generating unit load, that will be maintained by the permittee.
- (11) The permittee shall submit excess emission reports for any calculated exceedance of the nitrogen oxide emission limitation. All reports shall be submitted by the 30th day following the end of the 6 month reporting period.
- (12) Pursuant to the NSPS, section 60.7, the source owner/operator is hereby advised of the requirement to submit a written report to the administrator (not more than 60 days or as soon as practicable before the change is commenced) the following:
- a. information describing the precise nature of the change;
 - b. present and proposed emissions control systems;
 - c. productive capacity of the facility before and after the change; and
 - d. expected completion date of the change.

The administrator may request additional relevant information subsequent to this notice.

- (13) Report required in term A.IV.12 is to be sent to:

Ohio Environmental Protection Agency

DAPC - Permit Management Unit

P. O. Box 163669

Columbus, Ohio 43216-3669

and

Akron Air Pollution Control

146 South High Street

Room 904

Akron, Ohio 44308

- (14) The permittee shall submit annual reports to the appropriate Ohio EPA District Office or local air agency, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Δ Toxic Air



Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

f) Testing Requirements

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

- a. The emission testing shall be conducted within 3 months after start-up
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for particulate, nitrogen oxide, sulfur dioxide, carbon monoxide, organic compounds, hydrogen chloride and sulfuric acid mist.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

for PE, Methods 1-5 of 40 CFR Part 60, Appendix A (while firing 11%TDF and wood mix);

for NO_x, Methods 1-4 and 7E of 40 CFR Part 60, Appendix A (while firing only wood);

for SO₂, Methods 1-4 and 6C of 40 CFR Part 60, Appendix A (while firing 11%TDF and wood mix);

for CO, Methods 1-4 and 10 of 40 CFR Part 60, Appendix A (while firing only wood);

for OC, Methods 1-4 and 25A of 40 CFR Part 60, Appendix A (while firing 11%TDF and wood mix);

for HCl, Methods 1-4 and 26 of 40 CFR Part 60, Appendix A (while firing 11%TDF and wood mix); and

for H₂SO₄ mist, Methods 1-4 and 8 of 40 CFR Part 60, Appendix A (while firing 11%TDF and wood mix).

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 appropriate Ohio EPA District Office or local air agency.

(2) Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test



methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

- (3) Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- (4) A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.
- (5) The permittee shall demonstrate the maximum heat input capacity of the steam generating unit by operating it as maximum capacity for 24 hours. The permittee shall determine the maximum heat input capacity using the production rate at which the emissions unit will be operated, but not later than 180 days after initial start-up of the emissions unit. Subsequent demonstrations may be required by the Administrator at any other shall be used to determine the capacity utilization rate for the emissions unit. Otherwise, the maximum heat input capacity provided by the manufacturer is used.
- (6) Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation:

0.02 lb of PE/MMBTU of actual heat input, when combusting only natural gas

Applicable Compliance Method:

The AP-42 [(7/98) Table 1.4-2] emission factor for natural gas combustion is 7.6 lbs of particulate per 10⁶ scf. This factor is based on an average natural gas heating value of 1,020 Btu/scf and is equivalent to 0.007451 lb of particulate per mmBtu.

b. Emission Limitation:

0.08 lb of PE/MMBTU of actual heat input

14.4 lbs/hr of PE

Applicable Compliance Method:

If required, compliance shall be determined by emission testing in accordance with Methods 1-4 and 5, 40 CFR Part 60, Appendix A.

c. Emission Limitation:



0.24 lb of NO_x/MMBTU of actual heat input

43.2 lbs/hr of NO_x

Applicable Compliance Method:

If required, compliance shall be determined by emission testing in accordance with Methods 1-4 and 7E, 40 CFR Part 60, Appendix A.

d. Emission Limitation:

0.28 lb of SO₂ / MMBTU of actual heat input

50.4 lbs/hr of SO₂

Applicable Compliance Method:

If required, compliance shall be determined by emission testing in accordance with Methods 1-4 and 6C, 40 CFR Part 60, Appendix A.

e. Emission Limitation:

18.0 lbs/hr of CO

Applicable Compliance Method:

If required, compliance shall be determined by emission testing in accordance with Methods 1-4 and 10, 40 CFR Part 60, Appendix A.

f. Emission Limitation:

0.36 lbs/hr of OC

1.58 tpy of OC

Applicable Compliance Method:

If required, compliance shall be determined by emission testing in accordance with Methods 1-4 and 25A, 40 CFR Part 60, Appendix A.

g. Emission Limitation:

0.09 lb HCl/mmBtu

16.2 lbs/hr of HCl

19.87 tpy of HCl

Applicable Compliance Method:



If required, compliance shall be determined by emission testing in accordance with Methods 1-4 and 26, 40 CFR Part 60, Appendix A.

