



State of Ohio Environmental Protection Agency

Street Address:

Lazarus Gov. Center
122 S. Front Street
Columbus, OH 43215

TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center
P.O. Box 1049
Columbus, OH 43216-1049

01/13/05

CERTIFIED MAIL

01-25-04-2608
The Ohio State University
Cecil R. Smith Dr.
Environmental Health & Safety
1314 Kinnear Road
COLUMBUS, OH 43212-1168

**RE: Draft Title V Significant Permit
Modification Chapter 3745-77 permit**

Dear Cecil R. Smith:

You are hereby notified that the Ohio Environmental Protection Agency has prepared the enclosed draft of the Title V permit for the facility referenced above. The purpose of this draft is to solicit public comments. A public notice concerning the draft will appear in the Ohio EPA Weekly Review and the major newspaper in the county where the facility is located. Comments and/or a request for a public hearing from the public and any affected parties will be accepted by Central District Office within 30 days of the date of publication in the newspaper. You will be notified in writing if a public hearing is scheduled.

A decision on processing the Title V permit will be made after consideration of written public comments and oral testimony (if a public hearing is conducted). After the comment period, you will be provided with a Preliminary Proposed Title V permit and an opportunity to comment prior to the Proposed Title V permit submittal to USEPA.

If you have any questions or comments concerning this draft Title V permit, please contact Central District Office.

Very truly yours,

Michael W. Ahern, Supervisor
Field Operations and Permit Section
Division of Air Pollution Control

cc: USEPA (electronic)
Jim Orlemann, DAPC Engineering
Michael Ahern, DAPC PMU
Central District Office



State of Ohio Environmental Protection Agency

DRAFT TITLE V SIGNIFICANT PERMIT MODIFICATION

Original Effective Date: 12-19-01	Expiration Date: 12-19-06	Modification Effective Date: To be entered upon final issuance
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This document constitutes issuance of a Title V significant permit modification for Facility ID: 01-25-04-2608 to:

The Ohio State University
2003 MILLIKIN ROAD
COLUMBUS, OH 43210-1268

Emissions Unit ID (Company ID)/Emissions Unit Activity Description

B104 (147997) Scott Hall, Carmack, 10.4 mmBTU/hr boiler	B136 (Vet Hosp 5) Vet Hosp - 151925	K001 (Bldg290-17) 290/ , Heidelberg Speedmaster 5 Color Press
B105 (147996) 310/024M, Scott Hall, Cleaver Brooks boiler, 10.4 mmBTU/hr boiler	B137 (McCracken Natural Gas Driven Compressor) 230 HP Caterpillar natural gas driven compressor.	K002 (Print facility) Printing facility, 6 color press
B121 (BOILER #6) BOILER #6	B138 (C.A.R.Lab #1) C.A.R. Facility Engine Dynamometer Lab #1	K003 (Print facility) 2 color press. PTI is issued
B122 (BOILER #7) BOILER #7	B139 (C.A.R.Lab #2) C.A.R. Facility Engine Dynamometer Lab #2	P001 (RhodesETO1) ETO #1 at Rhodes Hall. Sterilizer for hospital equipment.
B124 (BOILER #3) BOILER #3	B140 (McCracken New Boiler #1) New Boiler #1 to be installed (replace B125)	P901 (McCracken Coal Handling) Coal stroage bldh & transport to bunker - blower/bag filter
B125 (BOILER #1) BOILER #1	B141 (McCracken New Boiler #3) McCracken New Boiler #3 to be installed (Replace B124)	P902 (McCracken Ash & Lime Handling) Ash unloader, ash silo exhaust/bag filter, lime silo bin vent filter
B131 (BOILER #8) BOILER #8	B142 (McCracken New Boiler #6) McCracken New Boiler #6 to be installed (Replace B121)	R001 (Booth #5B-RM301 McCracken Plant) Binks spray booth, model #FF 8-7T
B132 (BOILER #5) Replaced original BOILER #5	B143 (McCracken New Boiler #7) McCracken New Boiler #7 to be installed (Replace B122)	R002 (Booth #5A-RM301 McCracken Plant) Binks spray booth, model #FF10-8-T
B134 (Vet Hosp 3) Vet Hosp - 151923		
B135 (Vet Hosp 4) Vet Hosp - 151924		

You will be contacted approximately eighteen (18) months prior to the expiration date regarding the renewal of this permit. If you are not contacted, please contact the appropriate Ohio EPA District Office or local air agency listed below. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, provided that a complete renewal application is submitted no earlier than eighteen (18) months and no later than one-hundred eighty (180) days prior to the expiration date.

Described below is the current Ohio EPA District Office or local air agency that is responsible for processing and administering your Title V permit:

Central District Office
3232 Alum Creek Drive
Columbus, OH 43207-3417
(614) 728-3778

OHIO ENVIRONMENTAL PROTECTION AGENCY

Joseph P. Koncelik
Director

PART I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Section

1. 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, i.e., in Section A.III of Part III of this Title V permit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

- i. The date, place (as defined in the permit), and time of sampling or measurements.
- ii. The date(s) analyses were performed.
- iii. The company or entity that performed the analyses.
- iv. The analytical techniques or methods used.
- v. The results of such analyses.
- vi. The operating conditions existing at the time of sampling or measurement.
(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))

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 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.
(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))

c. The permittee shall submit required reports in the following manner:

- i. **All reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations caused by malfunctions shall be submitted in the following manner:**

Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the OAC rule 3745-77-07(A)(3)(c) deviation reporting requirements for malfunctions, written reports that identify each malfunction that occurred during each calendar quarter (including each malfunction reported only verbally in accordance with OAC rule 3745-15-06) shall be submitted by January 31, April 30, July 31, and October 31 of each year in accordance with General Term and Condition A.1.c.ii below; and each report shall cover the previous calendar quarter.

In accordance with OAC rule 3745-15-06, a malfunction constitutes a violation of an emission limitation (or control requirement) and, therefore, is a deviation of the federally enforceable permit requirements. Even though verbal notifications and written reports are required for malfunctions pursuant to OAC rule 3745-15-06, the written reports required pursuant to this term must be submitted quarterly to satisfy the prompt reporting provision of OAC rule 3745-77-07(A)(3)(c).

In identifying each deviation caused by a malfunction, the permittee shall specify the emission limitation(s) (or control requirement(s)) for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing on a quarterly basis.

Any scheduled maintenance, as referenced in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described above for malfunctions.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

- ii. **Except as may otherwise be provided in the terms and conditions for a specific emissions unit, i.e., in Section A.IV of Part III of this Title V permit or, in some cases, in Part II of this Title V permit, all reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations of the emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:**

Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. Except as provided below, the written reports shall be submitted by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

In identifying each deviation, the permittee shall specify the emission limitation(s), operational restriction(s), and/or control device operating parameter limitation(s) for which the deviation occurred, describe each deviation, and provide the estimated magnitude and duration of each deviation.

These written reports shall satisfy the requirements (in part) of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations. OAC rule 3745-77-07(A)(3)(c) is not fully satisfied until the permittee addresses all other deviations of the federally enforceable requirements specified in the permit.

If an emissions unit has a deviation reporting requirement for a specific emission limitation, operational restriction, or control device operating parameter limitation that is not on a quarterly basis (e.g., within 30 days following the end of the calendar month, or within 30 or 45 days after the exceedance occurs), that deviation reporting requirement overrides the reporting requirements specified in this General Term and Condition for that specific emission limitation, operational restriction, or control device parameter limitation. Following the provisions of that non-quarterly deviation reporting requirement will also satisfy the requirements (in part) of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations, and additional quarterly deviation reports for that specific emission limitation, operational restriction, or control device parameter limitation are not required pursuant to this General Term and Condition.

See B.6 below if no deviations occurred during the quarter.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

- iii. **All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) for other deviations of the federally enforceable permit requirements which are not reported in accordance with General Term and Condition A.1.c.ii above shall be submitted in the following manner:**

Written reports that identify all other deviations of the federally enforceable requirements contained in this permit, including the monitoring, record keeping, and reporting requirements, which are not reported in accordance with General Term and Condition A.1.c.ii above shall be

submitted to the appropriate Ohio EPA District Office or local air agency by January 31 and July 31 of each year; and each report shall cover the previous six calendar months.

In identifying each deviation, the permittee shall specify the federally enforceable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation.

These semi-annual written reports shall satisfy the reporting requirements of OAC rule 3745-77-07(A)(3)(c) for any deviations from the federally enforceable requirements contained in this permit that are not reported in accordance with General Term and Condition A.1.c.ii above.

If no such deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no such deviations occurred during that period.

(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii))

- iv. 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 (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete."

(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))

- v. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

2. **Scheduled Maintenance**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. Except as provided in OAC rule 3745-15-06(A)(3), any scheduled maintenance necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s). Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described for malfunctions in General Term and Condition A.1.c.i above.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

3. **Risk Management Plans**

If applicable, the permittee shall 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"); and, pursuant to 40 C.F.R. 68.215(a), the permittee shall submit either of the following:

- a. a compliance plan for meeting the requirements of 40 C.F.R. Part 68 by the date specified in 40 C.F.R. 68.10(a) and OAC 3745-104-05(A); or
- b. as part of the compliance certification submitted under 40 C.F.R. 70.6(c)(5), a certification statement that the source is in compliance with all requirements of 40 C.F.R. Part 68 and OAC Chapter 3745-104, including the registration and submission of the risk management plan.

(Authority for term: OAC rule 3745-77-07(A)(4))

4. **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.

(Authority for term: OAC rule 3745-77-07(A)(5))

5. Severability Clause

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.

(Authority for term: OAC rule 3745-77-07(A)(6))

6. 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 reissuance, or modification, or for denial of a permit renewal application.
- 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, reopened, revoked, or revoked and reissued, for cause, in accordance with A.10 below. 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, reopening 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.

(Authority for term: OAC rule 3745-77-07(A)(7))

7. 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.

(Authority for term: OAC rule 3745-77-07(A)(8))

8. Marketable Permit Programs

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.

(Authority for term: OAC rule 3745-77-07(A)(9))

9. Reasonably Anticipated Operating Scenarios

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these general terms and conditions shall apply to all operating scenarios authorized in this permit.

(Authority for term: OAC rule 3745-77-07(A)(10))

10. Reopening for Cause

This Title V permit will be reopened prior to its expiration date under the following conditions:

- a. Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.
- b. This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.
- c. The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.
- d. The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

(Authority for term: OAC rules 3745-77-07(A)(12) and 3745-77-08(D))

11. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that 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, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

(Authority for term: OAC rule 3745-77-07(B))

12. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V 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.
- b. 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:
 - i. 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.
 - ii. 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 paragraph (E) of OAC rule 3745-77-03.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. 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.

- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency 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:
 - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - ii. 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.
- d. Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) and the Administrator of the U.S. EPA in the following manner and with the following content:
 - i. Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted on or before April 30th of each year during the permit term.
 - ii. Compliance certifications shall include the following:
 - (a) An identification of each term or condition of this permit that is the basis of the certification.
 - (b) The permittee's current compliance status.
 - (c) Whether compliance was continuous or intermittent.
 - (d) The method(s) used for determining the compliance status of the source currently and over the required reporting period.
 - (e) Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.
 - iii. Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

(Authority for term: OAC rules 3745-77-07(C)(1),(2),(4) and (5) and ORC section 3704.03(L))

13. Permit Shield

- a. Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.
- b. This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

(Authority for term: OAC rule 3745-77-07(F))

14. Operational Flexibility

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the appropriate Ohio EPA District Office or local air agency with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the appropriate District Office of the Ohio EPA or local

air agency as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).
(Authority for term: OAC rules 3745-77-07(H)(1) and (2))

15. Emergencies

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met. This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.
(Authority for term: OAC rule 3745-77-07(G))

16. Off-Permit Changes

The owner or operator of a Title V source may make any change in its operations or emissions at the source that is not specifically addressed or prohibited in the Title V permit, without obtaining an amendment or modification of the permit, provided that the following conditions are met:

- a. The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.
- b. The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA. Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.
- c. The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).
- d. The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.
- e. The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

Paragraph (I) of rule 3745-77-07 of the Administrative Code applies only to modification or amendment of the permittee's Title V permit. The change made may require a permit to install under Chapter 3745-31 of the Administrative Code if the change constitutes a modification as defined in that Chapter. Nothing in paragraph (I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.

(Authority for term: OAC rule 3745-77-07(I))

17. Compliance Method Requirements

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Fed. Reg. 8314, Feb. 24, 1997), in the context of any future proceeding.

(This term is provided for informational purposes only.)

18. Insignificant Activities

Each insignificant activity that has one or more applicable requirements shall comply with those applicable requirements.

(Authority for term: OAC rule 3745-77-07(A)(1))

19. Permit to Install Requirement

Prior to the “installation” or “modification” of any “air contaminant source,” as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.
(Authority for term: OAC rule 3745-77-07(A)(1))

20. 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.
(Authority for term: OAC rule 3745-77-07(A)(1))

21. Permanent Shutdown of an Emissions Unit

The permittee may notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification by the responsible official of the date on which the emissions unit was permanently shut down. Authorization to operate the affected part or activity of the stationary source shall cease upon the date certified by the responsible official that the emissions unit was permanently shut down.

If an emissions unit is permanently shut down (i.e., that 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 and therefore ceases to meet the definition of an “emissions unit” as defined in OAC rule 3745-77-01(O)), rendering existing permit terms and conditions irrelevant, the permittee shall not be required, after the date of the certification and submission to Ohio EPA, to meet any monitoring, record keeping, reporting, or testing requirements, applicable to that emissions unit, except for any residual requirements, such as the quarterly deviation reports, semi-annual deviation reports and annual compliance certification covering the period during which the emissions unit last operated. All records relating to the shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law.

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

B. State Only Enforceable Section

1. Reporting Requirements Related to Monitoring and Record Keeping Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. 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., 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.)

2. Records Retention Requirements

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.

3. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. 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, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

4. 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 of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of 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 emissions unit(s) that is (are) served by such control system(s).

5. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

6. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

If no emission limitation (or control requirement), operational restriction and/or control device parameter limitation 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 by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

The permittee is not required to submit a quarterly report which states that no deviations occurred during that quarter for the following situations:

- a. where an emissions unit has deviation reporting requirements for a specific emission limitation, operational restriction, or control device parameter limitation that override the deviation reporting requirements specified in General Term and Condition A.1.c.ii;
- b. where an uncontrolled emissions unit has no monitoring, record keeping, or reporting requirements and the emissions unit's applicable emission limitations are established at the potentials to emit; and
- c. where the company's responsible official has certified that an emissions unit has been permanently shut down.

