Ohio Environmental Protection Agency
John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

12/22/2011

Certified Mail

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

Mr. Jan-Arthur Utrecht
University of Cincinnati
University of Cincinnati
P.O. Box 210218
Cincinnati, OH 45221-0218

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 1431070849
Permit Number: P0108825
Permit Type: OAC Chapter 3745-31 Modification
County: Hamilton

Dear Permit Holder:

Enclosed please find a final Air Pollution Permit-to-Install (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it carefully.Please complete a survey at www.epa.ohio.gov/dapc/permitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

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

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

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. If you have any questions regarding this permit, please contact the Hamilton County Dept. of Environmental Services. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page,www.epa.ohio.gov/dapc by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

Michael W. Ahern

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

Cc: U.S. EPA
HCDOES; Indiana; Kentucky

Ohio | Environmental Protection Agency

FINAL

Division of Air Pollution Control
Permit-to-Install
for
University of Cincinnati

Facility ID:	1431070849
Permit Number:	P0108825
Permit Type:	OAC Chapter 3745-31 Modification
Issued:	12/22/2011
Effective:	12/22/2011

Ohio Environmental Protection Agency

Division of Air Pollution Control
Permit-to-Install
for
University of Cincinnati

Table of Contents

Authorization 1
A. Standard Terms and Conditions 3
1. Federally Enforceable Standard Terms and Conditions 4
2. Severability Clause 4
3. General Requirements 4
4. Monitoring and Related Record Keeping and Reporting Requirements 5
5. Scheduled Maintenance/Malfunction Reporting 6
6. Compliance Requirements 6
7. Best Available Technology 7
8. Air Pollution Nuisance 7
9. Reporting Requirements 7
10. Applicability 8
11. Construction of New Sources(s) and Authorization to Install 8
12. Permit-To-Operate Application 9
13. Construction Compliance Certification 9
14. Public Disclosure 9
15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations 10
16. Fees 10
17. Permit Transfers 10
18. Risk Management Plans 10
19. Title IV Provisions 10
B. Facility-Wide Terms and Conditions 11
C. Emissions Unit Terms and Conditions 13
1. B108, ECUP Boiler #3 14

Authorization

Facility ID: 1431070849
Facility Description: Central Utility and East Campus Utility Plants (CUP & ECUP)
Application Number(s): A0042718, A0043182
Permit Number: P0108825
Permit Description: Chapter 31 modification to PTI 14-485 for B108, a 136.5 MMBtu/hr spreader stoker coal-fired boiler with fabric filter to allow use of clean cellulosic biomass as fuel.
Permit Type: OAC Chapter 3745-31 Modification
Permit Fee: $1,000.00
Issue Date: 12/22/2011
Effective Date: 12/22/2011

This document constitutes issuance to:

University of Cincinnati
Clifton Campus
Cincinnati, OH 45221

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:

Hamilton County Dept. of Environmental Services
250 William Howard Taft Pkwy.
Cincinnati, OH 45219-2660
(513)946-7777

The above named entity is hereby granted a Permit-to-Install for the emissions unit(s) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally
Director

Authorization (continued)

Permit Number: P0108825
Permit Description: Chapter 31 modification to PTI 14-485 for B108, a 136.5 MMBtu/hr spreader stoker coal-fired boiler with fabric filter to allow use of clean cellulosic biomass as fuel.

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

Emissions Unit ID:	**B108**
Company Equipment ID:	ECUP Boiler #3
Superseded Permit Number:	14-485
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:

(1) Standard Term and Condition A.2.a), Severability Clause

(2) Standard Term and Condition A.3.c) through A. 3.e)General Requirements

(3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements

(4) Standard Term and Condition A.9., Reporting Requirements

(5) Standard Term and Condition A.10., Applicability

(6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install

(7) Standard Term and Condition A.14., Public Disclosure

(8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

(9) Standard Term and Condition A.16., Fees

(10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. General Requirements

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

b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.

c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.

d) This permit does not convey any property rights of any sort, or any exclusive privilege.

e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

4. Monitoring and Related Record Keeping and Reporting Requirements

a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

(1) The date, place (as defined in the permit), and time of sampling or measurements.