To demonstrate compliance with the annual emission limitation, multiply the result of most recent stack test, in pounds/MMBTU, by the rated boiler capacity of 180 MMBTU/hr, by the maximum operating hours of 8760 hours/year and divide by 2000 to convert the result to tons.

h. Emission Limitation:

0.053 lb of sulfuric acid mist/MMBTU

9.56 lbs/hr of sulfuric acid mist

Applicable Compliance Method:

If required, compliance shall be determined by emission testing in accordance with Methods 1-4 and 8, 40 CFR Part 60, Appendix A.

i. Emission Limitation:

20% opacity as a 6-minute average, (except for one 6-minute period per hour of not more than 27% opacity)

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be demonstrated in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures in OAC rule 3745-17-03(B)(1).

j. Emission Limitation:

135.5 tons per rolling 12-month period of SO₂ from B003 and Boo4 combined

Applicable Compliance Method:

Annual SO₂ emissions = SO₂ emissions from TDF + SO₂ emissions from wood

SO₂ emissions from TDF = tons of TDF burned * 26 mmBtu/ton * 1.17 lb/mmBtu * 1 ton/2,000 lbs

SO₂ emissions from wood = tons of wood burned * 11 mmBtu/ton * 0.01 lb/mmBtu * 1 tons/2,000 lbs

The mmBtu heat content and emission rates in lb/mmBtu in the above equations should be adjusted if data obtained during emission testing warrants a change.

k. Emission Limitation:

23.4 tons per rolling 12-month period of sulfuric acid mist from B003 and Boo4 combined

Applicable Compliance Method:



Multiply the result of most recent stack test, in pounds/MMBTU, by the rated boiler capacity of 180 MMBTU/hr, by the maximum operating hours of 8760 hours/year and divide by 2000 to convert the result to tons.

I. Emission Limitation:

36.22 tpy of PM for B003 and B004 combined

130.24 tpy of NO_x for B003 and B004 combined

56.29 tpy of CO for B003 and B004 combined

Applicable Compliance Method:

The permittee shall demonstrate compliance with the above limitations based upon the record keeping requirements of section III.5 of these T&Cs.

m. Emission Limitation:

annual capacity factor for natural gas shall be limited to 10 percent (0.10)

Applicable Compliance Method:

The permittee shall demonstrate compliance with the above limitations based upon the record keeping requirements of section III.6 of these T&Cs.

g) Miscellaneous Requirements

- (1) The terms and conditions in this Permit to Install shall supersede all the air pollution control requirements for this emissions unit contained in permits to install 16-037, 16-294, and 16-02187 issued on March 17, 1976, July 11, 1984, and March 26, 2002 respectively.
- (2) The terms on condition in this administrative modification shall supersede all the air pollution control requirements for this emissions unit contained in this permit to install as was originally issued final on December 16, 2003.



2. B004, Unit #2

Operations, Property and/or Equipment Description:

B004 - Unit #2, Babcock and Wilcox 180 MMBTU/hr wood, natural gas, and tire derived fuel (TDF) fired boiler for steam generation, controlled with an electrostatic precipitator - modification to combust TDF with wood and avoid PSD review for PM/PM-10, NOx, and CO