Part II - Specific Facility Terms and Conditions

A. State and Federally Enforceable Section

1. MACT Requirements

- a. The permittee is subject to the applicable emission limitation(s) and/or control measures, operational restrictions, monitoring and/or record keeping requirements, reporting requirements, testing requirements and the general and/or other requirements specified in 40 CFR Part 63, Subpart DDDDD, in accordance with 40 CFR Parts 63.7480 through 63.7575 (including the Table(s) and Appendix(ices) referenced in Subpart DDDDD), which are included in the text of Attachment 1 hereto, and are hereby incorporated into this permit as if fully rewritten.

Ordinarily, these requirements would be incorporated into Part II of this Title V permit; however, incorporating Subpart DDDDD into Part II of this Title V permit was not practical due to technical incompatibilities and the limitations of the STARS program. In addition, numerous difficulties were encountered in attempting to copy and paste the Subpart's tables and/or equations into STARS format.

The following emissions units in this permit are subject to the aforementioned requirements: B104, B105, B121, B122, B124, B131, B132, B134, B135, B136, B140, B141, B142 and B143.

- b. The following emissions units are not subject to any requirements of 40 CFR Part 63, Subpart DDDDD or 40 CFR Part 63, Subpart A, in accordance with 40 CFR Part 63.7506(c), which is included in the text of Attachment 1: B001, B002, B011, B012, B013, B014, B015, B025, B026, B027, B029, B030, B035, B036, B039, B040, B041, B042, B043, B044, B045, B046, B047, B048, B049, B050, B051, B052, B054, B056, B057, B064, B065, B066, B074, B076, B079, B080, B081, B082, B083, B084, B085, B086, B087, B088, B089, B090, B091, B092, B093, B094, B095, B096, B097, B098, B099, B100, B106, B110, B111, B112, B113, B128, B129, B130, B133, B145, B146, B147, B148, B149, B150, B151, B152, B153, B154, B155, B156, B157, B158, B159, B160, B165, B166, B167, B168, B169, B170, B171, B172, B176, B177, Z054 and Z195.

2. Nitrogen Oxides (NOx) Budget Trading Program OAC Chapter 3745-14

- a. Facility Code - 0125042608
- b. The following regulated emissions units are subject to the applicable requirements specified in OAC Chapter 3745-14 and the annual NOx allowance allocations listed below:

Emissions Unit	Annual Allowance for Calendar Years 2004 through 2007
B132 - Boiler #5	103.52 tons per year

- c. The emissions units identified in Section A.1.b above are NO_x budget units under OAC rule 3745-14-01(C)(1)(b).
[OAC rule 3745-14-01(C)(1)]
- d. NO_x allowances for units commencing operation on the dates specified in OAC rule 3745-14-05(C)(4) shall be allocated from the new source set-aside in accordance with the provisions of OAC rule 3745-14-05(C)(4)(d).
[OAC rule 3745-14-05(C)(4)]
- e. The NO_x authorized account representative shall submit a complete NO_x budget permit application in accordance with the deadlines specified in paragraphs (B)(2) and (B)(3) of OAC rule 3745-14-03. The NO_x authorized account representative shall also submit, in a timely manner, any supplemental information that the Director determines is necessary in order to review a NO_x budget permit application and issue or deny a NO_x budget permit.
[OAC rules 3745-14-01(E)(1)(a)(i), 3745-14-01(E)(1)(a)(ii), and 3745-14-03(B)(1)]
- f. Beginning May 31, 2004, the owners and operators of each NO_x budget source and each NO_x budget unit at the source shall hold NO_x allowances available for compliance deductions under paragraph (E) of OAC rule 3745-14-06, as of the NO_x allowance transfer deadline, in the unit's compliance account and the source's overdraft account in an amount not less than the total NO_x emissions for the control period from the unit, as determined in accordance with OAC rule 3745-14-08, plus any amount necessary to account for actual utilization under paragraph (C)(5) of OAC rule 3745-14-05 for the control period.
[OAC rules 3745-14-01(E)(3)(a) and 3745-14-01(E)(3)(c)]
- g. NO_x allowances shall be held in, deducted from, or transferred among NO_x allowance tracking system accounts in accordance with OAC rules 3745-14-05, 3745-14-06, 3745-14-07, and 3745-14-09.
[OAC rule 3745-14-01(E)(3)(d)]
- h. A NO_x allowance shall not be deducted, in order to comply with the requirement under paragraph (E)(3)(a) of OAC rule 3745-14-01, for a control period in a year prior to the year for which the NO_x allowance was allocated.
[OAC rule 3745-14-01(E)(3)(e)]
- i. Each ton of NO_x emitted in excess of the NO_x budget emission limitation, as defined in OAC rule 3745-14-01(B)(2)(yy), shall constitute a separate violation of OAC Chapter 3745-14, the Clean Air Act, and applicable Ohio law. The owners and operators of a NO_x budget unit that has excess emissions in any control period shall surrender the NO_x allowances required for deduction under paragraph (E)(4)(a) of OAC rule 3745-14-06 and pay any fine, penalty, or assessment or comply with any other remedy imposed under paragraph (E)(4)(c) of OAC rule 3745-14-06.
[OAC rules 3745-14-01(E)(3)(b), 3745-14-01(E)(4)(a) and 3745-14-01(E)(4)(b)]
- j. When recorded by the Administrator pursuant to OAC rules 3745-14-06 and 3745-14-07, every allocation, transfer, or deduction of a NO_x allowance to or from a NO_x budget

unit's compliance account or the overdraft account of the source where the unit is located is deemed to amend automatically, and become a part of, any NOx budget permit of the NOx budget unit by operation of law without any further review.

[OAC rule 3745-14-01(E)(3)(h)]

- k. Except as provided below, the Director shall revise the NOx budget permit, as necessary, in accordance with OAC rule 3745-77-08. Each NOx budget permit is deemed to incorporate automatically the definitions of terms under paragraph (B) of OAC rule 3745-14-01 and, when recorded by the Administrator, in accordance with OAC rules 3745-14-06 and 3745-14-07, every allocation, transfer, or deduction of a NOx allowance to or from the compliance accounts of the NOx budget units covered by the permit or the overdraft account of the NOx budget source covered by the permit.
[OAC rules 3745-14-03(D)(2) and 3745-14-03(E)(1)]

- l. The owner or operator of a NOx budget unit shall comply with the prohibitions under OAC rule 3745-14-08(A)(5).
[OAC rule 3745-14-08(A)(5)]

- m. The owners and operators of the NOx budget unit shall keep on site at the source each of the following documents for a period of five years from the date the document is created: (This period may be extended for cause, at any time prior to the end of five years, in writing by the Director or Administrator.)

- i. the account certificate of representation for the NOx authorized account representative for the NOx budget unit and all documents that demonstrate the truth of the statements in the account certificate of representation, in accordance with paragraph (D) of OAC rule 3745-14-02, provided that the certificate and documents shall be retained on site at the source beyond such five-year period until such documents are superseded because of the submission of a new account certificate or representation changing the NOx authorized account representative;
- ii. all emission monitoring information, in accordance with OAC rule 3745-14-08;
- iii. copies of all reports, compliance certifications, and other submissions and all records made or required under the NOx budget trading program; and
- iv. copies of all documents used to complete a NOx budget permit application and any other submission under the NOx budget trading program or to demonstrate compliance with the requirements of the NOx budget trading program.

[OAC rule 3745-14-01(E)(5)(a)(i) through (iv)]

- n. The permittee, and to the extent applicable, the NOx authorized account representative of the NOx budget unit, shall comply with the monitoring and reporting requirements as provided in OAC rule 3745-14-08 and in 40 CFR Part 75, Subpart H. For purposes of complying with such requirements the definitions in OAC rule 3745-14-01(B) and in 40 CFR 72.2 shall apply, and the terms "affected unit," "designated representative," and

"continuous emission monitoring system" (or "CEMS") in 40 CFR Part 75 shall be replaced by the terms "NOx budget unit," "NOx authorized account representative," and "continuous emission monitoring system" (or "CEMS"), respectively, as defined in OAC rule 3745-14-01(B).

[OAC rule 3745-14-08(A)]

- o. The permittee shall comply with the monitoring plan requirements of 40 CFR Part 75.62, except that the monitoring plan is only required to include information required by 40 CFR Part 75, Subpart H.

[OAC rule 3745-14-08(E)(2)(b)]

- p. The NOx authorized account representative of the NOx budget unit shall submit the reports and compliance certifications required under the NOx budget trading program, including those under OAC rules 3745-14-04 and 3745-14-08, to the Director and Administrator.

[OAC rule 3745-14-01(E)(4)(b)]

- q. Each submission under the NOx budget trading program shall be submitted, signed, and certified by the NOx authorized account representative for each NOx budget source on behalf of which the submission is made. Each such submission shall include the following certification statement by the NOx authorized account representative:

"I am authorized to make this submission on behalf of the owners and operators of the NOx budget sources or NOx budget units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

If the NOx authorized account representative for a NOx budget unit subject to an acid rain emission limitation who signed and certified any submission that is made under Subpart F or G of 40 CFR Part 75 and which includes data and information required under OAC rule 3745-14-08 or Subpart H of 40 CFR Part 75 is not the same person as the designated representative or the alternate designated representative for the unit under 40 CFR Part 72, then the submission shall also be signed by the designated representative or the alternate designated representative.

[OAC rules 3745-14-02(A)(5) and 3745-14-08(E)(1)(b)]

- r. The NOx authorized account representative shall submit quarterly reports covering the period May 1 through September 30 of each year and including the data described in 40 CFR 75.74(c)(6). The NOx authorized account representative shall submit such quarterly reports, beginning with the calendar quarter covering May 1 through June 30, 2003. The NOx authorized account representative shall submit each quarterly report to the Administrator within thirty days following the end of the calendar quarter covered by the

report. Quarterly reports shall be submitted in the manner specified in 40 CFR Part 75, Subpart H.

[OAC rules 3745-14-08(E)(4)(b) and 3745-14-08(E)(4)(c)(i)]

- s. The NO_x authorized account representative shall submit to the Administrator a compliance certification in support of each quarterly report based on a reasonable inquiry of those persons with primary responsibility for ensuring that all of the unit's emissions are correctly and fully monitored. The compliance certification shall state that:
- i. the monitoring data submitted were recorded in accordance with the applicable requirements of OAC rule 3745-14-08 and 40 CFR Part 75, including the quality assurance procedures and specifications; and
 - ii. for a unit with add-on NO_x emission controls and for all hours where data are substituted in accordance with 40 CFR Part 75.34(a)(1), the add-on emission control were operating within the range of parameters listed in the quality assurance program under Appendix B of 40 CFR Part 75 and the substitute values do not systematically underestimate the NO_x emissions.

[OAC rule 3745-14-08(E)(4)(d)(i) and (ii)]

- t. The NO_x authorized account representative for a NO_x budget unit shall submit written notice of monitoring system certification and re-certification test dates to the Director and the Administrator in accordance with 40 CFR Part 75.61. The NO_x authorized account representative shall submit a certification application to the Administrator, U.S. EPA, Region V Office, and the Director within forty-five days after completing all initial or re-certification tests required under paragraph (B) of OAC rule 3745-14-08, including the information required under Subpart H of 40 CFR Part 75.

[OAC rules 3745-14-08(D) and 3745-14-08(E)(3)]

- u. For each control period in which one or more NO_x budget units at a source are subject to the NO_x budget emission limitation, the NO_x authorized account representative of the source shall submit to the Director and the Administrator, by November 30 of that year, a compliance certification report for each source covering all such units. The NO_x authorized account representative shall include the following elements in the compliance certification report, in a format prescribed by the Administrator, concerning each unit at the source and subject to the NO_x budget emission limitation for the control period covered by the report:
- i. identification of each NO_x budget unit;
 - ii. at the NO_x authorized account representative's option, the serial numbers of the NO_x allowances that are to be deducted from each unit's compliance account under paragraph (E) of OAC rule 3745-14-06 for the control period;
 - iii. at the NO_x authorized account representative's option, for units sharing a common stack and having NO_x emissions that are not monitored separately or apportioned

in accordance with OAC rule 3745-14-08, the percentage of allowances that is to be deducted from each unit's compliance account under paragraph (E)(5) of OAC rule 3745-14-06; and

- iv. the compliance certification under paragraph (A)(3) of OAC rule 3745-14-04.

[OAC rules 3745-14-04(A)(1) and 3745-14-04(A)(2)]

- v. In the compliance certification report under Section A.II.u.iv above, the NO_x authorized account representative shall certify, based upon reasonable inquiry of those persons with the primary responsibility for operating the source and the NO_x budget units at the source in compliance with the NO_x budget trading program, whether each NO_x budget unit for which the compliance certification is submitted was operated during the calendar year covered by the report in compliance with the requirements of the NO_x budget trading program applicable to the unit, including all the following:

- i. whether the unit was operated in compliance with the NO_x budget emission limitation;
- ii. whether the monitoring plan that governs the unit has been maintained to reflect the actual operation and monitoring of the unit, and contains all information necessary to attribute NO_x emissions to the unit, in accordance with OAC rule 3745-14-08;
- iii. whether all the NO_x emissions from the unit, or group of units (including the unit) using a common stack, were monitored or accounted for through the missing data procedures and reported in the quarterly monitoring reports, including whether conditional data were reported in the quarterly reports in accordance with OAC rule 3745-14-08, and if conditional data were reported, the permittee shall indicate whether the status of all conditional data has been resolved and all necessary quarterly report submissions have been made; and
- iv. whether the facts that form the basis for certification under OAC rule 3745-14-08 of each monitor at the unit or group of units (including the unit) using a common stack, or for using an excepted monitoring method or alternative monitoring method approved under OAC rule 3745-14-08, if any, have changed.

If a change is required to be reported under Section A.II.u.iv above, specify the nature of the change, the reason for the change, when the change occurred, and how the unit's compliance status was determined subsequent to the change, including what method was used to determine emissions when a change mandated the need for monitor re-certification.

[OAC rule 3745-14-04(A)(3)]

- w. The NO_x authorized account representative shall submit a complete NO_x budget permit renewal application for the NO_x budget source covering the NO_x budget units at the source in accordance with paragraph (E) of OAC rule 3745-77-08.

[OAC rule 3745-14-03(B)(3)(a)]

- x. The emission measurements recorded and reported in accordance with OAC rule 3745-14-08 shall be used to determine compliance by the unit with the NO_x budget emission limitation under paragraph (E)(3) of OAC rule 3745-14-01.

[OAC rule 3745-14-01(E)(2)(b)]

- y. The permittee shall develop and maintain a written quality assurance/quality control plan for each continuous NO_x monitoring system designed to ensure continuous valid and representative readings of NO_x emissions in units of the applicable standard. The plan shall follow the requirements of 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x monitoring system must be kept on-site and available for inspection during regular office hours.