(2) The date(s) analyses were performed.

(3) The company or entity that performed the analyses.

(4) The analytical techniques or methods used.

(5) The results of such analyses.

(6) The operating conditions existing at the time of sampling or measurement.

b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:

(1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Hamilton County Dept. of Environmental Services.

(2) Quarterly written reports of (i) any deviations from federally enforceable emissionlimitations, operationalrestrictions, andcontroldeviceoperatingparameterlimitations, 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 Hamilton County Dept. of Environmental Services. 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, andreportingrequirements contained in this permit shall be submitted (i.e., postmarked) to the Hamilton County Dept. of Environmental Services 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 Hamilton County Dept. of Environmental Services 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 Hamilton County Dept. of Environmental Services 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 Hamilton County Dept. of Environmental Services.

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 Hamilton County Dept. of Environmental Services. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

10. Applicability

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

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

a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as “permanently shut down” in Ohio EPA’s “Air Services” along with the date the emissions unit(s) was permanently

removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).

d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

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

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

12. Permit-To-Operate Application

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

13. Construction Compliance Certification

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

a) Completion of initial installation date shall be enteredupon completion of construction and prior to start-up.

b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. Public Disclosure

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

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

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

16. Fees

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

17. Permit Transfers

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

18. Risk Management Plans

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

19. Title IV Provisions

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

B. Facility-Wide Terms and Conditions

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

   a) None.

C. Emissions Unit Terms and Conditions

1. B108, ECUP Boiler #3

Operations, Property and/or Equipment Description:

135.6 MMBTU Spreader Stoker Boiler w/ fabric filter, capable of coal and/or clean cellulosic biomass firing (capacity with CCB is 131 MMBtu/hr)

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) d)(14) and d)(15).

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) (Avoiding PSD major modification for CO for coal and wood firing) Note that the emission limitation in this term was established originally under PTI 14-0485 issued in 1984, and is carried forward into this permitting action.	Carbon monoxide (CO) emissions shall not exceed 104.7 tons per year (TPY), based upon a rolling, 12-month summation. See b)(2)a., c)(1) – c)(4)
b.	ORC 3704.03(T) Best Available Technology (BAT)	When firing clean cellulosic biomass (CCB) only: Particulate matter 10 microns and less in diameter (PM10)* shall not exceed 0.034 grain per dry standard cubic foot (gr/dscf); Particulate matter 2.5 microns and less in diameter (PM2.5)* shall not exceed 0.032 gr/dscf; CO emissions shall not exceed 0.20 lb/MMBtu; See b)(2)c. * includes condensables

c.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	When firing clean cellulosic biomass (CCB): Volatile organic compound (VOC) emissions shall not exceed 0.017 lb/MMBtu of actual heat input. See b)(2)d.
d.	OAC rule 3745-31-05 (A)(3)(a)(ii), as effective 12/01/06	When firing clean cellulosic biomass (CCB): See b)(2)e.
e.	OAC rule 3745-31-05(A)(3) Best Available Technology (BAT) Note that BAT limitations of this term were established originally under PTI 14-0485 issued in 1984, and are carried forward into this permitting action. See b)(2)b.	Particulate emissions (PE) shall not exceed 0.05 lb/MMBtu of actual heat input, and 27.0 TPY. Nitrogen Oxide (NOx) emissions shall not exceed 0.70 lb. of NOx/MMBtu of actual heat input, and 378.1 TPY. Sulfur Dioxide (SO2) emissions shall not exceed 1.60 lbs/MMBtu of actual heat input, and 864.2 TPY*. * the SO2 lbs/MMBtu limit established by this rule is less stringent than the limitation established by OAC 3745-18-37(H)(1). Note that OAC rule 3745-18-37(H)(1) was effective after 1984.
f.	OAC rule 3745-17-10(B)(1)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
g.	OAC rule 3745-17-07(A)(1)	Visible emissions shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
h.	OAC rule 3745-18-37(H)(1)	Sulfur dioxide (SO_2) emissions shall not exceed 1.45 pounds per MMBtu of actual heat input. See c)(2)and c)(3).
i.	OAC rule 3745-103 Acid Rain Permits and Compliance	Exempt. See b)(2)f.
j.	40 CFR Part 60, Subpart Db Standards of Performance for New Stationary Sources (NSPS), Industrial, Commercial, and Institutional Steam Generating Units	Exempt. See b)(2)g.