- 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) Section d.9 – d.12, e.14.
- b) Applicable Emissions Limitations and/or Control Requirements
 - (1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
(a)	OAC rule 3745-31-05(A)(3)	<p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A), 3745-17-09, 3745-17-1(B), 3745-18-06(D), 3745-31-05(D), 3745-31- (13) thru (20), and 40 CFR 60 Subpart Db.</p> <p>When burning natural gas exclusively, particulate emissions (PE) shall not exceed 0.02 lb/MMBtu of actual heat input.</p> <p>When burning a combination of the following fuels: natural gas, TDF and/or wood (as described in term A.II.3), PE shall not exceed 0.08 lb/MMBtu of actual heat input, and 14.4 lbs/hr of PE;</p> <p>nitrogen oxides (NO_x) emissions shall not exceed 0.24 lb/MMBtu of actual heat input, and 43.2 lbs/hr;</p> <p>sulfur dioxide (SO₂) emissions shall not exceed 0.28 lb/MMBtu of actual heat input, and 50.4 lbs/hr;</p> <p>carbon monoxide (CO) emissions shall not exceed 18.0 lbs/hr;</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>organic compounds (OC) emissions shall not exceed 0.36 lb/hr and 1.58 tpy of OC;</p> <p>hydrogen chloride (HCl) emissions shall not exceed 0.09 lb/mmBtu, 16.2 lb/hr and 19.87 tpy of HCl;</p> <p>sulfuric acid mist emissions shall not exceed 0.053 lb/MMBtu of actual heat input, and 9.56 lbs/hr; and,</p> <p>See b.2.d below.</p> <p>20% opacity as a 6-minute average, (except for one 6-minute period per hour of not more than 27% opacity).</p> <p>See c.1 below.</p> <p>maximum hourly TDF and wood usage shall be limited by the equation found in section A.II.2.c and a limitation of no more than 3,220 lbs of TDF burned per hour.</p>
(b)	OAC rule 3745-17-07(A)	See b.2.a below.
(c)	OAC rule 3745-17-10(B)	Applicable PE rule when burning natural gas, see A.I.2.a below.
(d)	OAC rule 3745-18-06(D)	Applicable SO ₂ rule when burning natural gas, see A.I.2.a below.
(e)	OAC rule 3745-21-07(B) OAC rule 3745-21-08(B) OAC rule 3745-23-06(B)	See b.2.f below
(f)	40 CFR 60, Subpart Db	See b.2.a and c below.
(g)	OAC rule 3745-31-(13) thru (20)	<p>The tons of emissions per rolling 12-month period for emissions units B003 and B004 combined shall not exceed:</p> <p>SO₂ - 135.5 Sulfuric Acid Mist - 23.4.</p> <p>See b.2.e below.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
(h)	OAC rule 3745-31-05(D)	<p>This emissions unit is limited to burning natural gas, TDF, and/or wood (as described in term A.II.3), or a combination of these fuels. The amount of these fuels for emissions units B003 and B004 is limited by the equations found in paragraph A.II.2 and limitations of no more than 8,655 tons of TDF and no more than 106,818 tons of wood burned per rolling 12-month period.</p> <p>36.22 tons of particulate matter* (PM) per rolling 12-month period for emissions units B003 and B004 combined.</p> <p>130.24 tons of NO_x per rolling 12-month period for emissions units B003 and B004 combined.</p> <p>56.29 tons of CO per rolling 12-month period for emissions units B003 and B004 combined.</p> <p>See b.2.b below.</p> <p>The annual capacity factor for natural gas shall be limited to 10 percent (0.10) or less for this emissions unit per rolling 12-month period.</p> <p>*All particulate matter less than 10 microns (PM₁₀) is considered to be PM.</p>

- (2) Additional Terms and Conditions
- a. The emissions limitation established by this rule is less stringent than the emission limitation established by OAC rule 3745-31-05.
 - b. Based upon information submitted by the applicant in their permit application, the annual actual emissions for B003 and B004 based upon years 2001 and 2002 reporting are as follows:
 - PM - 13.76 tpy;
 - NO_x - 91.64 tpy; and
 - CO - 43.10 tpy.



- c. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.
- d. The hourly mass emission limitations (PE, NO_x, SO₂, CO, HCl, and sulfuric acid mist) are based upon maximum values and therefore the permittee does not need to keep hourly records to show compliance with those limitations.
- e. The permittee performed a Best Available Control Technology (BACT) review for SO₂ and sulfuric acid mist. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(13) through(20) above. The following determinations have been made for each pollutant:
 - SO₂ - Restricting the amount of TDF burned in this emissions unit; and
 - Sulfuric acid mist - Restricting the amount of TDF burned in this emissions unit.
- f. The permittee satisfies the ~~A~~best available control techniques and operating practices~~@~~ and ~~A~~latest available control techniques and operating practices~~@~~ required pursuant to OAC rule 3745-21-08 and 3745-21-07(B), respectively, by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3).
- g. On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the 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 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

d) Operational Restrictions

- (2) The permittee shall not burn any oil in this emissions unit.
- (3) Emission, Natural Gas, TDF/Wood Mix, and Wood Burned Restrictions:

In order to avoid applicability of the federal Prevention of Significant Deterioration and state OAC 3745-31-13 thru 20 rules for PM/PM-10, NO_x, and CO, Akron Thermal shall restrict the use of fuels burned in emissions units B003 through B004 combined by the following formula#:



a.

$$\left(\frac{X \text{ lbs of wood burned}}{\text{rolling 12 - month period}} \right) \left(\frac{0.10 \text{ lb of CO}}{10^6 \text{ BTU}} \right) \left(\frac{5500 \text{ BTU}}{\text{lbs of wood}} \right) +$$

$$\left(\frac{Y \text{ lbs of TDF / wood burned}}{\text{rolling 12 - month period}} \right) \left(\frac{0.08 \text{ lb of CO}}{10^6 \text{ BTU}} \right) \left(\frac{7161 \text{ BTU}}{\text{lbs of TDF / wood}} \right) +$$

$$\left(\frac{Z \text{ CF natural gas burned}}{\text{rolling 12 - month period}} \right) \left(\frac{84 \text{ lbs of CO}}{10^6 \text{ CF of natural gas}} \right) \leq$$

$$\left(\frac{112,580 \text{ lbs of CO}}{\text{rolling 12 - month period}} \right)$$

Where:

X is the pounds of pure wood burned per rolling 12 - month period

Y is the pounds of TDF / wood mix burned per rolling 12 - month period

Z is the cubic feet of natural gas burned per rolling 12 - month period

- b. If the rolling 12-month TDF usage is less than 8,655 tons, the rolling 12-month wood usage rate is the lesser of 106,818 tons or the amount determined from the following equation:

$$\text{Tons of wood allowed} = 2,463,636 - 276.5 * \text{actual tons of TDF}$$

- c. If the maximum hourly TDF usage is less than 3,220 lbs, the maximum hourly wood usage rate is determined from the following equation:

$$\text{Pounds of wood allowed} = 916,364 - 276.5 * \text{actual lbs of TDF}$$

note that stack testing and/or fuel analysis required in this permit might change the emission factors used to calculate the above PM, NO_x, and CO lbs value based upon a rolling 12-month period listed above. Should more accurate emission factors be developed, the permittee shall use them, provided the new emission factors are mutually agreeable to the Ohio EPA, Akron RAQMD, and the permittee.

In addition, during the first 12 calendar months of operation while burning TDF following the issuance of this permit, the permittee shall not exceed the TDF burned limitations specified in the following table:



Month	Maximum Allowable TDF Burned (B003 - B004) (tons)
1	1730
1 - 2	1730
1 - 3	3460
1 - 4	3460
1 - 5	5190
1 - 6	5190
1 - 7	6910
1 - 8	6910
1 - 9	8655
1 - 10	8655
1 - 11	8655
1 - 12	8655



After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual used TDF limitation shall be based upon a rolling, 12-month summation of TDF burned, in tons.

The permittee has existing natural gas and wood usage records such that the permittee does not need to be limited on a monthly basis for the first year.

(4) Wood Burned Restrictions:

The permittee shall only burn live tree trimmings and whole, but chipped trees from area land clearing operations. The permittee shall not burn wood or wood waste derived from any manufacturing operations or any other operation which coats, treats, or otherwise contaminates the wood or wood waste.

The permittee shall only burn wet wood that has a moisture content of 20% or greater.

(5) ESP Restrictions:

The average total combined power input (in kilowatts) to all fields of the ESP, for any 3-hour block of time when the emissions unit is in operation, shall be no less than 90 percent of the total combined power input, as a 3-hour average, during the most recent emissions test that demonstrated the emissions unit was in compliance with the particulate emission limitation.

The permittee shall operate the ESP during any operation of this 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.

The operation of the 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 US EPA-approved methods and procedures. The results of any required emission 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 possible violation of the mass emission limitations.

(6) Natural Gas Annual Capacity Factor Limitation:

In order to comply with the NO_x lb/MMBTU limitation listed under OAC rule 3745-31-05(A)(5) in term A.I.1, the maximum annual natural gas capacity factor for this emissions unit shall not exceed 10 percent, based upon a rolling, 12-month calculation of the annual capacity factor.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the monthly natural gas capacity factor limitations specified in the following table:



<u>Month</u>	<u>Maximum Allowable</u> <u>Monthly Natural Gas Capacity Factor</u>
1	10 percent
1-2	10 percent
1-3	10 percent
1-4	10 percent
1-5	10 percent
1-6	10 percent
1-7	10 percent
1-8	10 percent
1-9	10 percent
1-10	10 percent
1-11	10 percent
1-12	10 percent

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual production rate limitation shall be based upon a rolling, 12-month summation of the production rates.

h) Monitoring and/or Recordkeeping Requirements

(12) The permittee shall monitor and record the following information on a daily basis:

- a. the tons of wood that was fed to the boiler that day;
- b. the tons of TDF that was fed to the boiler that day;
- c. the natural gas consumption for each day (in million cubic feet); and
- d. the total actual heat input to the emissions unit, calculated as follows:

$$DI = DI_g + DI_w + DI_t$$

DI = Total heat input for each day, mmBtu

DI_g = Daily heat input rate from Gas



$$DI_w = \text{Daily heat input rate from Wood}$$

$$DI_t = \text{Daily heat input rate from TDF}$$

When the unit is combusting natural gas, use the following equation to calculate heat input rate:

$$DI_g = (Q_g * GCV_g) / 10^3$$

Where:

$$DI_g = \text{Daily heat input rate from pipeline natural gas, mmBtu/day.}$$

$$Q_g = \text{Metered flow rate of gaseous fuel combusted during unit operation, thousand standard cubic feet per day.}$$

$$GCV_g = \text{Gross calorific value of natural gas, as determined by sampling (for each monthly sample of pipeline natural gas, or as verified by the contractual supplier at least once every month pipeline natural gas is combusted) using ASTM D1826-88, ASTM D3588-91, ASTM D4891-89, GPA Standard 2172-86 "Calculation of Gross Heating Value, Relative Density and Compressibility Factor for Natural Gas Mixtures from Compositional Analysis," or GPA Standard 2261-90 "Analysis for Natural Gas and Similar Gaseous Mixtures by Gas Chromatography," Btu/scf.}$$

$$10^3 = \text{Conversion of thousand Btu to mmBtu.}$$

When the unit is combusting wood, use the following equation to calculate heat input rate:

$$DI_w = W_w * GCV_w / 10^6$$

Where:

$$DI_w = \text{Daily heat input rate from wood, mmBtu/day.}$$

$$V_w = \text{Weight of wood consumed per day, measured in lbs/day}$$

$$GCV_w = \text{Gross calorific value of wood = 5,500 Btu/lb, or as measured by ASTM D2015 during most recent stack test, Btu/unit mass, in lbs.}$$

$$10^6 = \text{Conversion of Btu to mmBtu.}$$

When the unit is combusting TDF, use the following equation to calculate heat input rate:

$$DI_t = W_t * GCV_t / 10^6$$

Where:

$$DI_t = \text{Daily heat input rate from TDF, mmBtu/day.}$$



- V_t = Weight of TDF consumed per day, measured in lbs/day
- GCV_t = Gross calorific value of TDF = 13,000 Btu/lb, or as measured by ASTM E711 during most recent stack test, Btu/unit mass, in lbs.
- 10^6 = Conversion of Btu to mmBtu.

(13) Continuous Opacity Monitoring Requirements:

A statement of certification of the existing continuous opacity monitoring system shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 1. Proof of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

The permittee shall operate and maintain existing equipment to continuously monitor and record the opacity of the particulate emissions from this emissions unit. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The permittee shall maintain records of all data obtained by the continuous opacity monitoring system including, but not limited to, percent opacity on an instantaneous (one- minute) and 6-minute block average basis, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

The continuous emission monitoring system consists of all the equipment used to acquire data and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous opacity monitoring system designed to ensure continuous valid and representative readings of opacity. The plan shall include, as a minimum, conducting and recording daily automatic zero/span checks, provisions for conducting a quarterly audit of the continuous opacity monitoring system, and a description of preventive maintenance activities. The plan shall describe step by step procedures for ensuring that sections 7.1.4, 7.4.1, 7.4.2, and Table 1-1 of Performance Specification 1 are maintained on a continuous basis. The quality assurance/quality control plan and a logbook dedicated to the continuous opacity monitoring system must be kept on site and available for inspection during regular office hours.

(14) ESP Requirements:

The permittee shall monitor and record the following on an hourly basis during any operation of the 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 permittee shall record the following information for each day:

- a. all 3-hour blocks of time during which the average total combined power input to the ESP, when the emissions unit was in operation, was less than 90 percent of the total combined power input, as a 3-hour average, during the most recent emissions test that demonstrated the emissions unit was in compliance with the particulate emission limitation; and
 - b. the duration of any downtime for the ESP monitoring equipment for secondary voltage and current specified above, the ESP sections that are out of service, and the duration of the downtime for each section, when the associated emissions unit was in operation.
- (15) The permittee shall operate and maintain a temperature monitor and recorder that measures and records the temperature of the boiler exhaust gases entering the ESP as follows:
- a. during all periods of start-up until the ESP is operational or until the inlet temperature of the ESP achieves the temperature level specified in OAC rule 3745-17-07(A)(3)(a)(i); and
 - b. during all periods of shutdown until the inlet temperature to the ESP drops below the temperature level specified in OAC rule 3745-17-07(A)(3)(b)(i).

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.

- (16) The permittee shall maintain monthly records of the following information in emission units B003 - B004:
- a. the pounds of wood burned;
 - b. the pounds of TDF burned;
 - c. the cubic feet of natural gas burned;
 - d. the rolling, 12-month summation of TDF, natural gas and wood used;
 - e. the calculations and the results of the determination that the formulas in term A.II.2 were met;
 - f. beginning after the first 12 calendar months of operation, the rolling, 12-month summation of the TDF burned ; and



- g. the rolling, 12-month summation of SO₂ and Sulfuric Acid Mist emission limitations.

Also, during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative TDF burned for each calendar month.

The permittee shall calculate the annual capacity factor as defined in 40 CFR Part 60.41b individually for each fuel burned each calendar quarter pursuant to 40 CFR Part 60.49b.

- (d). The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.
- (17) The permittee shall monitor steam generating unit operating conditions and predict nitrogen oxides emission rates as specified in section A.IV.10.
- (18) The permittee shall maintain daily records of the following information for each day:
 - a. the pounds of TDF burned; and
 - b. the pounds of wood burned in conjunction with TDF.
- (19) The permit-to-install (PTI) application for this/these emissions unit(s) B003 – B004 was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The ^AToxic Air Contaminant Statute[@], ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled ^AReview of New Sources of Air Toxic Emissions, Option A[@], as follows:
 - a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists= (ACGIH) ^AThreshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices[@]; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists= (ACGIH) ^AThreshold Limit Values for Chemical Substances and Physical Agents Biological



Exposure Indices; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., $\frac{X}{8}$ hours per day and $\frac{Y}{5}$ days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or worst case toxic contaminant(s):