[OAC rules 3745-14-08(A)(2)(c) and 3745-14-08(A)(2)(d)]

- 3. The following insignificant emissions units are located at this facility:

B001 - 151902, 5.6 mmBtu/hr, natural gas boiler
B002 - 151901, 5.6 mmBtu/hr, natural gas boiler
B011 - 141793, 6.2 mmBtu/hr, natural gas boiler
B012 - 141793, 6.2 mmBtu/hr, natural gas boiler
B013 - 141791, 6.2 mmBtu/hr, natural gas boiler
B014 - 202452, Woody Hayes/Biggs Athletic, 3.9 mmBtu/hr boiler
B015 - 202453, Woody Hayes/Biggs Athletic, 3.9 mmBtu/hr boiler
B025 - 146194, 5.1 mmBtu/hr, natural gas boiler
B026 - 118933, 6.8 mmBtu/hr, natural gas boiler
B027 - 118932, 6.8 mmBtu/hr, natural gas boiler
B029 - 131512, 5.2 mmBtu/hr, natural gas boiler
B030 - 131511, 5.2 mmBtu/hr, natural gas boiler
B035 - 151910, 4.0 mmBtu/hr, natural gas boiler
B036 - 151909, 4.0 mmBtu/hr, natural gas boiler
B039 - 146182, 8.4 mmBtu/hr, natural gas boiler
B040 - 146181, 8.4 mmBtu/hr, natural gas boiler
B041 - 138350, 4.1 mmBtu/hr, natural gas boiler
B042 - 131538, 4.1 mmBtu/hr, natural gas boiler
B043 - 122185, 4.2 mmBtu/hr, natural gas boiler
B044 - 122184, 5.9 mmBtu/hr, natural gas boiler
B045 - 122183, 5.9 mmBtu/hr, natural gas boiler
B046 - 122182, 5.9 mmBtu/hr, natural gas boiler
B047 - 122181, 5.9 mmBtu/hr, natural gas boiler
B048 - 146158, 4.0 mmBtu/hr, natural gas boiler
B049 - 146157, 4.0 mmBtu/hr, natural gas boiler
B050 - 146156, 4.0 mmBtu/hr, natural gas boiler
B051 - 146155, 4.0 mmBtu/hr, natural gas boiler
B052 - 146154, 4.0 mmBtu/hr, natural gas boiler
B054 - 146152, 4.0 mmBtu/hr, natural gas boiler

B056 - 146192, 5.1 mmBtu/hr, natural gas boiler
B057 - 146191, 5.1 mmBtu/hr, natural gas boiler
B064 - 140493, 4.3 mmBtu/hr, natural gas boiler
B065 - 140492, 4.3 mmBtu/hr, natural gas boiler
B066 - 140491, 4.3 mmBtu/hr, natural gas boiler
B074 - 135641, 6.7 mmBtu/hr, natural gas boiler
B076 - 151917, 1.5 mmBtu/hr, natural gas boiler
B079 - 151914, 7.5 mmBtu/hr, natural gas boiler
B080 - 135635, 4.3 mmBtu/hr, natural gas boiler
B081 - 135634, 4.3 mmBtu/hr, natural gas boiler
B082 - 135633, 4.3 mmBtu/hr, natural gas boiler
B083 - 135632, 4.2 mmBtu/hr, natural gas boiler
B084 - 135631, 4.2 mmBtu/hr, natural gas boiler
B085 - 133469, 4.1 mmBtu/hr, natural gas boiler
B086 - 134815, 4.1 mmBtu/hr, natural gas boiler
B087 - 134814, 4.1 mmBtu/hr, natural gas boiler
B088 - 140496, 3.1 mmBtu/hr, natural gas boiler
B089 - 140497, 3.1 mmBtu/hr, natural gas boiler
B090 - 135646, 6.2 mmBtu/hr, natural gas boiler
B091 - 135645, 6.2 mmBtu/hr, natural gas boiler
B092 - 135644, 4.1 mmBtu/hr, natural gas boiler
B093 - 123422, 4.4 mmBtu/hr, natural gas boiler
B094 - 123423, 4.4 mmBtu/hr, natural gas boiler
B095 - 114902, 4.4 mmBtu/hr, natural gas boiler
B096 - 130477, 4.4 mmBtu/hr, natural gas boiler
B097 - 123421, 4.4 mmBtu/hr, natural gas boiler
B098 - 123605, 4.2 mmBtu/hr, natural gas boiler
B099 - 123604, 4.2 mmBtu/hr, natural gas boiler
B100 - 123603, 4.2 mmBtu/hr, natural gas boiler
B106 - Biotech boiler
B110 - 107237, Sisson Hall, 2.4 mmBtu/hr boiler
B111 - 107238, Sisson Hall, 2.4 mmBtu/hr boiler
B112 - 138363, 5.2 mmBtu/hr, natural gas boiler
B113 - 138634, 5.2 mmBtu/hr, natural gas boiler
B128 - Mount Hall, 3.15 mmBtu/hr boiler
B129 - 160863, Mount Hall, 3.15 mmBtu/hr boiler
B130 - 6-171498, 4.2 mmBtu/hr, natural gas boiler
B133 - OSU Hospital behind Rhodes, 2000 KW emergency generator (permit to install 01-6073)
B145 - 117607, Animal Science small boiler
B146 - 117609, Animal Science small boiler
B147 - 151916, Animal Science small boiler
B148 - 204475, Child Care 1
B149 - 204476, Child Care 2
B150 - 204477, Child Care 3
B151 - 204478, Child Care 4
B152 - 204479, Child Care 5
B153 - 204480, Child Care 6

B154 - 204481, Child Care 7
B155 - 125941, Scott House 1, 8.37 mmBtu/hr natural gas boiler
B156 - 125942, Scott House 2, 8.37 mmBtu/hr natural gas boiler
B157 - 125943, Scott House 3, 8.37 mmBtu/hr natural gas boiler
B158 - 204482, Child Care 8
B159 - 204483, Child Care 9
B160 - 204484, Child Care 10
B165 - 135636, Lincoln Tower
B166 - 135637, Lincoln Tower
B167 - 135638, Lincoln Tower
B168 - 135639, Lincoln Tower
B169 - 135640, Lincoln Tower
B170 - 188013, Taylor Tower 1
B171 - 188014, Taylor Tower 2
B172 - 141777, Newton Hall
B176 - 395/M, 1275 Kinnear Rd., 5.8 mmBtu/hr natural gas boiler
B177 - 395/M, 1275 Kinnear Rd., 5.8 mmBtu/hr natural gas boiler
G006 - 16G, gasoline dispensing facility (permit to install 01-08470)
P903 - McCracken DG, diesel generator (permit to install 01-6745)
T001 - McCracken oil tank no. 1, no. 2 fuel oil, 50,000 gallons
T002 - McCracken oil tank no. 2, no. 2 fuel oil, 50,000 gallons
T003 - McCracken oil tank no. 3, no. 2 fuel oil, 50,000 gallons
T004 - McCracken oil tank no. 4, no. 2 fuel oil, 50,000 gallons
T005 - McCracken oil tank no. 5, no. 2 fuel oil, 50,000 gallons
T006 - McCracken oil tank no. 6, no. 2 fuel oil, 40,000 gallons
T007 - McCracken oil tank no. 7, no. 2 fuel oil, 40,000 gallons
T008 - McCracken oil tank no. 8, no. 2 fuel oil, 40,000 gallons
T009 - McCracken oil tank no. 9, no. 2 fuel oil, 40,000 gallons
T011 - McCracken oil tank no. 11, no. 2 fuel oil, 30,000 gallons
T012 - McCracken oil tank no. 12, no. 2 fuel oil, 30,000 gallons
T021 - OSU Hospital behind Rhodes, 15,000-gallon diesel UST
Z001 - Ad Administration, 86959, 86961, 86962
Z054 - Newton Hall, 6.5 mmBtu/hr, natural gas boiler
Z195 - Biotech B, 5.23 mmBtu/hr, natural gas boiler
Z220 - McCracken truck traffic/coal handling plant roadway
Z221 - sawdust collection

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, and well as any emission limitations and/or control requirements contained within the identified permit to install for the emissions unit. Insignificant emissions units listed above that are not subject to specific permit to install requirements are subject to one or more of the applicable requirements contained in the federally-approved versions of OAC Chapters 3745-17, 3745-18, and 3745-21.

B. State Only Enforceable Section

1. The following insignificant emissions units located at this facility are exempt from permit requirements because they are not subject to any applicable requirements (as defined in OAC rule 3745-77-01(H)) or because they meet the "de minimis" criteria established in OAC rule 3745-15-05:

G002 - 8G-GDF, gasoline dispensing facility
G003 - 9G-GDF, gasoline dispensing facility
G007 - 18G, gasoline dispensing facility
G008 - 19G, gasoline dispensing facility
G009 - 20G, gasoline dispensing facility
T015 - Neuropsychiatric facility, 4000-gallon UST
T016 - Riffe, 2000-gallon diesel UST
T018 - James Cancer Hospital, 3000-gallon AST
T019 - Agronomy field HQ, ASTs (1000-gallon diesel, 500-gallon gas, 500-gallon kerosene)
T020 - Kinnear, 2500-gallon diesel UST
T022 - McCracken, No. 2 fuel oil day tank
T025 - 85, Goss Lab, 5000-gallon diesel fuel oil storage tank
T026 - 65, Hamilton Hall, 1000-gallon diesel fuel oil storage tank
T031 - 02, Maintenance building, 2,500-gallon diesel storage tank
T032 - 48, Mershon, 1000-gallon diesel storage tank
T033 - 26, Service Building Annex, 10,000-gallon diesel storage tank
T034 - 27, Service Building Annex, 1000-gallon used oil storage tank
T035 - 62, Sisson Hall, 2000-gallon diesel storage tank
T039 - Fawcett Center, 2000-gallon No. 2 fuel oil storage tank
T040 - Fawcett Center, 2000-gallon No. 2 fuel oil storage tank
T041 - 85, Telecommunication building storage tank
T042 - Dodd/Davis Hall, 1000-gallon diesel storage tank
T043 - Dodd/Davis Hall, 2500-gallon diesel storage tank
Z004 - Allied Medical EG, emergency generator
Z005 - McPherson Lab EG, emergency generator
Z006 - Starling/Loving, emergency generator
Z008 - Wisemen EG, emergency generator
Z009 - Lazenby EG, emergency generator
Z010 - Comprehensive Cancer EG, emergency generator
Z011 - Schottentstein EG, emergency generator
Z012 - Bioscience 2, emergency generator
Z013 - Bioscience 3, emergency generator
Z014 - Parker Food Science EG, 280 KW emergency generator
Z015 - Wiseman EG 2, 275 KW emergency generator
Z016 - Wiseman EG 3, 275 KW emergency generator
Z017 - Ohio Stadium EG, 33 KW emergency generator
Z021 - Graves Hall EG, emergency generator
Z027 - Hamilton Hall EG, emergency generator
Z028 - Postlehall EG, emergency generator
Z029 - prior health/science EG, emergency generator

Z032 - Dodd Hall/Davis, emergency generator
Z034 - Rightmirehall SE, emergency generator
Z035 - Rightmirehall PH, emergency generator
Z036 - Rightmirehall NE, emergency generator
Z037 - Animal EG 1, emergency generator
Z038 - Animal EG 2, emergency generator
Z039 - Animal EG 3, emergency generator
Z040 - Goss EG, emergency generator
Z041 - Byrd Research EG, emergency generator
Z042 - Scott Hall EG 1, emergency generator
Z043 - Scott Hall EG 2, emergency generator
Z044 - Blankenship EG, emergency generator
Z045 - St. Johns EG, emergency generator
Z046 - Fisher Hall, emergency generator
Z047 - Lincoln EG, emergency generator
Z048 - Fawcett EG, emergency generator
Z049 - McCampbell 2, emergency generator
Z050 - Raney Commons EG, emergency generator
Z051 - North Commons EG, emergency generator
Z052 - Veterinary Medicine Academic Bldg., 370 KW emergency generator
Z053 - Chemical Engineering Storage Bldg. EG, 35 KW emergency generator
Z056 - Hitchcock Hall, emergency generator
Z058 - Print Facility 1, 140496, small printing press
Z059 - Print Facility 2, 140497, small printing press
Z060 - Print Facility 3, 140498, small printing press
Z101 - 047/outside, EG1, emergency generator
Z102 - 054/407B, EG2, emergency generator
Z103 - 055/12M, EG3, emergency generator
Z105 - 078/main shop area, EG4, emergency generator
Z106 - 078/main shop area on first floor, maintenance activities
Z107 - 080/043M, EG5, emergency generator
Z108 - lab 1, 089/0309, Doan Hall, Histology Lab
Z109 - lab 2, 089/0309A, Doan Hall, Histology Lab
Z112 - RhodesHall/Powerplant EG #3, 2000 KW emergency generator
Z113 - RhodesHall/Powerplant EG #4, 2000 KW emergency generator
Z116 - 094/bldg, EG10, emergency generator
Z117 - 094/bldg, EG11, emergency generator
Z122 - Neuropsychiatric facility, EG15, emergency generator
Z141 - 183/maint shop, Royer Center maintenance facility
Z142 - Drackett EG, emergency generator
Z144 - Riffle EG, emergency generator
Z145 - Jones EG, emergency generator
Z148 - Taylor EG, emergency generator
Z149 - Morrill EG, emergency generator
Z150 - 274/011, Hitchcock Hall, offset printing machine
Z151 - 274/011, Hitchcock Hall, offset printing machine
Z152 - 274/011, Hitchcock Hall, offset printing machine

Z153 - Graves EG, emergency generator
Z154 - Dreese EG, emergency generator
Z155 - Fawcett Center, printing press
Z156 - 113/EG at Heart and Lung Institute, 1250 KW emergency generator
Z157 - bldg290-1, Polychrome developing machine
Z158 - bldg290-2, Polychrome developing machine
Z159 - bldg290-3, 12" ITEK graphics machine
Z160 - bldg290-4, 15" ITEK graphics machine
Z161 - bldg290-5, printing press
Z162 - bldg290-6, printing press
Z163 - bldg290-7, web printing room, Goss Suburban - 8 unit printing press
Z164 - bldg290-8, duplicating room, Multi 1860 offset
Z165 - bldg290-9, printing press
Z166 - bldg290-10, printing press
Z167 - bldg290-11, printing press
Z168 - bldg290-12, printing press
Z169 - bldg290-13, printing press
Z170 - bldg290-14, printing press
Z171 - bldg290-15, printing press
Z173 - DrakePwCv, emergency generator
Z174 - HHGreen EG, emergency generator
Z175 - AgEng EG, emergency generator
Z176 - VetETO1, ETO sterilizer
Z177 - VetETO2, ETO sterilizer
Z178 - VetEG, emergency generator
Z179 - UnHospEG, emergency generator
Z180 - Rightmire EG, emergency generator
Z184 - 354/0324S, Rhodes Hall, clinical chemistry, hood #7
Z185 - 354/326S, Rhodes Hall, clinical chemistry, hood #5
Z187 - Cancer Ct EG, 275 KW emergency generator
Z188 - Kinnear EG1, emergency generator
Z189 - Kinnear EG2, emergency generator
Z191 - Celeste EG, emergency generator
Z192 - Celeste Hood 14, 372/1128, drug development, hood #14
Z194 - Wexner paint, 386/61, Painting room
Z198 - 951/1314, 1315 Kinnear Rd., Bio. Collections Museum, storage
Z199 - 951/1686, 1315 Kinnear Rd., Bio. Collections Museum, Fish
Z201 - Neuman EG, emergency generator
Z202 - 16Ga, gasoline dispensing facility
Z203 - 284/005, Fawcett Center, OEPA/Development Mail Center
Z204 - 294/140E, Wilce Student Health Center, X-ray developer
Z205 - MathTower EG, emergency generator
Z207 - MedRes EG, emergency generator
Z211 - 354/0306S, Rhodes Hall, Hood
Z212 - James EG 1, emergency generator
Z213 - James EG 2, emergency generator
Z215 - gen #1, emergency generator

Z216 - gen #2, emergency generator

Z224 - McCracken Emergency Generator #2, 21.5 mmBtu/hr emergency generator

Z225 - McCracken Emergency Generator #3, 21.5 mmBtu/hr emergency generator

Emissions Unit: 147997 (B104)

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: 147997 (B104)

Activity Description: Scott Hall, Carmack, 10.4 mmBTU/hr boiler

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
10.4 mmBtu/hr natural gas-fired boiler - Boiler #104	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-10(B)(1)	Particulate emissions shall not exceed 0.020 pound per mmBtu of actual heat input.
	OAC rule 3745-18-06	None, see A.I.2.a below.
	40 CFR Part 63, Subpart DDDDD	See Attachment 1 of this permit.