k.	40 CFR Part 60, Subpart Eb Standards of Performance for New Stationary Sources (NSPS), Large Municipal Waste Combustors	Exempt. See b)(2)h. and c)(1).
l.	40 CFR Part 60, Subpart CCCC Standards of Performance for New Stationary Sources (NSPS), Commercial and Industrial Solid Waste Incineration Units	Exempt. See b)(2)i.
m.	40 CFR Part 63, Subpart DDDDD National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process heaters	See b)(2)j.

(2) Additional Terms and Conditions

a. This permit establishes the federally enforceable emission limitation for purposes of limiting the annual potential to emit (PTE) of this emissions unit to avoid Prevention of Significant Deterioration (PSD) permitting requirements. This federally enforceable emission limitation is based on the operational restrictions contained in c)(1) and c)(3) which limit fuel usage and type in this emissions unit.

This federally enforceable emission limitation established above for the use of clean cellulosic biomass resulted in an annual restricted PTE of 104.7 tons of CO. This annual restricted PTE emission level was determined by multiplying the federally enforceable pound per million Btu emission limitation by the maximum heat input and the maximum allowable rolling 12-month clean cellulosic biomass usage and dividing by 2000. The annual restricted PTE emission level has been established via tons per year limitation in b)(1)a.

b. Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the emission limitations and compliance with all applicable regulations, record keeping, and reporting required by this permit that are associated with the above OAC rule 3745-31-05(A)(3) limitations.

The above-specified emission limitations under OAC rule 3745-31-05(A)(3) represent existing best available technology (BAT) requirements established under the prior permitting actions for this emissions unit.

c. Compliance with ORC 3704.03(T) shall be demonstrated by the emission limitations and compliance with applicable fuel restriction requirements, record keeping, reporting, and emission testing required by this permit that are associated with the above ORC 3704.03(T) limitation and requirements when combusting clean cellulosic biomass material.

The above-specified limitations under ORC 3704.03(T) represent best available technology (BAT) requirements that were triggered as a result of the Chapter 31 modification in this permit action for the use of clean cellulosic biomass which increased potential emissions of CO, PM10, and PM2.5when combusting clean cellulosic biomass materials in this emissions unit.

d. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutant less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limits/control measures no longer apply.

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

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

f. This emissions unit is exempt from the acid rain program requirements in OAC Chapter 3745-103 pursuant to the exemption for non-utility units specified in OAC rule 3745-103-02(B)(8).

g. This emissions unit is exempt from the steam generating unit requirements in 40 CFR Part 60, Subpart Db for affected units that commence construction, modification, or reconstruction after 6/19/1984. The Alternative Fuels Project, as proposed in this permitting action, does not result in a modification or reconstruction of this emissions unit pursuant to the definitions of modification and reconstruction specified in 40 CFR Part 60.14 and 60.15. This emissions unit is undergoing a physical and/or operational change as a result of the Alternative Fuels Project; however, the change does not result in an increase in the emission rate of any pollutant subject to regulation under Subpart Db (i.e., filterable particulate matter, sulfur dioxide, and nitrogen oxides).

h. This emissions unit is exempt from the municipal waste combustor requirements in 40 CFR Part 60, Subpart Eb pursuant to the definitions of municipal solid waste and municipal waste combustor specified in 40 CFR Part 60.51b. The clean cellulosic biomass material (clean wood), which is a material specifically excluded from the definition of municipal solid waste.