Pollutant: Manganese

TLV (mg/m3): 0.2

Maximum Hourly Emission Rate (lbs/hr): 0.12

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.022

MAGLC (ug/m3): 0.714

Pollutant: Acrolein

TLV (mg/m3): 0.23

Maximum Hourly Emission Rate (lbs/hr): 0.89

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.167

MAGLC (ug/m3): 4.02

Pollutant: Benzene

TLV (mg/m3): 32

Maximum Hourly Emission Rate (lbs/hr): 0.37

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.070

MAGLC (ug/m3): 37.95



Pollutant: Biphenyl

TLV (mg/m³): 1.3

Maximum Hourly Emission Rate (lbs/hr): 3.31

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.264

MAGLC (ug/m³): 29.97

Pollutant: 1,3-Butadiene

TLV (mg/m³): 4.4

Maximum Hourly Emission Rate (lbs/hr): 1.40

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.264

MAGLC (ug/m³): 105.13

Pollutant: Ethylbenzene

TLV (mg/m³): 434

Maximum Hourly Emission Rate (lbs/hr): 0.37

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.070

MAGLC (ug/m³): 10,316.81

Pollutant: Formaldehyde

TLV (mg/m³): 0.27

Maximum Hourly Emission Rate (lbs/hr): 0.97

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.184

MAGLC (ug/m³): 6.45



Pollutant: Naphthalene

TLV (mg/m³): 52

Maximum Hourly Emission Rate (lbs/hr): 0.37

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.070

MAGLC (ug/m³): 1,245.77

Pollutant: Phenol

TLV (mg/m³): 19

Maximum Hourly Emission Rate (lbs/hr): 0.40

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.075

MAGLC (ug/m³): 457.29

Pollutant: Styrene

TLV (mg/m³): 213

Maximum Hourly Emission Rate (lbs/hr): 0.37

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.070

MAGLC (ug/m³): 2,024.49

Pollutant: Toluene

TLV (mg/m³): 188

Maximum Hourly Emission Rate (lbs/hr): 0.20

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.038

MAGLC (ug/m³): 4,476.68

Pollutant: Sulfuric Acid Mist



TLV (mg/m³): 1

Maximum Hourly Emission Rate (lbs/hr): 19.11

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 3.607

MAGLC (ug/m³): 23.81

Pollutant: Hydrogen Chloride

TLV (mg/m³): 5

Maximum Hourly Emission Rate (lbs/hr): 0.86

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.161

MAGLC (ug/m³): 130.60

Pollutant: Lead

TLV (mg/m³): 0.05

Maximum Hourly Emission Rate (lbs/hr): 0.04

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.01

MAGLC (ug/m³): 1.19

The permittee, has demonstrated that emissions, from emissions unit(s) B003 – B004, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the AToxic Air Contaminant Statute, ORC 3704.03(F).

- (20) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and



- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the AToxic Air Contaminant Statute will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the AToxic Air Contaminant Statute, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI, PTIO, or FEPTIO (as applicable) prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (21) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the AToxic Air Contaminant Statute, ORC 3704.03(F):

- a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

- a. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the AToxic Air Contaminant Statute, ORC 3704.03(F);
- b. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the AToxic Air Contaminant Statute, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
- c. the documentation of the initial evaluation of compliance with the AToxic Air Contaminant Statute, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

- (22) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the AToxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

- i) Reporting Requirements



- (15) The permittee shall submit reports (hardcopy and electronic) within 30 days following the end of each calendar quarter to the Akron Regional Air Quality Management District documenting all instances of opacity values in excess of the limitations specified above, detailing the date,

commencement and completion times, duration, magnitude (percent opacity), reason (if known), and corrective actions taken (if any) of each 6-minute block average above the applicable opacity limitation(s).

The reports shall also document any continuous opacity monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included in the quarterly report.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report.

These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

- (16) The permittee shall submit deviation (excursion) reports which identify:
- a. all periods of time during start-up and shutdown of the emissions unit when the ESP was not in operation and the temperature of the emissions unit exhaust gases exceeded the temperature levels specified in OAC rule 3745-17-07(A)(3)(a)(i) and (b)(i);
 - b. all 3-hour blocks of time during which the average total combined power input to all fields of the ESP does not comply with the operational restriction specified in Section A.II of this permit; and
 - c. all periods in which the TDF usage exceeded 11% TDF by weight and the actual composition for that time period;
- (17) The permittee shall submit quarterly reports which identify the sections of the ESP that were out of service along with the time period(s) involved. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall address the information obtained during the previous calendar quarter.
- (18) The permittee shall submit deviation (excursion) reports which identify all exceedances of rolling, 12-month limitations and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative amounts of TDF and/or wood burned and PM, NO_x, and CO emission levels



(compliance with PM, NO_x, and CO emissions levels are demonstrated thru the use of the formula described in term A.II.2) for emission units B003 - B004.