2. Additional Terms and Conditions

- 2.a The provisions specified in paragraphs (D), (F), and (G) of OAC rule 3745-18-06 do not apply to this emissions unit; therefore, there is no SO₂ emission limitation from OAC Chapter 3745-18 for this emissions unit.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

Emissions Unit: 147997 (B104)

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

1. 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):

- 1.a. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- 1.b. Emission Limitation:

Particulate emissions shall not exceed 0.020 pound per mmBtu of actual heat input.

Applicable Compliance Method:

Compliance may be determined by multiplying the maximum natural gas burning capacity of the emissions unit (10,400 CF/hr) by the AP-42 (Table 1.4-5, 7/98) emission factor for filterable particulates from natural gas combustion (1.9 lbs/mmCF) and dividing by the maximum heat input capacity of the emissions unit (10.4 mmBtu/hr).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

VI. Miscellaneous Requirements

None

Emissions Unit: 147997 (B104)

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

**Operations, Property,
and/or Equipment**

**Applicable Rules/
Requirements**

**Applicable Emissions
Limitations/Control Measures**

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit: 147996 (B105)

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: 147996 (B105)

Activity Description: 310/024M, Scott Hall, Cleaver Brooks boiler, 10.4 mmBTU/hr boiler

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
10.4 mmBtu/hr natural gas-fired boiler - Boiler #105	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-10(B)(1)	Particulate emissions shall not exceed 0.020 pound per mmBtu of actual heat input.
	OAC rule 3745-18-06	None, see A.I.2.a below.
	40 CFR Part 63, Subpart DDDDD	See Attachment 1 of this permit.

2. Additional Terms and Conditions

- 2.a The provisions specified in paragraphs (D), (F), and (G) of OAC rule 3745-18-06 do not apply to this emissions unit; therefore, there is no SO₂ emission limitation from OAC Chapter 3745-18 for this emissions unit.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

Emissions Unit: 147996 (B105)

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

1. 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):

- 1.a Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- 1.b Emission Limitation:

Particulate emissions shall not exceed 0.020 pound per mmBtu of actual heat input.

Applicable Compliance Method:

Compliance may be determined by multiplying the maximum natural gas burning capacity of the emissions unit (10,400 CF/hr) by the AP-42 (Table 1.4-5, 7/98) emission factor for filterable particulates from natural gas combustion (1.9 lbs/mmCF) and dividing by the maximum heat input capacity of the emissions unit (10.4 mmBtu/hr).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

VI. Miscellaneous Requirements

None

Emissions Unit: 147996 (B105)

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit: BOILER #6 (B121)

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: BOILER #6 (B121)

Activity Description: BOILER #6

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
150 mmBtu/hr natural gas, number 2 fuel oil and number 6 fuel oil-fired boiler - Boiler # 6	OAC rule 3745-31-05(A)(3) (PTI 01-645)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-10(B)(1), 3745-17-10(C)(1), and 3745-17-07(A).
	OAC rule 3745-17-10(B)(1)	Particulate emissions shall not exceed 0.020 lb/mmBtu of actual heat input when firing natural gas or number 2 fuel oil.
	OAC rule 3745-18-06(D)	When firing number 2 or number 6 fuel oil, sulfur dioxide emissions shall not exceed 1.6 lbs/mmBtu actual heat input.
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rules 3745-21-08(B) and 3745-23-06(B)	See A.I.2.a below.
	OAC rule 3745-31-05(C) (PTI 01-645)	See A.II.2 through A.II.5 below.

Emissions Unit: BOILER #6 (B121)

OAC rule 3745-17-10(C)(1)

Particulate emissions shall not exceed 0.18 lb/mmBtu of actual heat input when firing number 6 fuel oil.

40 CFR Part 63, Subpart DDDDD

See Attachment 1 of this permit.

2. Additional Terms and Conditions

- 2.a** The design of the emissions unit and the technology associated with the current operating practices will satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.

II. Operational Restrictions

1. The permittee shall burn only natural gas, number 2 fuel oil or number 6 fuel oil in this emissions unit.
2. The annual number 6 fuel oil usage shall not exceed 510,000 gallons per rolling, 12-month period for boilers number 6 and number 7 (emissions units B121 and B122, respectively) combined.
3. The permittee shall not simultaneously fire multiple fuels in this emissions unit during the production of steam.
4. Sulfur dioxide emissions from the combustion of number 6 fuel oil shall not exceed 39.96 tons per year for boilers number 6 and number 7 (emissions units B121 and B122, respectively) combined, as a rolling, 12-month summation.
5. The quality of the number 6 fuel oil burned in this emissions unit shall meet, on an as-received basis, a sulfur content of one (1.0) percent or less. A higher sulfur content for the number 6 fuel oil may be used provided that the usage, in gallons, is reduced to maintain a sulfur dioxide emission rate of less than 39.96 tons per year for boilers number 6 and number 7 (emissions units B121 and B122, respectively) combined, as a rolling, 12-month summation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain daily records of any time during which this emissions unit simultaneously fired multiple fuels during the production of steam.
2. The permittee shall collect or require the oil supplier to collect a representative grab sample for each shipment of any oil that is received for burning in this emission unit. The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with the following ASTM methods: ASTM method D4294 for sulfur content and

Emissions Unit: BOILER #6 (B121)

ASTM method D240 for heat content. Alternative, equivalent methods may be used upon approval by the Ohio EPA, Central District Office.

3. For each shipment of any oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).)
4. The permittee shall collect and record the following information on a monthly basis for boilers number 6 and number 7 (emissions units B121 and B122, respectively) combined:
 - a. the amount of number 6 fuel oil burned, in gallons; and
 - b. the rolling, 12-month summation of the amount of number 6 fuel oil burned, in gallons.
5. For each day during which the permittee burns a fuel other than natural gas, number 2 fuel oil, or number 6 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
6. The permittee shall maintain monthly records of the sulfur dioxide emission rate, when burning number 6 fuel oil, in tons of sulfur dioxide per year as a rolling, 12-month summation, for boilers number 6 and number 7 (emissions units B121 and B122, respectively) combined, calculated in accordance with Section A.V.1.f of this permit.
7. The permittee shall perform daily checks for visible emissions from the stack serving this emissions unit when burning number 6 fuel oil. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

Emissions Unit: BOILER #6 (B121)

IV. Reporting Requirements

1. The permittee shall notify the Director (the Ohio EPA, Central District Office) in writing of any record which shows an exceedance of the lbs of sulfur dioxide/mmBtu emission limitation, based upon the calculated sulfur dioxide emission rates from Section A.III.3. The notification shall include a copy of such record and shall be sent to the Director (the Ohio EPA, Central District Office) within 30 days after the deviation occurs.
2. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas, number 2 fuel oil or number 6 fuel oil was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
3. The permittee shall notify the Director (the Ohio EPA, Central District Office) in writing of any record which shows a deviation of the number 6 fuel oil usage limitation and/or sulfur dioxide emission limitation for boilers number 6 and number 7 (emissions units B121 and B122, respectively) combined. The notification shall include a copy of such record and shall be sent to the Director (the Ohio EPA, Central District Office) within 30 days after the deviation occurs.
4. The permittee shall submit deviation (excursion) reports that identify any time during which this emissions unit simultaneously fired multiple fuels during the production of steam. These reports shall be submitted within 30 days after the deviation occurs.
5. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit when burning number 6 fuel oil and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.
6. The permittee shall notify the Director (the Ohio EPA, Central District Office) in writing of any record which shows an exceedance of the sulfur content limitation specified in Section A.II.5. The notification shall include a copy of such record and shall be sent to the Director (the Ohio EPA, Central District Office) within 30 days after the deviation occurs.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
 - 1.a Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

Emissions Unit: BOILER #6 (B121)

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation:

Particulate emissions shall not exceed 0.020 lb/mmBtu of actual heat input when firing natural gas or number 2 fuel oil.

Applicable Compliance Method:

When firing natural gas, compliance with this emission limitation may be demonstrated by multiplying the maximum hourly gas burning capacity of the emissions unit (145,631 CF/hr) by the emission factor from AP-42 "Compilation of Air Pollutant Emission Factors", Table 1.4-2 (7/98) for filterable particulates from natural gas combustion (1.9 lbs of particulates/mmCF), and dividing by the maximum hourly heat input capacity of the emissions unit (150 mmBtu/hr).

When firing number two fuel oil, compliance with this emission limitation may be demonstrated by multiplying the maximum number 2 fuel oil burning capacity of the emissions unit (1071.5 gal/hr) by the emission factor from AP-42 "Compilation of Air Pollutant Emission Factors", Table 1.3-1 (9/98) for filterable particulates in number 2 fuel oil combustion (2 lbs of particulates/1000 gal), and dividing by the maximum hourly heat input capacity of the emissions unit (150 mmBtu/hr).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9) while firing number 2 fuel oil.

1.c Emission Limitation:

Particulate emissions shall not to exceed 0.18 lb/mmBtu of actual heat input when firing number 6 fuel oil.

Applicable Compliance Method:

When firing number 6 fuel oil, compliance with this emission limitation may be demonstrated by dividing the maximum number 6 fuel oil burning capacity of the emissions unit (1071.5 gal/hr) by the maximum hourly heat input capacity of the emissions unit (150 mmBtu/hr) and multiplying by the emission factor for sulfur dioxide from the following equation found in AP-42 "Compilation of Air Pollutant Emission Factors", Table 1.3-1 (9/98) for filterable particulates in number 6 fuel oil combustion:

$$9.19(S) + 3.22 = EF$$

Where:

S = sulfur content (%)

EF = emission factor (lbs PE/1000 gallons)

Emissions Unit: BOILER #6 (B121)

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9) while firing number 6 fuel oil.

1.d Compliance with the sulfur content limitation specified in Section A.II.5 shall be based on the record keeping in Section A.III.3.

1.e Emission Limitation:

When firing number 2 or number 6 fuel oil, sulfur dioxide emissions shall not exceed 1.6 lbs/mmBtu actual heat input.

Applicable Compliance Method:

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

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

1.f Emission Limitation:

Sulfur dioxide emissions from number 6 fuel oil shall not exceed 39.96 tons per year for boiler number 6 and number 7 (emissions units B121 and B122, respectively) combined, as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be determined for sulfur dioxide, from number 6 fuel oil, as provided below:

(the average sulfur dioxide emission rate, for the rolling, 12-month period, in lb/mmBtu, from Section A.III.3) X (the average of the heat content data for the number 6 fuel oil for the rolling, 12-month period, from Section A.III.3, in mmBtu/gallon) X (the updated rolling, 12-month number 6 fuel oil usage rate, in gallons, from Section A.III.4.b)/2000.

VI. Miscellaneous Requirements

1. Ambient air quality impacts from the shut down and removal of emissions unit B121 are being used as ambient air quality impact credits towards the increase in ambient air quality impacts associated with emissions unit B142. Therefore, at no time shall both emissions units B121 and B142 operate at the same time.

Emissions Unit: BOILER #6 (B121)

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit: BOILER #7 (B122)

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: BOILER #7 (B122)

Activity Description: BOILER #7

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
150 mmBtu/hr natural gas, number 2 fuel oil and number 6 fuel oil-fired boiler - Boiler # 7	OAC rule 3745-31-05(A)(3) (PTI 01-645)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-10(B)(1), 3745-17-10(C)(1), and 3745-17-07(A).
	OAC rule 3745-17-10(B)(1)	Particulate emissions shall not exceed 0.020 lb/mmBtu of actual heat input when firing natural gas or number 2 fuel oil.
	OAC rule 3745-18-06(D)	When firing number 2 or number 6 fuel oil, sulfur dioxide emissions shall not exceed 1.6 lbs/mmBtu actual heat input.
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rules 3745-21-08(B) and 3745-23-06(B)	See A.I.2.a below.
	OAC rule 3745-31-05(C) (PTI 01-645)	See A.II.2 through A.II.5 below.

Emissions Unit: BOILER #7 (B122)

OAC rule 3745-17-10(C)(1)

Particulate emissions shall not exceed 0.18 lb/mmBtu of actual heat input when firing number 6 fuel oil.

40 CFR Part 63, Subpart DDDDD

See Attachment 1 of this permit.

2. Additional Terms and Conditions

- 2.a** The design of the emissions unit and the technology associated with the current operating practices will satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.

II. Operational Restrictions

1. The permittee shall burn only natural gas, number 2 fuel oil or number 6 fuel oil in this emissions unit.
2. The annual number 6 fuel oil usage shall not exceed 510,000 gallons per rolling, 12-month period for boilers number 6 and number 7 (emissions units B121 and B122, respectively) combined.
3. The permittee shall not simultaneously fire multiple fuels in this emissions unit during the production of steam.
4. Sulfur dioxide emissions from the combustion of number 6 fuel oil shall not exceed 39.96 tons per year for boilers number 6 and number 7 (emissions units B121 and B122, respectively) combined, as a rolling, 12-month summation.
5. The quality of the number 6 fuel oil burned in this emissions unit shall meet, on an as-received basis, a sulfur content of one (1.0) percent or less. A higher sulfur content for the number 6 fuel oil may be used provided that the usage, in gallons, is reduced to maintain a sulfur dioxide emission rate of less than 39.96 tons per year for boilers number 6 and number 7 (emissions units B121 and B122, respectively) combined, as a rolling, 12-month summation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain daily records of any time during which this emissions unit simultaneously fired multiple fuels during the production of steam.
2. The permittee shall collect or require the oil supplier to collect a representative grab sample for each shipment of any oil that is received for burning in this emission unit. The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with the following ASTM methods: ASTM method D4294 for sulfur content and

Emissions Unit: BOILER #7 (B122)

ASTM method D240 for heat content. Alternative, equivalent methods may be used upon approval by the Ohio EPA, Central District Office.