In order to demonstrate that this emissions unit is exempt from being subject to 40 CFR Part 60, Subpart Eb, the permittee shall comply with the monitoring and

record keeping requirements as specified in d)(7) and d)(8) to ensure that the clean cellulosic biomass material do not contain discarded waste constituents that would classify the fuel as municipal solid waste.

i. This emissions unit is exempt from the Standards of Performance for Commercial and Industrial Solid Waste Incinerations (CISWI) Units, 40 CFR Part 60, Subpart CCCC, by the exclusive use of traditional fuels as identified in 40 CFR 241.2 which specifically identifies clean cellulosic biomass as an alternative fuel developed from virgin materials that can now be used as fuel products.

j. On May 16, 2011, U.S. EPA decided to stay the Boiler MACT (40 CFR Part 63, Subpart DDDDD). This delay of effectiveness will remain in place until the proceedings for judicial review are completed or U.S. EPA completes its reconsideration of the rules, whichever is earlier, and the Agency publishes a notice in the Federal Register announcing that the rules are in effect. Upon being effective, applicable emissions units at this facility will be subject to 40 CFR Part 63, Subpart DDDDD.

k. The emissions from this emissions unit shall be vented to the baghouse at all times the emissions unit is in operation.

l. The permittee shall maintain a written quality assurance/quality control plan for the continuous opacity monitoring system, designed to ensure continuous valid and representative readings of opacity and compliance with 40 CFR Part 60, Appendix B, Performance Specification 1. The plan shall include, at a minimum, procedures for 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 accurate operation of the continuous opacity monitoring system 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.

c) Operational Restrictions

(1) The permittee shall burn only coal and/or clean cellulosic biomass material in this emissions unit.

(2) The coal received for burning in this emissions unit shall have a sulfur content and heat content that, when calculated in terms of pounds of sulfur dioxide per million Btu of heat content, complies with the allowable sulfur dioxide emission limitation contained in this permit.

(3) The clean cellulosic biomass material burned in this emissions unit shall have a sulfur content that, when calculated in terms of pounds of sulfur dioxide per million Btu of heat content, complies with the allowable sulfur dioxide emission limitation contained in this permit.

(4) The maximum annual clean cellulosic biomass material usage rate for this emissions unit shall not exceed 128,624 tons per rolling, 12-month period.

To ensure enforceability during the first 12 calendar months of operation, the permittee shall not exceed the clean cellulosic biomass material usage levels specified in the following table:

Month	Maximum Allowable Cumulative Usage (tons)
1	11587
1-2	23174
1-3	34761
1-4	46348
1-5	57935
1-6	69522
1-7	81109
1-8	92696
1-9	104283
1-10	115870
1-11	127457
1-12	128624

After the first 12 calendar months of operation, compliance with the annual clean cellulosic biomass material usage limitation shall be based upon a rolling, 12-month summation of the usage rates.

(5) This facility shall operate and maintain an oxygen analyzer to automatically regulate excess air to the boiler.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than coal and clean cellulosic biomass material, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

(2) The permittee shall collect representative grab samples of the coal burned in this emissions unit on a weekly basis. Each sample shall be collected from the feed conveyor. The coal sampling shall be performed in accordance with ASTM method D2234, Standard Practice for Collection of a Gross Sample of Coal. At the end of each calendar month, all of the grab samples which were collected during that calendar month shall be combined into one composite sample.

Each monthly composite sample of coal shall be analyzed for ash content (percent), sulfur content (percent), and heat content (Btu/pound of coal). The analytical methods to be used to determine the ash content, sulfur content, and heat content shall be the most recent version of: ASTM method D3174, Standard Test Method for Ash in the Analysis Sample of Coal and Coke from Coal; ASTM method D3177, Standard Test Methods for Total Sulfur in the Analysis Sample of Coal and Coke or ASTM method D4239, Standard Test Methods for Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods; and ASTM method D5865 Standard Test Method for Gross Calorific Value of Coal and Coke, respectively. Alternative, equivalent methods may be used upon written approval from the appropriate Ohio EPA District Office or local air agency.