- (19) The permittee shall submit deviation (excursion) reports which identify all exceedances of rolling, 12-month limitations for SO₂ and sulfuric acid mist.
- (20) The permittee shall submit deviation (excursion) reports that identify all exceedances of the natural gas annual capacity factor limitation and, for the first 12 calendar months of operation following the issuance of the permit, all exceedances of the monthly allowable natural gas capacity factor.
- (21) The deviation reports shall be submitted as specified in General Condition A.1.c of this permit.
- (22) The permittee shall submit quarterly reports which specify the total quantity of each fuel combusted in this emissions unit for each calendar month during the calendar quarter. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter.
- (23) The permittee shall submit an initial notification of startup. This notification shall include:
 - a. the date of initial startup;
 - b. the design heat input capacity of the facility and an identification of the fuels to be combusted in the affected facility; and
 - c. the annual capacity factor at which the permittee anticipates operating the facility based on all fuels fired and based on each individual fuel fired.
- (24) The permittee shall submit for approval within 360 days of startup a plan that identifies the operating conditions to be monitored to demonstrate compliance with the nitrogen oxide emission limitations. The plan shall:
 - a. identify the specific operating conditions to be monitored and the relationship between these operating conditions and nitrogen oxide emission rates (i.e., ng/J or lbs/million Btu heat input). Steam generating unit operating conditions include, but are not limited to, the degree of staged combustion (i.e., the ratio of primary air to secondary and/or tertiary air) and the level of excess air (i.e., flue gas oxygen level);
 - b. include the data and information that the owner or operator used to identify the relationship between nitrogen oxides emission rates and these operating conditions; and
 - c. identify how these operating conditions, including steam generating unit load, will be monitored on an hourly basis by the permittee during the period of operating of the affected facility; the quality assurance procedures or practices that will be employed to ensure that the data generated by monitoring these operating conditions will be representative and accurate; and the type and format of the records of these operating conditions, including steam generating unit load, that will be maintained by the permittee.



- (25) The permittee shall submit excess emission reports for any calculated exceedance of the nitrogen oxide emission limitation. All reports shall be submitted by the 30th day following the end of the 6 month reporting period.
- (26) Pursuant to the NSPS, section 60.7, the source owner/operator is hereby advised of the requirement to submit a written report to the administrator (not more than 60 days or as soon as practicable before the change is commenced) the following:
 - a. information describing the precise nature of the change;
 - b. present and proposed emissions control systems;
 - c. productive capacity of the facility before and after the change; and
 - d. expected completion date of the change.

The administrator may request additional relevant information subsequent to this notice.

- (27) Report required in term A.IV.12 is to be sent to:

Ohio Environmental Protection Agency

DAPC - Permit Management Unit

P. O. Box 163669

Columbus, Ohio 43216-3669

and

Akron Air Pollution Control

146 South High Street

Room 904

Akron, Ohio 44308

- (28) The permittee shall submit annual reports to the appropriate Ohio EPA District Office or local air agency, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the A Toxics Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

j) Testing Requirements

- (7) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 3 months after start-up



- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for particulate, nitrogen oxide, sulfur dioxide, carbon monoxide, organic compounds, hydrogen chloride and sulfuric acid mist.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):
 - for PE, Methods 1-5 of 40 CFR Part 60, Appendix A (while firing 11%TDF and wood mix);
 - for NO_x, Methods 1-4 and 7E of 40 CFR Part 60, Appendix A (while firing only wood);
 - for SO₂, Methods 1-4 and 6C of 40 CFR Part 60, Appendix A (while firing 11%TDF and wood mix);
 - for CO, Methods 1-4 and 10 of 40 CFR Part 60, Appendix A (while firing only wood);
 - for OC, Methods 1-4 and 25A of 40 CFR Part 60, Appendix A (while firing 11%TDF and wood mix);
 - for HCl, Methods 1-4 and 26 of 40 CFR Part 60, Appendix A (while firing 11%TDF and wood mix); and
 - for H₂SO₄ mist, Methods 1-4 and 8 of 40 CFR Part 60, Appendix A (while firing 11%TDF and wood mix).

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 appropriate Ohio EPA District Office or local air agency.
- (8) Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).
- (9) Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- (10) A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio



EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

- (11) The permittee shall demonstrate the maximum heat input capacity of the steam generating unit by operating it as maximum capacity for 24 hours. The permittee shall determine the maximum heat input capacity using the heat loss method described in section 5 and 7.3 of the ASME Power Test Codes 4.1. This demonstration of maximum heat input capacity shall be made during the initial performance test. It shall be made within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial start-up of the emissions unit. Subsequent demonstrations may be required by the Administrator at any other time. If this demonstration indicates that the maximum heat input capacity of the emissions unit is less than that stated by the manufacturer of the emissions unit, the maximum heat input capacity determined during this demonstration shall be used to determine the capacity utilization rate for the emissions unit. Otherwise, the maximum heat input capacity provided by the manufacturer is used.

Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation:

0.02 lb of PE/MMBTU of actual heat input, when combusting only natural gas

Applicable Compliance Method:

The AP-42 [(7/98) Table 1.4-2] emission factor for natural gas combustion is 7.6 lbs of particulate per 10⁶ scf. This factor is based on an average natural gas heating value of 1,020 Btu/scf and is equivalent to 0.007451 lb of particulate per mmBtu.

b. Emission Limitation:

0.08 lb of PE/MMBTU of actual heat input

14.4 lbs/hr of PE

Applicable Compliance Method:

If required, compliance shall be determined by emission testing in accordance with Methods 1-4 and 5, 40 CFR Part 60, Appendix A.

c. Emission Limitation:

0.24 lb of NO_x/MMBTU of actual heat input

43.2 lbs/hr of NO_x

Applicable Compliance Method:



If required, compliance shall be determined by emission testing in accordance with Methods 1-4 and 7E, 40 CFR Part 60, Appendix A.

d. Emission Limitation:

0.28 lb of SO₂ / MMBTU of actual heat input

50.4 lbs/hr of SO₂

Applicable Compliance Method:

If required, compliance shall be determined by emission testing in accordance with Methods 1-4 and 6C, 40 CFR Part 60, Appendix A.

e. Emission Limitation:

18.0 lbs/hr of CO

Applicable Compliance Method:

If required, compliance shall be determined by emission testing in accordance with Methods 1-4 and 10, 40 CFR Part 60, Appendix A.

f. Emission Limitation:

0.36 lbs/hr of OC

1.58 tpy of OC

Applicable Compliance Method:

If required, compliance shall be determined by emission testing in accordance with Methods 1-4 and 25A, 40 CFR Part 60, Appendix A.

g. Emission Limitation:

0.09 lb HCl/mmBtu

16.2 lbs/hr of HCl

19.87 tpy of HCl

Applicable Compliance Method:

If required, compliance shall be determined by emission testing in accordance with Methods 1-4 and 26, 40 CFR Part 60, Appendix A.

To demonstrate compliance with the annual emission limitation, multiply the result of most recent stack test, in pounds/MMBTU, by the rated boiler capacity of 180 MMBTU/hr, by the maximum operating hours of 8760 hours/year and divide by 2000 to convert the result to tons.

h. Emission Limitation:



0.053 lb of sulfuric acid mist/MMBTU

9.56 lbs/hr of sulfuric acid mist

Applicable Compliance Method:

If required, compliance shall be determined by emission testing in accordance with Methods 1-4 and 8, 40 CFR Part 60, Appendix A.

i. Emission Limitation:

20% opacity as a 6-minute average, (except for one 6-minute period per hour of not more than 27% opacity)

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be demonstrated in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures in OAC rule 3745-17-03(B)(1).

j. Emission Limitation:

135.5 tons per rolling 12-month period of SO₂ from B003 and Boo4 combined

Applicable Compliance Method:

Annual SO₂ emissions = SO₂ emissions from TDF + SO₂ emissions from wood

SO₂ emissions from TDF = tons of TDF burned * 26 mmBtu/ton * 1.17 lb/mmBtu * 1 ton/2,000 lbs

SO₂ emissions from wood = tons of wood burned * 11 mmBtu/ton * 0.01 lb/mmBtu * 1 tons/2,000 lbs

The mmBtu heat content and emission rates in lb/mmBtu in the above equations should be adjusted if data obtained during emission testing warrants a change.

k. Emission Limitation:

23.4 tons per rolling 12-month period of sulfuric acid mist from B003 and Boo4 combined

Applicable Compliance Method:

Multiply the result of most recent stack test, in pounds/MMBTU, by the rated boiler capacity of 180 MMBTU/hr, by the maximum operating hours of 8760 hours/year and divide by 2000 to convert the result to tons.

l. Emission Limitation:

36.22 tpy of PM for B003 and BOO4 combined

130.24 tpy of NO_x for B003 and B004 combined



56.29 tpy of CO for B003 and B004 combined

Applicable Compliance Method:

The permittee shall demonstrate compliance with the above limitations based upon the record keeping requirements of section III.5 of these T&Cs.

m. Emission Limitation:

annual capacity factor for natural gas shall be limited to 10 percent (0.10)

Applicable Compliance Method:

The permittee shall demonstrate compliance with the above limitations based upon the record keeping requirements of section III.6 of these T&Cs.

k) Miscellaneous Requirements

- (3) The terms and conditions in this Permit to Install shall supersede all the air pollution control requirements for this emissions unit contained in permits to install 16-037, 16-294, and 16-02187 issued on March 17, 1976, July 11, 1984, and March 26, 2002 respectively.
- (4) The terms on condition in this administrative modification shall supersede all the air pollution control requirements for this emissions unit contained in this permit to install as was originally issued final on December 16, 2003.