3. For each shipment of any oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).)
4. The permittee shall collect and record the following information on a monthly basis for boilers number 6 and number 7 (emissions units B121 and B122, respectively) combined:
 - a. the amount of number 6 fuel oil burned, in gallons; and
 - b. the rolling, 12-month summation of the amount of number 6 fuel oil burned, in gallons.
5. For each day during which the permittee burns a fuel other than natural gas, number 2 fuel oil, or number 6 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
6. The permittee shall maintain monthly records of the sulfur dioxide emission rate, when burning number 6 fuel oil, in tons of sulfur dioxide per year as a rolling, 12-month summation, for boilers number 6 and number 7 (emissions units B121 and B122, respectively) combined, calculated in accordance with Section A.V.1.f of this permit.
7. The permittee shall perform daily checks for visible emissions from the stack serving this emissions unit when burning number 6 fuel oil. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

Emissions Unit: BOILER #7 (B122)

IV. Reporting Requirements

1. The permittee shall notify the Director (the Ohio EPA, Central District Office) in writing of any record which shows an exceedance of the lbs of sulfur dioxide/mmBtu emission limitation, based upon the calculated sulfur dioxide emission rates from Section A.III.3. The notification shall include a copy of such record and shall be sent to the Director (the Ohio EPA, Central District Office) within 30 days after the deviation occurs.
2. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas, number 2 fuel oil or number 6 fuel oil was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
3. The permittee shall notify the Director (the Ohio EPA, Central District Office) in writing of any record which shows a deviation of the number 6 fuel oil usage limitation and/or sulfur dioxide emission limitation for boilers number 6 and number 7 (emissions units B121 and B122, respectively) combined. The notification shall include a copy of such record and shall be sent to the Director (the Ohio EPA, Central District Office) within 30 days after the deviation occurs.
4. The permittee shall submit deviation (excursion) reports that identify any time during which this emissions unit simultaneously fired multiple fuels during the production of steam. These reports shall be submitted within 30 days after the deviation occurs.
5. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit when burning number 6 fuel oil and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.
6. The permittee shall notify the Director (the Ohio EPA, Central District Office) in writing of any record which shows an exceedance of the sulfur content limitation specified in Section A.II.5. The notification shall include a copy of such record and shall be sent to the Director (the Ohio EPA, Central District Office) within 30 days after the deviation occurs.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
 - 1.a Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

Emissions Unit: BOILER #7 (B122)

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation:

Particulate emissions shall not exceed 0.020 lb/mmBtu of actual heat input when firing natural gas or number 2 fuel oil.

Applicable Compliance Method:

When firing natural gas, compliance with this emission limitation may be demonstrated by multiplying the maximum hourly gas burning capacity of the emissions unit (145,631 CF/hr) by the emission factor from AP-42 "Compilation of Air Pollutant Emission Factors", Table 1.4-2 (7/98) for filterable particulates from natural gas combustion (1.9 lbs of particulates/mmCF), and dividing by the maximum hourly heat input capacity of the emissions unit (150 mmBtu/hr).

When firing number two fuel oil, compliance with this emission limitation may be demonstrated by multiplying the maximum number 2 fuel oil burning capacity of the emissions unit (1071.5 gal/hr) by the emission factor from AP-42 "Compilation of Air Pollutant Emission Factors", Table 1.3-1 (9/98) for filterable particulates in number 2 fuel oil combustion (2 lbs of particulates/1000 gal), and dividing by the maximum hourly heat input capacity of the emissions unit (150 mmBtu/hr).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9) while firing number 2 fuel oil.

1.c Emission Limitation:

Particulate emissions shall not to exceed 0.18 lb/mmBtu of actual heat input when firing number 6 fuel oil.

Applicable Compliance Method:

When firing number 6 fuel oil, compliance with this emission limitation may be demonstrated by dividing the maximum number 6 fuel oil burning capacity of the emissions unit (1071.5 gal/hr) by the maximum hourly heat input capacity of the emissions unit (150 mmBtu/hr) and multiplying by the emission factor for sulfur dioxide from the following equation found in AP-42 "Compilation of Air Pollutant Emission Factors", Table 1.3-1 (9/98) for filterable particulates in number 6 fuel oil combustion:

$$9.19(S) + 3.22 = EF$$

Where:

S = sulfur content (%)

EF = emission factor (lbs PE/1000 gallons)

Emissions Unit: BOILER #7 (B122)

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9) while firing number 6 fuel oil.

1.d Compliance with the sulfur content limitation specified in Section A.II.5 shall be based on the record keeping in Section A.III.3.

1.e Emission Limitation:

When firing number 2 or number 6 fuel oil, sulfur dioxide emissions shall not exceed 1.6 lbs/mmBtu actual heat input.

Applicable Compliance Method:

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

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

1.f Emission Limitation:

Sulfur dioxide emissions from number 6 fuel oil shall not exceed 39.96 tons per year for boiler number 6 and number 7 (emissions units B121 and B122, respectively) combined, as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be determined for sulfur dioxide, from number 6 fuel oil, as provided below:

(the average sulfur dioxide emission rate, for the rolling, 12-month period, in lb/mmBtu, from Section A.III.3) X (the average of the heat content data for the number 6 fuel oil for the rolling, 12-month period, from Section A.III.3, in mmBtu/gallon) X (the updated rolling, 12-month number 6 fuel oil usage rate, in gallons, from Section A.III.4.b)/2000.

VI. Miscellaneous Requirements

1. Ambient air quality impacts from the shut down and removal of emissions unit B122 are being used as ambient air quality impact credits towards the increase in ambient air quality impacts associated with this emissions unit. Therefore, at no time shall both emissions units B122 and B143 operate at the same time.

Emissions Unit: BOILER #7 (B122)

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. **Additional Terms and Conditions**

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit: BOILER #3 (B124)

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: BOILER #3 (B124)

Activity Description: BOILER #3

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
135 mmBtu/hr natural gas-fired boiler - Boiler #3	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-10(B)(1)	Particulate emissions shall not exceed 0.020 lb/mmBtu of actual heat input.
	OAC rule 3745-18-06	None, see A.I.2.a below.
	40 CFR Part 63, Subpart DDDDD	See Attachment 1 of this permit.

2. Additional Terms and Conditions

- 2.a The provisions specified in paragraphs (D), (F), and (G) of OAC rule 3745-18-06 do not apply to this emissions unit; therefore, there is no SO₂ emission limitation from OAC Chapter 3745-18 for this emissions unit.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

Emissions Unit: BOILER #3 (B124)

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation:

Particulate emissions shall not exceed 0.020 lb/mmBtu actual heat input.

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the maximum hourly gas burning capacity of the emissions unit (131,068 CF/hr) by the emission factor from AP-42 "Compilation of Air Pollutant Emission Factors", Table 1.4-2 (7/98) for filterable particulates from natural gas combustion (1.9 lbs of particulates/mmCF), and dividing by the maximum hourly heat input capacity of the emissions unit (135 mmBtu/hr).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

VI. Miscellaneous Requirements

1. Ambient air quality impacts from the shut down and removal of emissions unit B124 are being used as ambient air quality impact credits towards the increase in ambient air quality impacts associated with this emissions unit. Therefore, at no time shall both emissions units B124 and B141 operate at the same time.

Emissions Unit: BOILER #3 (B124)

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit: BOILER #8 (B131)

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: BOILER #8 (B131)

Activity Description: BOILER #8

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
181 mmBtu/hr coal-fired boiler with auxiliary natural gas-fired burner, controlled with an oxygen analyzer, dry scrubber and baghouse - Boiler #8	OAC rule 3745-31-05(A)(3) (PTI 01-572)	When burning coal, particulate emissions shall not exceed 0.04 lb/mmBtu of actual heat input and 7.24 lbs/hr.
		Particulate emissions shall not exceed 24.8 tons/yr.
		When burning coal, nitrogen oxides emissions shall not exceed 0.6 lb/mmBtu of actual heat input and 108.6 lbs/hr.
		Nitrogen oxides emissions shall not exceed 474.36 tons/yr.
		When burning coal, sulfur dioxide emissions shall not exceed 0.87 lb/mmBtu of actual heat input and 157.5 lbs/hr.
		Sulfur dioxide emissions shall not exceed 687.83 tons/yr.
		When burning coal, carbon monoxide emissions shall not exceed 15.5 lbs/hr.

Emissions Unit: BOILER #8 (B131)

Carbon monoxide emissions shall not exceed 67.61 tons/yr.

The following emission limitations only apply when burning coal:

Lead emissions shall not exceed 0.1 lb/hr and 0.44 ton/yr.

Beryllium emissions shall not exceed 0.015 lb/hr and 0.07 ton/yr.

Mercury (Hg) emissions shall not exceed 0.003 lb/hr and 0.02 ton/yr.

Fluoride emissions shall not exceed 0.004 lb/hr and 0.0182 ton/yr.

Visible particulate emissions shall not exceed 20% opacity, except for a period of not more than 3 minutes in any 60-minute period, but shall not exceed 60% opacity, at any time.

See A.II.1-5 below.

The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-10(B)(1).

OAC rule 3745-17-07(A)

The emission limitations specified by this rule are less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

OAC rule 3745-18-06(E)

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

The emission limitation specified by this rule is less stringent than the

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OAC rule 3745-17-10(C)(1) emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

See A.I.2.a below.

OAC rules 3745-21-08(B) and 3745-23-06(B) Particulate emissions shall not exceed 0.020 lb/mmBtu of actual heat input when burning natural gas.
OAC rule 3745-17-10(B)(1)

See Attachment 1 of this permit.

40 CFR Part 63, Subpart DDDDD

2. Additional Terms and Conditions

2.a The permittee has satisfied the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-572.

II. Operational Restrictions

1. The permittee shall vent emissions to a dry scrubber followed by a baghouse.
2. The permittee shall operate and maintain an oxygen analyzer to assure complete combustion in this emissions unit.
3. The quality of the coal burned in this emissions unit shall meet the following specifications on an "as-received" basis:
 - a. less than 14% ash, by weight;
 - b. a sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 0.87 pound sulfur dioxide/mmBtu of actual heat input at the scrubber exhaust; and
 - c. greater than 11,700 Btu/pound of coal.

Compliance with the above-mentioned specifications shall be determined based upon the analytical results for the monthly composite sample of coal collected from each shipment of coal received during the calendar month.

Emissions Unit: BOILER #8 (B131)

4. The annual coal usage shall not exceed 53,000 tons per calendar year.
5. The permittee shall operate and maintain equipment to continuously monitor and record the opacity of the particulate emissions from this emissions unit when the emissions unit is in operation.
6. The permittee shall operate and maintain equipment to continuously monitor and record the sulfur dioxide emission rate, in lbs of sulfur dioxide/mmBtu from this emissions unit, when the emissions unit is in operation.
7. The pressure drop across the baghouse shall be maintained within the range of 4-8 inches of water while the emissions unit is in operation, while burning coal.
8. The permittee shall burn only natural gas or coal in this emissions unit.
9. The auxiliary natural gas-fired burner shall only be used during periods of boiler start-up, coal handling system malfunctions, boiler shutdown, and when sulfur dioxide emissions are marginal (based upon the data from the continuous sulfur dioxide monitoring system).

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect a representative sample of each shipment of coal which is received for burning. The coal sampling shall be performed in accordance with ASTM method D2234, Collection of a Gross Sample of Coal. At the end of each calendar month, the representative samples of coal from all shipments of coal which were received 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 for ash content, sulfur content and heat content shall be: ASTM method D3174, Ash in the Analysis of Coal and Coke; ASTM method D3177, Total Sulfur in the Analysis Sample of Coal and Coke or ASTM method D4239, Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods; and ASTM method D5865, Gross Calorific Value of Coal and Coke, respectively. Alternative, equivalent methods may be used upon written approval from the Ohio EPA, Central District Office.

2. The permittee shall maintain monthly records of the following:
 - a. the total quantity of coal received (tons);
 - b. the total quantity of coal burned (tons);
 - c. the average ash content (percent) of the coal received;
 - d. the average sulfur content (percent) of the coal received;

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- e. the average heat content (Btu/pound) of the coal received;
 - f. the total quantity of natural gas burned (CF); and
 - g. the total operating time for the emissions unit (hrs).
3. The permittee shall maintain annual records of the following:
- a. the total quantity of coal burned (tons); and
 - b. the total operating time of the emissions unit (hrs).
4. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on daily basis.
5. For each day during which the permittee burns a fuel other than natural gas and/or coal, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
6. The permittee shall operate and maintain 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 60.13.

Each continuous monitoring system consists of all the equipment used to acquire data and includes the data recording/processing hardware and software.

The permittee shall maintain a certification letter from the Ohio EPA documenting that the continuous opacity monitoring system has been certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 1. The letter of certification shall be made available to the Director upon request.

The permittee shall maintain records of the following data obtained by the continuous opacity monitoring system: percent opacity on a 6-minute block average basis, results of daily zero/span calibration checks and magnitude of manual calibration adjustments.

7. The permittee shall operate and maintain equipment to continuously monitor and record sulfur dioxide emissions from this emissions unit in units of the applicable standard(s). Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

Each continuous 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.

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The permittee shall maintain on-site documentation from the USEPA or the Ohio EPA that the continuous sulfur dioxide monitoring system has been certified in accordance with 40 CFR Part 60. The letter of certification shall be made available to the Director upon request.

The permittee shall maintain records of the following data obtained by the continuous sulfur dioxide monitoring system: emissions of sulfur dioxide in lb/mmBtu actual heat input on an hourly average basis, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments. In addition, the permittee shall maintain daily records of the total actual heat input values as determined through the F-Factor and carbon dioxide/oxygen calculations as specified in 40 CFR Part 60, Appendix A, Method 19.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify each month during which records were not maintained for the amount of coal burned or the quantity of coal received.
2. The permittee shall submit quarterly deviation (excursion) reports that identify any record showing an exceedance of the coal ash content limitation or the heat content limitation.
3. The permittee shall submit quarterly deviation (excursion) reports that identify any record showing an exceedance of the 0.87 pound sulfur dioxide/mmBtu of actual heat input limitation for the coal received.
4. The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.
5. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.
6. The permittee shall submit annual reports that specify the total amount of coal used and the total particulate, nitrogen oxides, sulfur dioxide, carbon monoxide, lead, beryllium, mercury, and fluoride emissions for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
7. The permittee shall submit reports following the end of each calendar quarter to the Ohio EPA, Central District Office 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 identify 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

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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 date, time, reason, and corrective action(s) taken for each time period of 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 31, April 30, July 31 and October 31 of each year and shall address the data obtained during the previous calendar quarter.