(3) The permittee shall collect, or require the clean cellulosic biomass material supplier to collect, a representative sample of the clean cellulosic biomass from each shipment of fuel which is received for burning in this emissions unit. The clean cellulosic biomass sampling shall be performed in accordance with ASTM method D2234, Standard Practice for Collection of a Gross Sample of Coal. At the end of each month, the representative samples of alternative fuel from all shipments of clean cellulosic biomass material which were received during that month shall be combined into one composite sample. This combination may be a physical composite or a weighted average of the test data for the individual shipments.

Each monthly composite sample of clean cellulosic biomass shall be analyzed for sulfur content (percent) and heat content (Btu/pound of fuel). The analytical methods to be used to determine the sulfur content and heat content shall be the most recent version of: ASTM method D3177, Standard Test Methods for Total Sulfur in the Analysis Sample of Coal and Coke or ASTM method D4239, Standard Test Methods for Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods; and ASTM method D5865 Standard Test Method for Gross Calorific Value of Coal and Coke, respectively.Alternative, equivalent methods may be used upon written approval from the Hamilton County Department of Environmental Services.

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

a. the clean cellulosic biomass material usage for each month, and

b. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the clean cellulosic biomass material usage figures.

(5) Also, during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative clean cellulosic biomass material usage for each calendar month.

(6) The permittee shall maintain monthly records of the total quantity of coal received, the results of the analyses for ash content, sulfur content and heat content, and the calculated sulfur dioxide emission rate (in pounds per mmBtu), for all shipments of coal during each calendar month. The sulfur dioxide emission rate is based upon a volume-weighted average as calculated per the equation in OAC rule 3745-18-04(F)(1).

(7) The permittee shall develop, implement, and maintain an Alternative Fuel Procurement and Monitoring Plan (AFPMP) to ensure that only clean cellulosic biomass material, as described in c)(1), is being burned in this emissions unit and to prevent unacceptable waste from being burned. The plan shall, at a minimum, specify the following:

a. A description of the clean cellulosic biomass material fuel to be burned, including the raw materials used to produce the fuel;

b. A description of prohibited waste constituents that would classify the alternative fuel as municipal solid waste;

c. Inspection and sorting procedures and protocol used to eliminate prohibited fuels and minimize unacceptable fuels;

d. Auditing procedures including records of fuel specification, quality control, and batch identification; and

e. Notification and approval procedures for changes to fuel constituents.

(8) The AFPMP and related records must be kept onsite and available for inspection during regular office hours. The permittee shall submit a copy of the AFPMP to Hamilton County Department of Environmental Services 30 days prior to commencing operation of the Alternative Fuels Project.

(9) The permittee shall operate and maintain existing equipment to continuously monitor and record the opacity of particulate emissions from the common stack serving emissions units B103, B105, and B108. The opacity of the visible particulate emissions from emissions units B103, B105, and B108 shall be monitored in the combined stack for the three boilers and the visible particulate emission limitation specified in b)(1)g. applies to each individual boiler as monitored at the common stack. An exceedance of the visible emission limitation in b)(1)g. as measured at the common stack does not necessarily constitute an exceedance of the emission limitation for all boilers. Such

continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of data obtained by the continuous opacity monitoring system including, but not limited to:

a. percent opacity on an instantaneous (one-minute or less) and 6-minute block average basis;

b. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

c. hours of operation of the emissions unit, continuous opacity monitoring system, and control equipment;

d. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous opacity monitoring system;

e. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous opacity monitoring system; as well as, and

f. the reason (if known) and the corrective actions taken (if any) for each such event in d. and e. above.

(10) The permittee shall maintain on-site, the document of certification received from the U.S. EPA or the Ohio EPA's Central Office verifying that the continuous opacity monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 1. The letter/document of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

(11) Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

(12) The acceptable range for the pressure drop across the baghouse shall be based upon the manufacturer’s specifications, until such time as any required performance testing is conducted and an alternative pressure drop range and/or limit is established. The permittee shall record the pressure drop across the baghouse on continuous basis.

(13) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a continuous basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer’s recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee. The acceptable pressure drop shall be based upon the manufacturer’s specifications until such time as

any required performance testing is conducted and the appropriate range is established to demonstrate compliance.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

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

a. a description of the corrective action;

b. the date corrective action was completed;

c. the date and time the deviation ended;

d. the total period of time (in minutes) during which there was a deviation;

e. the pressure drop readings immediately after the corrective action was implemented; and

f. the name(s) of the personnel who performed the work.

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

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

(14) The permit to install for this emissions unit B108 was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Benzene

TLV (ug/m3): 1600

Maximum Hourly Emission Rate (lbs/hr): 0.36

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.178

MAGLC (ug/m3): 38

Pollutant: Formaldehyde

TLV: 0.3 ppm

Maximum Hourly Emission Rate (lbs/hr): 0.38

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.186

MAGLC (ug/m3): 5.26

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include 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 compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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 pollutant with a listed TLV that was proposed in the application and modeled; and

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

(15) If the permittee determines that the "Air Toxic Policy" 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 the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the “Air Toxic Policy:”

a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. documentation of its evaluation and determination that the changed emissions unit still satisfies the “Air Toxic Policy”; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the “Air Toxic Policy” for the change.

e) Reporting Requirements

(1) The permittee shall submit quarterly reports on the quality and quantity of coal received for burning in this emissions unit. These reports shall include the following information for the emissions unit for each calendar month during the calendar quarter:

a. the total quantity of coal received (tons);

b. the average sulfur content (percent) of the coal received;

c. the average heat content (Btu/pound) of the coal received; and

d. the average sulfur dioxide emission rate (pounds sulfur dioxide/mmBtu actual heat input) from the coal received.

Compliance with the sulfur dioxide emission limit shall be determined each month by calculating the average monthly sulfur dioxide emission rate, using the results of the analyses of the monthly composite sample for sulfur content and heat content.

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

(2) The permittee shall submit quarterly reports on the quality and quantity of clean cellulosic biomass material burned in this emissions unit. These reports shall include the

following information for the emissions unit for each calendar month during the calendar quarter:

a. the total quantity of clean cellulosic biomass material burned (tons or pounds);

b. a description of any material other than coal and clean cellulosic biomass material burned;

c. the average sulfur content (percent) of the clean cellulosic biomass material burned;

d. the average heat content (Btu/pound) of the clean cellulosic biomass material burned; and

e. the average sulfur dioxide emission rate (pounds sulfur dioxide/mmBtu actual heat input) from the clean cellulosic biomass material burned.

Compliance with the sulfur dioxide emission limit shall be determined each month by calculating the average monthly sulfur dioxide emission rate, using the results of the analyses of the monthly composite sample for sulfur content and heat content.

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

(3) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. allexceedances of the rolling, 12-month emission limitation for CO.

b. allexceedances of the rolling, 12 month clean cellulosic biomass material usage rate.

c. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the range specified by the manufacturer and outside of the acceptable range following any required compliance demonstration;

d. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;

e. each incident of deviation described in a-d (above) where a prompt investigation was not conducted;

f. each incident of deviation described in a-d where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

g. each incident of deviation described in a-d where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

(4) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous opacity monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of opacity values in excess of any limitation specified in this permit, 40 CFR Part 60, OAC rule 3745-17-07, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude (percent opacity) of each 6-minute block average exceeding the applicable opacity limitation(s), as well as, the reason (if known) and the corrective actions taken (if any) for each exceedance.

b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous opacity monitor;

iii. a description of any change in the equipment that comprises the continuous opacity monitoring system (COMS), including any change to the hardware, changes to the software that may affect COMS readings, and/or changes in the location of the COMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total operating time (hours) of the emissions unit;

vi. the total operating time of the continuous opacity monitoring system while the emissions unit was in operation;

vii. the date, time, and duration of any/each malfunction** of the continuous opacity monitoring system, emissions unit, and/or control equipment;

viii. the date, time, and duration of any downtime** of the continuous opacity monitoring system and/or control equipment while the emissions unit was in operation; and

ix. the reason (if known) and the corrective actions taken (if any) for each event in vii. and viii. above.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* where no exceedance of the opacity limit has occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the quarterly EER report.