8. The permittee shall submit reports (hardcopy or electronic format) following the end of each calendar quarter to the Ohio EPA, Central District Office documenting the date, commencement and completion time, duration, magnitude, reason (if known), and corrective actions taken (if any), of all 3-hour average sulfur dioxide values in excess of the applicable sulfur dioxide emission rate (lb/mmBtu) and/or of all 1-hour readings which are equal to or greater than the span of the analyzer.

The reports shall also document any continuous sulfur dioxide 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 also 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 date, time, reason, and corrective action(s) taken for each time period of monitoring system malfunction. 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 31, April 30, July 31 and October 31 of each year and shall address the data obtained during the previous calendar quarter.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
 - 1.a Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity, except for a period of not more than 3 minutes in any 60-minute period, but shall not exceed 60% opacity, at any time.

Applicable Compliance Method:

Compliance may be based on the data obtained by the continuous opacity monitoring system.

Emissions Unit: BOILER #8 (B131)

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

1.b Emission Limitations:

Particulate emissions shall not exceed 0.04 lb/mmBtu of actual heat input and 7.24 lbs/hr.

Applicable Compliance Method:

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

- i. The emission testing shall be conducted every 2.5 years from the date of the most recent emission test that demonstrated the emissions unit was in compliance.
- ii. The emission testing shall be conducted to demonstrate compliance with the particulate emission limitations.
- iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate(s): 40 CFR Part 60, Appendix A, Methods 1 through 5. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, Central District Office.
- iv. The test(s) shall be conducted while the emissions unit is burning coal and operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA, Central District Office.

1.c Emission Limitation:

Particulate emissions shall not exceed 24.8 tons/yr.

Applicable Compliance Method:

Compliance shall be demonstrated by summing the annual natural gas and coal emissions.

The annual natural gas emissions shall be determined by multiplying the annual natural gas usage (CF/yr) by the emission factor from AP-42 "Compilation of Air Pollutant Emission Factors", Table 1.4-2 (7/98) for filterable particulates from natural gas combustion (1.9 lbs of particulates/mmCF), and dividing by 2000 lbs/ton.

The annual coal emissions shall be determined by multiplying the emission factor established during the most recent emission tests that demonstrated that the emissions unit was in compliance (lbs PE/ton) by the amount of coal used (tons/yr) and dividing by 2000 lbs/ton.

1.d Emission Limitations:

Nitrogen oxides emissions shall not exceed 0.6 lb/mmBtu of actual heat input and 108.6 lbs/hr.

Applicable Compliance Method:

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

Emissions Unit: BOILER #8 (B131)

- i. The emission testing shall be conducted every 2.5 years from the date of the most recent emission test that demonstrated the emissions unit was in compliance.
- ii. The emission testing shall be conducted to demonstrate compliance with the emission limitations for nitrogen oxides.
- iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, Central District Office.
- iv. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA, Central District Office.

1.e Emission Limitation:

Nitrogen oxides emissions shall not exceed 474.36 tons/yr.

Applicable Compliance Method:

Compliance shall be demonstrated by summing the annual natural gas and coal emissions.

The annual natural gas emissions shall be determined by multiplying the annual natural gas usage (CF/yr) by the emission factor from AP-42 "Compilation of Air Pollutant Emission Factors", Table 1.4-1 (2/98) for nitrogen oxides from natural gas combustion (140 lbs of nitrogen oxides/mmCF), and dividing by 2000 lbs/ton.

The annual coal emissions shall be determined by multiplying the hourly emission rate from the most recent emission test (lb/mmBtu) that demonstrated that the emissions unit was in compliance by the total tons of coal burned (Section A.III.2.b) and by the average annual heat content (Section A.III.2.e) divided by 1,000,000.

1.f Emission Limitation:

Sulfur dioxide emissions shall not exceed 0.87 lb/mmBtu of actual heat input.

Applicable Compliance Method:

Compliance shall be based on the data obtained by the continuous sulfur dioxide emission monitoring system and the record keeping in Section A.III.1.

If required, the permittee shall conduct emission testing for this emissions unit in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

1.g Emission Limitation:

Sulfur dioxide emissions shall not exceed 157.5 lbs/hr.

Applicable Compliance Method:

Emissions Unit: BOILER #8 (B131)

Compliance with this emission limitation can be assumed provided that the permittee demonstrates compliance with the 0.87 lb of sulfur dioxide/mmBtu emission limitation.

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

1.h Emission Limitation:

Sulfur dioxide emissions shall not exceed 687.83 tons/yr.

Applicable Compliance Method:

Compliance shall be demonstrated by summing the annual natural gas and coal emissions.

The annual natural gas emissions shall be determined by multiplying the annual natural gas usage (CF/yr) by the emission factor from AP-42 "Compilation of Air Pollutant Emission Factors", Table 1.4-2 (7/98) for sulfur dioxide from natural gas combustion (0.6 lb of sulfur dioxide/mmCF), and dividing by 2000 lbs/ton.

The annual coal emissions shall be determined by multiplying the CEMS emission data (lbs SO₂/mmBtu) by the average annual coal heat content (Btu/lb coal) from Section A.III.2.e by the total annual quantity of coal burned (tons) from Section A.III.3.a and dividing by 1,000,000 Btu/mmBtu.

1.i Emission Limitation:

Carbon monoxide emissions shall not exceed 15.5 lbs/hr.

Applicable Compliance Method:

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

- i. The emission testing shall be conducted every 2.5 years from the date of the most recent emission test that demonstrated the emissions unit was in compliance.
- ii. The emission testing shall be conducted to demonstrate compliance with the carbon monoxide emission limitation.
- iii. The following test method shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, Central District Office.
- iv. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA, Central District Office.

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1.j Emission Limitation:

Carbon monoxide emissions shall not exceed 67.61 tons/yr.

Applicable Compliance Method:

Compliance shall be demonstrated by summing the annual natural gas and coal emissions.

The annual natural gas emissions shall be determined by multiplying the annual natural gas usage (CF/yr) by the emission factor from AP-42 "Compilation of Air Pollutant Emission Factors", Table 1.4-1 (2/98) for carbon monoxide from natural gas combustion (84 lbs of carbon monoxide/mmCF), and dividing by 2000 lbs/ton.

The annual coal emissions shall be determined by multiplying the hourly emission rate from the most recent emission tests that demonstrated that the emissions unit was in compliance by the total annual operating hours from Section A.III.3.b and dividing by 2000 lbs/ton.

1.k Emission Limitation:

Lead emissions shall not exceed 0.1 lb/hr.

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the emission factor of 507 lbs lead/10e12 Btu (AP-42, Table 1.1-17, 9/98) by the maximum heat input capacity of the emissions unit (181 mmBtu/hr).

If required, the permittee shall conduct emission testing for this emissions unit in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 12.

1.l Emission Limitation:

Lead emissions shall not exceed 0.44 ton/yr.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the maximum emission rate of 0.1 lb lead/hr by the total annual operating hours from Section A.III.3.b and dividing by 2000 lbs/ton.

1.m Emission Limitation:

Mercury emissions shall not exceed 0.003 lb/hr.

Applicable Compliance Method:

This emission limitation was established by multiplying the emission factor of 16 lbs mercury/10e12 Btu (AP-42, Table 1.1-17, 9/98) by the maximum capacity of the emissions unit (181 mmBtu/hr).

If required, the permittee shall conduct emission testing for this emissions unit in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 29.

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1.n Emission Limitation:

Mercury emissions shall not exceed 0.02 ton/yr.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the maximum emission rate of 0.003 lb/hr by the total annual operating hours from Section A.III.3.b and dividing by 2000 lbs/ton.

1.o Emission Limitation:

Fluoride emissions shall not exceed 0.004 lb/hr.

Applicable Compliance Method:

This emission limitation was established by multiplying the maximum coal burned per hour, 7.42 tons (per the Title V application submitted 3/15/01) by the emission factor of 0.00054 lb Fluoride/ton coal burned (from AP-42, Supplement 13, Table 1.1, 1982).

If required, the permittee shall conduct emission testing for this emissions unit in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 13A or 13B.

1.p Emission Limitation:

Fluoride emissions shall not exceed 0.0182 ton/yr.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the maximum emission rate of 0.004 lb fluoride/hr by the total annual operating hours from Section A.III.3.b and dividing by 2000 lbs/ton.

1.q Emission Limitation:

Beryllium emissions shall not exceed 0.015 lb/hr.

Applicable Compliance Method:

This emission limitation was established by multiplying the emission factor of 2.1 lbs beryllium/10e5 Btu (from AP-42, Table 1.1-18, 9/98) by the maximum capacity of the emissions unit (181 mmBtu/hr).

If required, the permittee shall conduct emission testing for this emissions unit in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 29.

1.r Emission Limitation:

Beryllium emissions shall not exceed 0.07 ton/yr.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the maximum emission rate of 0.015 lb/hr by the total annual operating hours from Section A.III.3.b and dividing by 2000 lbs/ton.

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1.s Emission Limitation:

Particulate emissions shall not exceed 0.020 lb/mmBtu of actual heat input when burning only natural gas.

Applicable Compliance Method:

Compliance with this emission limitation may be demonstrated by multiplying the maximum hourly gas burning capacity of the emissions unit (106,796 CF/hr) by the emission factor from AP-42 "Compilation of Air Pollutant Emission Factors", Table 1.4-2 (7/98) for filterable particulates in natural gas combustion (1.9 lbs of particulates/mmCF), and dividing by the maximum hourly heat input capacity of the natural gas burner (110 mmBtu/hr).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

2. Not later than 30 days prior to any proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Central District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Central District Office.

VI. Miscellaneous Requirements

None

Emissions Unit: BOILER #5 (B132)

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: BOILER #5 (B132)

Activity Description: Replaced original BOILER #5

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
313.1 mmBtu/hr natural gas and 300.1 mmBtu/hr number 2 fuel oil-fired boiler - Boiler #5	OAC rule 3745-31-05(A)(3) (PTI 01-08714)	Particulate emissions (PE) shall not exceed 0.0196 lb/mmBtu of actual heat input when burning number 2 fuel oil and 0.007 lb/mmBtu when burning natural gas. PE shall not exceed 17.68 tons per year when firing natural gas and/or number 2 fuel oil. Sulfur dioxide (SO ₂) emissions shall not exceed 0.056 lb/mmBtu of actual heat input when burning number 2 fuel oil and 0.0006 lb/mmBtu when burning natural gas. SO ₂ emissions shall not exceed 37.80 tons per year when firing natural gas and/or number 2 fuel oil. Volatile organic compound (VOC) emissions shall not exceed 0.009 lb/mmBtu of actual heat input when burning number 2 fuel oil and

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0.008 lb/mmBtu when burning natural gas.

VOC emissions shall not exceed 11.40 tons per year when firing natural gas and/or number 2 fuel oil.

Nitrogen oxides (NO_x) emissions shall not exceed 0.12 lb/mmBtu of actual heat input when burning number 2 fuel oil and 0.036 lb/mmBtu when burning natural gas.

NO_x emissions shall not exceed 103.52 tons per year when firing natural gas and/or number 2 fuel oil.

Carbon monoxide (CO) emissions shall not exceed 0.17 lb/mmBtu of actual heat input when burning number 2 fuel oil and 0.072 lb/mmBtu when burning natural gas.

CO emissions shall not exceed 161.04 tons per year when firing natural gas and/or number 2 fuel oil.

The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A) and 40 CFR Part 60, Subpart Db.

See A.II.4 below.

OAC rule 3745-18-06(D)
OAC rule 3745-17-10(B)(1)
OAC rule 3745-23-06(C)(1)
OAC rule 3745-23-06(C)(2)
40 CFR Part 60.44b

The emission limitations established pursuant to OAC rule 3745-31-05 (A)(3) are more stringent than the emission limitation established by these rules.

Emissions Unit: BOILER #5 (B132)

40 CFR Part 60, Subpart Db	When firing number 2 fuel oil, visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except for one 6-minute period per hour of not more than 27% opacity.
OAC rule 3745-17-07(A)	When firing natural gas, visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
OAC rule 3745-21-08(B)	See A.I.2.a below.
OAC rule 3745-31-13(D)(1)	See A.I.2.b below.
40 CFR Part 63, Subpart DDDDD	See Attachment 1 of this permit.

2. Additional Terms and Conditions

- 2.a** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08 by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08714.

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.

- 2.b** As a non-profit education institution, the permittee requested and received a discretionary exemption from the Director on March 14, 2003, to exempt this emissions unit from the PSD requirements contained in OAC rules 3745-31-10 through 3745-31-20.

II. Operational Restrictions

1. The maximum annual number 2 fuel oil consumption shall not exceed 9,526,500 gallons.

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2. The quality of the number 2 fuel oil burned in this emissions unit shall meet, on an as-received basis, a sulfur content which is equal to or less than 0.5 weight percent sulfur and is sufficient to comply with the allowable sulfur dioxide emission limitation specified in Section A.I above.
3. The permittee shall operate and maintain equipment to continuously monitor and record the opacity of the particulate emissions from this emissions unit when combusting number 2 fuel oil.
4. The permittee shall operate low NOx burners and employ flue gas recirculation at all times this emissions unit is in operation.
5. The permittee shall operate and maintain equipment to continuously monitor and record the NOx emissions from this emissions unit when combusting natural gas and/or number 2 fuel oil.
6. The permittee shall burn only natural gas and/or number 2 fuel oil in this emissions unit.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below.

a. Alternative 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).) A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated

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sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).)

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as ASTM methods D4294 and D240), or equivalent methods approved by the Director.

2. For each day during which the permittee burns a fuel other than natural gas or number 2 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
3. The permittee shall maintain daily records of the following information:
 - a. the natural gas consumption for each day (mm cu.ft);
 - b. the number 2 fuel oil consumption for each day (gal);
 - c. the total actual heat input to the emissions unit, calculated as follows:

$$DI = DI_g + DI_o$$

DI = Total heat input for each day, mmBtu
DI_g = Daily heat input rate from Gas
DI_o = Daily heat input rate from Oil

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.
10³ = Conversion of thousand Btu to mmBtu.

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

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$$DI_o = V_{oil-rate} * D_{oil} * (GCV_o / 10^6)$$

Where:

- DI_o = Daily heat input rate from oil, mmBtu/day.
- V_{oil-rate} = Volume rate of oil consumed per day, measured in gal/day
- D_{oil} = Density of oil, measured in lb/gal
- GCV_o = Gross calorific value of oil, as measured by ASTM D240-87, ASTM D2015-91, or ASTM D2382-88 for each batch of oil burned, Btu/unit mass, in lbs.
- 10⁶ = Conversion of Btu to mmBtu.