** each downtime and malfunction event shall be reported regardless if there is an exceedance of the opacity limit.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

(5) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

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

a. Emission Limitation:

CO emissions shall not exceed 104.7 TPY as a rolling, 12-month summation.

Applicable Compliance Method(s):

Compliance with the annual emission rate, when combusting coal or clean cellulosic biomass, is based upon the summation of the monthly actual heat input in MMBtu per year for the emissions unit multiplied by the actual CO emissions rate determined by the most recent stack emissions test.

b. Emission Limitations:

When firing only clean cellulosic biomass material:

PM10 emissions shall not exceed 0.034 gr/dscf; and

PM2.5 emissions shall not exceed 0.032 gr/dscf.

Applicable Compliance Method:

The emission limitations specified above are based upon compliance with the a particulate emissions (PE) rate of 0.039 pound per mmBtu and the calculated PM10and PM2.5 filterable percentage of the total allowable PE rate, including the condensable portion, based on AP-42 emission factors found in Section 1.6 and using an F-factor of 9420 dscf/MMBtu, the average of the F-factors for wood and wood bark in reference method 19, table 19-2.. Compliance with these emission limitations shall be demonstrated through the PE testing required in f)(2)below, applying the appropriate AP-42 cumulative particulate size distribution and size-specific emissions factors found in Section 1.6 for wood combustion.

c. Emission Limitation:

CO emissions shall not exceed 0.20 lb/MMBtu.

Applicable Compliance Method:

The emission limitation specified above is based on company submitted data estimating a maximum CO emission rate of 231 ppm CO at 3% oxygen at the entrance of the economizer when firing 100% clean cellulosic biomass material.Compliance with these emission limitations shall be demonstrated through the CO testing required in f)(2)below.

Compliance when firing coal may be determined by the appropriate emission factor found in US EPA AP-42 Section 1.1 (dated 9/98) or the permittee's most recent emissions test data. If required, the permittee shall demonstrate compliance with the CO emission limitation when combusting coal through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10.

d. Emission Limitation:

When firing only clean cellulosic biomass material:

VOC emissions shall not exceed 0.017 pound per mmBtu of actual heat input.

VOC emissions shall be less than 10 TPY.

Applicable Compliance Method:

The emission limitations specified above are based upon the appropriate AP-42 emission factor found in Section 1.6.3. If required, the permittee shall demonstrate compliance with the VOC emission limitation by emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 25.

Compliance with the annual emission rate is based upon the summation of the monthly actual heat input in MMBtu per year for the emissions unit multiplied by the AP-42 VOC emissions factor.

e. Emission Limitation:

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

Applicable Compliance Method:

Ongoing compliance with the opacity limitation contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with the quality

assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60.

f. Emission Limitation:

Particulate emissions (PE) shall not exceed 0.05 pound per mmBtu of actual heat input; and

PE shall not exceed 27.0 TPY.

Applicable Compliance Methods:

Compliance with the mass allowable emissions limitation in pound per mmBtu shall be demonstrated through the particulate emission testing required in f)(2) below. Compliance with the annual emission rate, when combusting coal or clean cellulosic biomass, is based upon the summation of the monthly actual heat input in MMBtu per year for the emissions unit multiplied by the actual PE emissions rate determined by the most recent stack emissions test.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 5.

g. Emission Limitation:

SO2 emissions shall not exceed 1.45 pounds per mmBtu of actual heat input.

Sulfur Dioxide (SO2) emissions shall not exceed 864.2 TPY.

Applicable Compliance Method:

Compliance with this emission limitation shall be determined by using the fuel analysis records required pursuant to d)(2), d)(3), and d)(7) and the applicable equation in OAC rule 3745-18-04(F) below.