4. The permittee shall operate and maintain existing equipment to continuously monitor and record the opacity of the particulate emissions from this emissions unit when using number 2 fuel oil. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

Each continuous emission monitoring system consists of all the equipment used to acquire data and includes the data recording/processing hardware and software.

The permittee shall maintain a certification letter from the Ohio EPA documenting that the continuous opacity monitoring system has been certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 1. The letter of certification shall be made available to the Director upon request.

The permittee shall maintain records of the following data obtained by the continuous opacity monitoring system: percent opacity on a 6-minute block average basis, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

5. The permittee shall maintain the written quality assurance/quality control plan for the continuous opacity monitoring system designed to ensure continuous valid and representative readings of opacity. The plan includes, 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 describes 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.
6. The permittee shall operate and maintain equipment to continuously monitor and record NO_x emissions from this emissions unit, in units of the applicable standard(s). Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 and 40 CFR Part 75.

Each 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.

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The permittee shall maintain on-site documentation from the USEPA or the Ohio EPA that the continuous nitrogen oxides monitoring system has been certified in accordance with 40 CFR Part 60. The letter of certification shall be made available to the Director upon request.

The permittee shall maintain records of the following data obtained by the continuous nitrogen oxides monitoring system: emissions of nitrogen oxides in lb/mmBtu actual heat input on an hourly average basis, emissions of nitrogen oxides in lb/mmBtu actual heat input on a daily average basis, emissions of nitrogen oxides in lb/mmBtu on a rolling, 30-day average basis, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

7. The permittee shall maintain the written quality assurance/quality control plan for the continuous NO_x monitoring system designed to ensure continuous valid and representative readings of NO_x emissions in units of the applicable standard. The plan follows the requirements of 40 CFR Part 60, Appendix F and/or 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x monitoring system must be kept on site and available for inspection during regular office hours.
8. The permittee shall collect and record the following information for the purpose of determining annual emissions:
 - a. the amount of natural gas used (in million cubic feet);
 - b. the amount of number 2 fuel oil used (in gallons); and
 - c. the total annual emissions of each pollutant listed in term A.I.1 emitted from this emissions unit, in tons.
9. The permittee shall calculate the annual capacity factor each calendar year as defined in 40 CFR Part 60.41b individually for each fuel burned 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.

IV. Reporting Requirements

1. The permittee shall notify the Director (the Ohio EPA, Central District Office) in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation based upon the calculated sulfur dioxide emission rates and any record which shows a deviation of the allowable sulfur content. The notification shall include a copy of such record and shall be sent to the Director (the Ohio EPA, Central District Office) within 45 days after the deviation occurs.
2. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas and/or number 2 fuel oil was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
3. The permittee shall submit reports (hardcopy or electronic format) within 30 days following the end of each calendar quarter to the Ohio EPA, Central District Office documenting all instances

Emissions Unit: BOILER #5 (B132)

of opacity values in excess of the limitations specified above when burning number 2 fuel oil, detailing the date, commencement and completion times, duration, magnitude (percent opacity), reason (if known), and corrective action(s) taken (if any) of each 6-minute block average above the applicable opacity limitation(s).

The reports shall also identify any continuous opacity monitoring system downtime while the emissions unit was on line (date, time, duration and reason) when burning number 2 fuel oil, 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 date, time, reason, and corrective action(s) taken for each time period of monitoring system malfunction. 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.

4. The permittee shall submit reports (hardcopy or electronic format) within 30 days following the end of each calendar quarter to the Ohio EPA, Central District Office documenting the date, commencement and completion time, duration, magnitude, reason (if known), and corrective actions taken (if any), of all 30-day average nitrogen oxides values in excess of the applicable nitrogen oxides emission rate (lb/mmBtu).

The reports shall also document any continuous nitrogen oxides 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 also 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 date, time, reason, and corrective action(s) taken for each time period of monitoring system malfunction. 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.

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5. The permittee shall submit quarterly reports certifying that only very low sulfur oil meeting the definition in 40 CFR Part 60.41b (i.e., containing no more than 0.5 weight percent sulfur) was combusted in this emissions unit during the preceding quarter.

These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year.

6. The permittee shall submit annual reports that specify the total particulate, sulfur dioxide, volatile organic compound, nitrogen oxides, and carbon monoxide emissions for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
7. The permittee shall submit annual reports of the following information:
 - a. the annual capacity factor over the previous 12 months;
 - b. the average fuel nitrogen content during the reporting period, if any number 2 fuel oil that had a nitrogen content greater than 0.05 was percent is fired;
 - c. the results of any nitrogen oxides emission tests required during the previous 12 months;
 - d. the hours of operation during the previous 12 months; and
 - e. the hours of operation since the last nitrogen oxides emissions test.

V. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I shall be determined in accordance with the following methods:
 - 1.a. Emission Limitations:
PE shall not exceed 0.0196 lb/mmBtu of actual heat input while burning number 2 fuel oil, and 0.007 lb/mmBtu while burning natural gas.

Applicable Compliance Method:

When firing natural gas, compliance with this emission limitation may be demonstrated by multiplying the maximum hourly gas burning capacity of the emissions unit (302,512 CF/hr) by the boiler manufacturer's emission factor (Babcock and Wilcox, 04/24/1998) for total PE from natural gas combustion (7.25 lbs of particulates/mmCF), and dividing by the maximum hourly heat input capacity of the emissions unit (313 mmBtu/hr).

When firing number 2 fuel oil, compliance may be demonstrated based on the results of the the most recent emission test that demonstrated that the emissions unit was in compliance.

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

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1.b Emission Limitation:

PE shall not exceed 17.68 tons/year when burning natural gas and/or number 2 fuel oil.

Applicable Compliance Method:

Compliance shall be demonstrated by summing the annual natural gas and number 2 fuel oil emissions.

The natural gas annual emissions shall be determined by multiplying the annual natural gas usage (mmCF/yr) by the boiler manufacturer's emission factor (Babcock and Wilcox, 04/24/1998) for total PE from natural gas combustion (7.25 lbs of particulates/mmCF), and dividing by 2000 pounds per ton.

The number 2 fuel oil emissions shall be determined by multiplying the emission factor established during the most recent emission test that demonstrated compliance (lbs/gal) by the annual number 2 fuel oil usage (gal/yr) and dividing by 2000 pounds per ton.

1.c Emission Limitations:

Sulfur dioxide (SO₂) emissions shall not exceed 0.056 lb/mmBtu of actual heat input when burning number 2 fuel oil and 0.0006 lb/mmBtu when burning natural gas.

Applicable Compliance Method:

When firing number 2 fuel oil, compliance with the allowable sulfur dioxide emission limitation shall be demonstrated by documenting that the sulfur content of each shipment of oil received during a calendar month meets the limitation.

When firing natural gas, compliance with this limitation will be assumed due to the negligible percent sulfur, by weight, in the fuel.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6, while firing number 2 fuel oil.

1.d Emission Limitation:

Sulfur dioxide (SO₂) emissions shall not exceed 37.8 tons/year when burning natural gas and/or number 2 fuel oil.

Applicable Compliance Method:

Compliance shall be demonstrated by summing the annual natural gas and number 2 fuel oil emissions.

The natural gas annual emissions shall be determined by multiplying the annual natural gas usage (mmCF/yr) by the emission factor from AP-42 "Compilation of Air Pollutant Emission Factors",

Table 1.4-2 (07/1998) for sulfur dioxide from natural gas combustion (0.6 lb of SO₂/mmCF), and dividing by 2000 pounds per ton.

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When firing number 2 fuel oil, compliance with the allowable sulfur dioxide emission limitation shall be demonstrated by multiplying the annual number 2 fuel oil consumption (gal/yr) by the emission factor of $157 * S$ lbs SO₂/1000 gal, where S equals sulfur content (from AP-42, Table 1.3-1, 09/1998) and dividing by 2000 pounds per ton.

1.e Emission Limitations:

Volatile organic compound (VOC) emissions shall not exceed 0.009 lb/mmBtu of actual heat input when burning number 2 fuel oil and 0.008 lb/mmBtu when burning natural gas.

Applicable Compliance Method:

When firing natural gas, compliance may be demonstrated by multiplying the maximum hourly gas burning capacity of the emissions unit (302,512 CF/hr) by the boiler manufacturer's emission factor (Babcock and Wilcox, 04/24/1998) for volatile organic compounds from natural gas combustion (8.28 lbs of VOC/mmCF), and dividing by the maximum hourly heat input capacity of the emissions unit (313 mmBtu/hr).

When firing number 2 fuel oil, compliance with this emission limitation may be demonstrated by multiplying the maximum fuel oil burning capacity of the emissions unit (2144 gal/hr) by the boiler manufacturer's emission factor (Babcock and Wilcox, 04/24/1998) for volatile organic compounds in number 2 fuel oil combustion (1.26 lbs of VOC/1000 gal), and dividing by the maximum hourly heat input capacity of the emissions unit (300.1 mmBtu/hr).

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

1.f Emission Limitation:

Volatile organic compound (VOC) emissions shall not exceed 11.40 tons/year when burning natural gas and/or number 2 fuel oil.

Applicable Compliance Method:

Compliance shall be demonstrated by summing the annual natural gas and number 2 fuel oil emissions.

The natural gas annual emissions shall be determined by multiplying the annual natural gas usage (mmCF/yr) by the boiler manufacturer's emission factor (Babcock and Wilcox, 04/24/1998) for volatile organic compounds in natural gas combustion (8.28 lbs VOC/mmCF), and dividing by 2000 pounds per ton.

The number 2 fuel oil emissions shall be determined by multiplying the annual number 2 fuel oil usage (gal) by the boiler manufacturer's emission factor (Babcock and Wilcox, 04/24/1998) for volatile organic compounds from number 2 fuel oil combustion (1.26 lbs of VOC/1000 gal), and dividing by 2000 pounds per ton.

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1.g Emission Limitations:

Carbon monoxide (CO) emissions shall not exceed 0.17 lb/mmBtu of actual heat input while burning number 2 fuel oil, and 0.072 lb/mmBtu of actual heat input while burning natural gas.

Applicable Compliance Method:

When firing natural gas, compliance may be demonstrated by multiplying the maximum hourly gas burning capacity of the emissions unit (302,512 CF/hr) by the emission factor supplied by the boiler manufacturer (Babcock and Wilcox, 04/29/2001) for carbon monoxide in natural gas combustion (74.5 lbs of CO/mmCF), and dividing by the maximum hourly heat input capacity of the emissions unit (313 mmBtu/hr).

When firing number 2 fuel oil, compliance with this emission limitation may be demonstrated with the boiler manufacturer's emission factor data (0.17 lb/mmBtu, Babcock and Wilcox, 04/24/1998).

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

1.h Emission Limitation:

Carbon monoxide (CO) emissions shall not exceed 161.04 tons/year when burning natural gas and/or number 2 fuel oil.

Applicable Compliance Method:

Compliance shall be demonstrated by summing the annual natural gas and number 2 fuel oil emissions.

The natural gas annual emissions shall be determined by multiplying the annual natural gas usage (mmCF/yr) by the emission factor supplied by the boiler manufacturer (Babcock and Wilcox, 04/29/2001) for carbon monoxide from natural gas combustion (74.5 lbs CO/mmCF), and dividing by 2000 pounds per ton.

The number 2 fuel oil emissions shall be determined by multiplying the annual number 2 fuel oil usage (gal/yr) by the heat content of the oil (Btu/gal) by the boiler manufacturer's emission factor (Babcock and Wilcox, 04/24/1998) for carbon monoxide from number 2 fuel oil combustion (0.17 lb CO/mmBtu) and dividing by 2000 pounds per ton and by 1,000,000 Btu/mmBtu.

1.i Emission Limitations:

Nitrogen oxides (NO_x) emissions shall not exceed 0.12 lb/mmBtu of actual heat input while burning number 2 fuel oil and 0.036 lb/mmBtu of actual heat input while burning natural gas.

Applicable Compliance Method:

When firing natural gas, compliance with the emission limitation may be demonstrated on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all

Emissions Unit: BOILER #5 (B132)

of the hourly nitrogen oxides emission data for the preceding 30 steam generating unit operating days.

When burning number 2 fuel oil, compliance with the emission limitation may be demonstrated on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly nitrogen oxides emission data for the preceding 30 steam generating unit operating days.

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

1.j Emission Limitation:

Nitrogen oxides (NO_x) emissions shall not exceed 103.52 tons/year when burning natural gas and/or number 2 fuel oil.

Applicable Compliance Method:

Compliance shall be demonstrated by summing the annual natural gas and number 2 fuel oil emissions.

The annual natural gas emissions shall be determined by multiplying the CEMS emission data (lbs NO_x/mmBtu) by the average annual natural gas heat content (Btu/cu.ft) by the annual natural gas usage (mmcu.ft/yr) and dividing by 2000 lbs/ton.

The annual number 2 fuel oil emissions shall be determined by multiplying the CEMS emission data (lbs NO_x/mmBtu) by the average annual number 2 fuel oil heat content (Btu/gal) by the annual number 2 fuel oil usage (gal/yr) and dividing by 1,000,000 Btu/mmBtu and again by 2000 lbs/ton.

1.k Emission Limitation:

When firing natural gas, visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

1.l Emission Limitation:

When firing number 2 fuel oil, visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except for one 6-minute period per hour of not more than 27% opacity.

Emissions Unit: BOILER #5 (B132)

Applicable Compliance Method:

Compliance may be determined by the data collected and recorded in Section A.III.5 for the COM and, if required, by visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

VI. Miscellaneous Requirements

1. The permittee shall comply with all applicable provisions of OAC Chapter 3745-14 for emissions unit B132 if appropriate, including but not limited to, certain NO_x emission limitations in the emissions trading program, obtain permits, comply with trading procedures and meet the monitoring and reporting requirements in this rule. See Part II.A.2. of this permit.

Emissions Unit: BOILER #5 (B132)

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit: Vet Hosp 3 (B134)

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Vet Hosp 3 (B134)

Activity Description: Vet Hosp - 151923

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
16.7 mmBtu/hr natural gas-fired boiler - VH #3	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-10(B)(1)	Particulate emissions shall not exceed 0.020 pound per mmBtu of actual heat input.
	OAC rule 3745-18-06	None, see A.I.2.a below.
	40 CFR Part 63, Subpart DDDDD	See Attachment 1 of this permit.