Sulfur dioxide emissions from solid fuel samples shall be calculated as follows:

$ER = (1 \times 10^{6}) / H \times S \times 1.9$

Where,

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

H = the heat content of the solid fuel in Btu per pound; and

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

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

Compliance with the annual emission rate, when combusting coal or clean cellulosic biomass, is based upon the summation of the monthly actual heat input in MMBtu per year for the emissions unit multiplied by the actual SO2 emissions rate determined by the most recent stack emissions test or an emission rate based on the above fuel sampling analysis method.

h. Emission Limitation:

Nitrogen Oxide (NOx) emissions shall not exceed 0.70 lb of NOx/MMBtu of actual heat input, and 378.1 TPY.

Applicable Compliance Methods:

Compliance with the mass allowable emissions limitation in pound per MMBtu shall be demonstrated through the NOx emission testing required in f)(2) below. Compliance with the annual emission rate, when combusting coal or clean cellulosic biomass, is based upon the summation of the monthly actual heat input in MMBtu per year for the emissions unit multiplied by the actual NOx emissions rate determined by the most recent stack emissions test.

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

a. the emission testing shall be conducted within 6 months after commencing operation of this emissions unit firing clean cellulosic biomass material identified in this permit to install; unless otherwise approved by Hamilton County Department of Environmental Services to coincide with the required periodic testing pursuant to the terms and conditions for this emissions unit contained in the permittee's Title V Operating Permit;

b. the emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for particulates (PE), nitrogen oxides (NOx) and carbon monoxide (CO) when firing clean cellulosic biomass material;

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

i. 40 CFR Part 60, Appendix A, Methods 1 through 4; and

ii. 40 CFR Part 60, Appendix A, Method 5 and the procedures specified in OAC rule 3745-17-03(B)(9) for PE;

iii. 40 CFR Part 60, Appendix A, Method 7 for NOx;

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

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

d. the tests shall be conducted while the emissions unit is operating at or near its maximum capacity, firing clean cellulosic biomass mate, unless otherwise

specified or approved by the appropriate Ohio EPA District Office or local air agency;

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

f. Personnel from the Hamilton County Department of Environmental Services shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Hamilton County Department of Environmental Services within 30 days following completion of the test(s). The permittee may request additional time for submittal of the written report. The request may be granted, where warranted, if submitted prior to testing and with prior approval from the Hamilton County Department of Environmental Services.

g) Miscellaneous Requirements

(1) The terms and conditions in this permit to install shall supersede the terms and conditions for emissions unit B108 contained in PTI number 14-485, issued on April 18, 1984.

(2) The table below demonstrates that this permit action does not trigger New Source Review (NSR) based on the NSR reform rule of 2002.

Source/Scenario	PM (TSP)	Condensable PM	**PM10 (filterable + condensable)**	**PM2.5 (filterable + condensable)**	**SO_2**	**NO_X**	**CO**	**VOC**	**lead**
BAE 3 Boiler (B108)	4.3	12.5	15.1	13.6	362.3	122.0	6.3	0.6	0.0049
Projected actual (B108)	15.0	6.5	17.6	16.2	8.9	130.4	76.7	6.5	0.0184
Emission Change (B108)	**10.7**	**-6.0**	**2.5**	**2.6**	**-353.4**	**8.5**	**70.5**	**5.9**	**0.014**
BAE Wood chip receiving and transfer (new)	0	-	0	0	-	-	-	-	-

BAE Coal receiving and transfer (F001)	0.32	-	0.31	0.31	-	-	-	-	-
Projected actual (new wood receiving and handling)	0.06	-	0.02	0.004	-	-	-	-	-
Emission Change (F001)	**-0.26**	**0**	**-0.29**	**-0.31**	**0**	**0**	**0**	**0**	**0**
TOTAL EMISSIONS CHANGE	**10.4**	**-6.0**	**2.2**	**2.3**	**-353.4**	**8.5**	**70.5**	**5.9**	**0.014**
Ohio modeling significant emission rates	*-*	*-*	*10*	*10*	*25*	*25*	*100*		*0.6*
PSD significant emission rates	*-*	*-*	*15*	*10*	*40*	*40*	*100*	*40*	*0.6*