2. Additional Terms and Conditions

- 2.a The provisions specified in paragraphs (D), (F), and (G) of OAC rule 3745-18-06 do not apply to this emissions unit; therefore, there is no SO₂ emission limitation from OAC Chapter 3745-18 for this emissions unit.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

Emissions Unit: Vet Hosp 3 (B134)

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

1. 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):

- 1.a Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- 1.b Emission Limitation:

Particulate emissions shall not exceed 0.020 pound per mmBtu of actual heat input.

Applicable Compliance Method:

Compliance may be determined by multiplying the maximum natural gas burning capacity of the emissions unit (16,700 CF/hr) by the AP-42 (Table 1.4-5, 7/98) emission factor for filterable particulates from natural gas combustion (1.9 lbs/mmCF) and dividing by the maximum heat input capacity of the emissions unit (16.7 mmBtu/hr).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

VI. Miscellaneous Requirements

None

Emissions Unit: Vet Hosp 3 (B134)

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit: Vet Hosp 4 (B135)

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Vet Hosp 4 (B135)

Activity Description: Vet Hosp - 151924

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
16.7 mmBtu/hr natural gas-fired boiler - VH #4	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-10(B)(1)	Particulate emissions shall not exceed 0.020 pound per mmBtu of actual heat input.
	OAC rule 3745-18-06	None, see A.I.2.a below.
	40 CFR Part 63, Subpart DDDDD	See Attachment 1 of this permit.

2. Additional Terms and Conditions

- 2.a The provisions specified in paragraphs (D), (F), and (G) of OAC rule 3745-18-06 do not apply to this emissions unit; therefore, there is no SO₂ emission limitation from OAC Chapter 3745-18 for this emissions unit.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

Emissions Unit: Vet Hosp 4 (B135)

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

1. 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):

1.a Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation:

Particulate emissions shall not exceed 0.020 pound per mmBtu of actual heat input.

Applicable Compliance Method:

Compliance may be determined by multiplying the maximum natural gas burning capacity of the emissions unit (16,700 CF/hr) by the AP-42 (Table 1.4-5, 7/98) emission factor for filterable particulates from natural gas combustion (1.9 lbs/mmCF) and dividing by the maximum heat input capacity of the emissions unit (16.7 mmBtu/hr).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

VI. Miscellaneous Requirements

None

Emissions Unit: Vet Hosp 5 (B136)

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

**Operations, Property,
and/or Equipment**

**Applicable Rules/
Requirements**

**Applicable Emissions
Limitations/Control Measures**

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit: Vet Hosp 5 (B136)

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Vet Hosp 5 (B136)

Activity Description: Vet Hosp - 151925

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
16.7 mmBtu/hr natural gas-fired boiler - VH #5	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-10(B)(1)	Particulate emissions shall not exceed 0.020 pound per mmBtu of actual heat input.
	OAC rule 3745-18-06	None, see A.I.2.a below.

2. Additional Terms and Conditions

- 2.a The provisions specified in paragraphs (D), (F), and (G) of OAC rule 3745-18-06 do not apply to this emissions unit; therefore, there is no SO₂ emission limitation from OAC Chapter 3745-18 for this emissions unit.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

Emissions Unit: Vet Hosp 5 (B136)

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

1. 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):

1.a Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation:

Particulate emissions shall not exceed 0.020 pound per mmBtu of actual heat input.

Applicable Compliance Method:

Compliance may be determined by multiplying the maximum natural gas burning capacity of the emissions unit (16,700 CF/hr) by the AP-42 (Table 1.4-5, 7/98) emission factor for filterable particulates from natural gas combustion (1.9 lbs/mmCF) and dividing by the maximum heat input capacity of the emissions unit (16.7 mmBtu/hr).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

VI. Miscellaneous Requirements

None

Emissions Unit: Vet Hosp 5 (B136)

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit: McCracken Natural Gas Driven Compressor (B137)

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: McCracken Natural Gas Driven Compressor (B137)

Activity Description: 230 HP Caterpillar natural gas driven compressor.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
230 HP Caterpillar natural gas-driven compressor	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(5)(a)	Particulate emissions shall not exceed 0.25 lb/mmBtu actual heat input. See A.I.2.a below.
	OAC rule 3745-17-11(B)(5)(a)	Particulate emissions shall not exceed 0.310 lb/mmBtu actual heat input. See A.I.2.b below.
	OAC rule 3745-18-06	None, exempt pursuant to OAC rules 3745-18-06(A) and 3745-18-06(B).

2. Additional Terms and Conditions

- 2.a The requirement to comply with this particulate emission limitation shall terminate on the date the U.S. EPA approves the 0.310 lb/mmBtu actual heat input emission limitation as a revision to the Ohio SIP for particulate matter.

Emissions Unit: McCracken Natural Gas Driven Compressor (B137)

- 2.b** This particulate emission limitation shall be effective and federally enforceable on the date the U.S. EPA approves this particulate emission limitation as a revision to the Ohio SIP for particulate matter.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation:

Particulate emissions shall not exceed 0.25 lb/mmBtu actual heat input.

Applicable Compliance Method:

Compliance may be based upon an emission factor of 0.0095 lb/mmBtu. This emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.2, Table 3.2-3 (07/00).

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in OAC rule 3745-17-03(B)(10).

1.c Emission Limitation:

Particulate emissions shall not exceed 0.310 lb/mmBtu of actual heat input.

Emissions Unit: McCracken Natural Gas Driven Compressor (B137)

Applicable Compliance Method:

Compliance may be based upon an emission factor of 0.0095 lb/mmBtu. This emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.2, Table 3.2-3 (07/00).

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in OAC rule 3745-17-03(B)(10).

VI. Miscellaneous Requirements

None

Emissions Unit: McCracken Natural Gas Driven Compressor (B137)

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. **Additional Terms and Conditions**

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit: C.A.R.Lab #1 (B138)

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

Emissions Unit ID: C.A.R.Lab #1 (B138)
 Activity Description: C.A.R. Facility Engine Dynamometer Lab #1

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
300 HP Engine Dynamometer Lab 1	OAC rule 3745-31-05(A)(3) (PTI 01-08695)	Organic compound emissions shall not exceed 10.66 lbs/day and 0.69 ton/year. Carbon monoxide emissions shall not exceed 101.52 lbs/day and 6.60 tons/year. Nitrogen oxides emissions shall not exceed 7.34 lbs/day and 0.48 ton/year. Sulfur dioxide emissions shall not exceed 0.38 lb/day and 0.02 ton/year. Particulate emissions shall not exceed 0.47 lb/day and 0.03 ton/year. Visible particulate emissions shall not exceed 20% opacity as a 6-minute average. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C).
	OAC rule 3745-31-05(C) (PTI 01-08695)	Carbon monoxide emissions shall not exceed 6.60 tons per year, based on a rolling, 12-month summation of the monthly carbon monoxide emissions.

Emissions Unit: C.A.R.Lab #1 (B138)

	See A.II.2 below.
	None, see A.I.2.a below.
OAC rule 3745-17-07(A)	None, see A.I.2.b below.
OAC rule 3745-17-11(B)(1)	None, exempt pursuant to OAC rule 3745-18-06(B).
OAC rule 3745-18-06	None, see A.I.2.c below.
OAC rule 3745-21-07(B)	None, see A.I.2.c below.
OAC rule 3745-23-06(B)	

2. Additional Terms and Conditions

- 2.a** This emissions unit is exempt from the visible particulate emission limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because the emissions unit is not subject to the requirements of OAC rule 3745-17-11, see A.I.2.b.
- 2.b** The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-47-17-11(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11, does not apply because the process weight, as defined in OAC rule 3745-17-01(B)(14), is equal to zero.
- 2.c** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-07 for control of organic materials from stationary sources and OAC rule 3745-23-06 for control of nitrogen oxides emissions from stationary sources, respectively, by committing to comply with the best available technology requirements of OAC rule 3745-31-05(A)(3) in Permit to Install 01-08695.

II. Operational Restrictions

1. The maximum daily fuel usage for this emissions unit shall not exceed 72 gallons of gasoline per day.
2. The maximum annual fuel usage for this emissions unit shall not exceed 9,360 gallons of gasoline based on a rolling, 12-month summation of the monthly gasoline fuel usages.

Emissions Unit: C.A.R.Lab #1 (B138)

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain records of the following information:
 - a. the daily gasoline usage for this emissions unit (gallons);
 - b. the monthly gasoline usage for this emissions unit (gallons);
 - c. the rolling, 12-month summation of the monthly gasoline fuel usages for this emissions unit (gallons);
 - d. the monthly carbon monoxide emissions for this emissions unit (tons); and
 - e. the rolling, 12-month summation of the monthly carbon monoxide emissions for this emissions unit.

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

The visible emissions check is not required to be performed by individuals certified to conduct U.S. EPA Reference Method 9 observations.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the daily and rolling, 12-month fuel usage and carbon monoxide emission limitations for this emissions unit. These reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

2. The permittee shall submit quarterly written reports that (a) identify all days during which any visible particulate emissions were observed from the vent serving this emissions unit and (b)

Emissions Unit: C.A.R.Lab #1 (B138)

describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted on the dates specified in section A.1.c.ii of the General Terms and Conditions of this permit.

3. The permittee shall submit annual reports that specify the total emissions of particulates, sulfur dioxide, nitrogen oxides, volatile organic compounds, and carbon monoxide from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data from this emissions unit in the annual Fee Emission Report.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of the terms and conditions of this permit shall be determined in accordance with the following methods:

- a. Emission Limitations:

Organic compound (OC) emissions shall not exceed 10.66 lbs/day and 0.69 ton/year.

Applicable Compliance Method:

Compliance with the short term limitation shall be demonstrated by multiplying the emission factor of 148.00 pounds of OC per 1,000 gallons of gasoline burned (U.S. EPA's Factor Information Retrieval Data System (FIRE) Version 6.23) by the maximum daily gasoline usage of 72 gallons per day. Compliance with the long term limitation shall be demonstrated by multiplying the emission factor of 148.00 pounds of OC per 1,000 gallons of gasoline burned (U.S. EPA's Factor Information Retrieval Data System (FIRE) Version 6.23) by the maximum annual gasoline usage of 9,360 gallons per year and dividing by 2,000 pounds per ton.

$$\text{OC} - 148.00 \text{ lbs}/1000 \text{ gal} * 72 \text{ gals}/\text{day} = 10.66 \text{ lbs}/\text{day}$$

$$\text{OC} - 148.00 \text{ lbs}/1000 \text{ gal} * 9360 \text{ gals}/\text{yr} * 1 \text{ ton}/2000 \text{ lbs} = 0.69 \text{ ton}/\text{year}$$

- b. Emission Limitations:

Carbon monoxide (CO) emissions shall not exceed 101.52 lbs/day and 6.60 tons/year.

Applicable Compliance Method:

Compliance with the short term limitation shall be demonstrated by multiplying the emission factor of 1,410 pounds of CO per 1,000 gallons of gasoline burned (emissions test, June 5, 2002) by the maximum daily gasoline usage of 72 gallons per day. Compliance with the long term limitation shall be demonstrated by multiplying the emission factor of 1,410 pounds of CO per 1,000 gallons of gasoline burned (emissions

Emissions Unit: C.A.R.Lab #1 (B138)

test, June 5, 2002) by the maximum annual gasoline usage of 9,360 gallons per year and dividing by 2,000 pounds per ton.

$$\text{CO} - 1,410 \text{ lbs}/1000 \text{ gal} * 72 \text{ gals}/\text{day} = 101.52 \text{ lbs}/\text{day}$$

$$\text{CO} - 1,410 \text{ lbs}/1000 \text{ gal} * 9360 \text{ gals}/\text{yr} * 1 \text{ ton}/2000 \text{ lbs} = 6.60 \text{ tons}/\text{year}$$

c. Emission Limitations:

Nitrogen oxides (NO_x) emissions shall not exceed 7.34 lbs/day and 0.48 ton/year.

Applicable Compliance Method:

Compliance with the short term limitation shall be demonstrated by multiplying the emission factor of 102.00 pounds of NO_x per 1,000 gallons of gasoline burned (U.S. EPA's Factor Information Retrieval Data System (FIRE) Version 6.23) by the maximum daily gasoline usage of 72 gallons per day. Compliance with the long term limitation shall be demonstrated by multiplying the emission factor of 102.00 pounds of NO_x per 1,000 gallons of gasoline burned (U.S. EPA's Factor Information Retrieval Data System (FIRE) Version 6.23) by the maximum annual gasoline usage of 9,360 gallons per year and dividing by 2,000 pounds per ton.

$$\text{NO}_x - 102.00 \text{ lbs}/1000 \text{ gal} * 72 \text{ gals}/\text{day} = 7.34 \text{ lbs}/\text{day}$$

$$\text{NO}_x - 102.00 \text{ lbs}/1000 \text{ gal} * 9360 \text{ gals}/\text{yr} * 1 \text{ ton}/2000 \text{ lbs} = 0.48 \text{ ton}/\text{year}$$

d. Emission Limitations:

Sulfur dioxide (SO₂) emissions shall not exceed 0.38 lb/day and 0.02 ton/year.

Applicable Compliance Method:

Compliance with the short term limitation shall be demonstrated by multiplying the emission factor of 5.31 pounds of SO₂ per 1,000 gallons of gasoline burned (U.S. EPA's Factor Information Retrieval Data System (FIRE) Version 6.23) by the maximum daily gasoline usage of 72 gallons per day. Compliance with the long term limitation shall be demonstrated by multiplying the emission factor of 5.31 pounds of SO₂ per 1,000 gallons of gasoline burned (U.S. EPA's Factor Information Retrieval Data System (FIRE) Version 6.23) by the maximum annual gasoline usage of 9,360 gallons per year and dividing by 2,000 pounds per ton.

$$\text{SO}_2 - 5.31 \text{ lbs}/1000 \text{ gal} * 72 \text{ gals}/\text{day} = 0.38 \text{ lb}/\text{day}$$

$$\text{SO}_2 - 5.31 \text{ lbs}/1000 \text{ gal} * 9360 \text{ gals}/\text{yr} * 1 \text{ ton}/2000 \text{ lbs} = 0.02 \text{ ton}/\text{year}$$

e. Emission Limitations:

Particulate emissions (PE) shall not exceed 0.47 lb/day and 0.03 ton/year.

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Applicable Compliance Method:

Compliance with the short term limitation shall be demonstrated by multiplying the emission factor of 6.47 pounds of PE per 1,000 gallons of gasoline burned (U.S. EPA's Factor Information Retrieval Data System (FIRE) Version 6.23) by the maximum daily gasoline usage of 72 gallons per day. Compliance with the long term limitation shall be demonstrated by multiplying the emission factor of 6.47 pounds of PE per 1,000 gallons of gasoline burned (U.S. EPA's Factor Information Retrieval Data System (FIRE) Version 6.23) by the maximum annual gasoline usage of 9,360 gallons per year and dividing by 2,000 pounds per ton.

$$\text{PE} - 6.47 \text{ lbs}/1000 \text{ gal} * 72 \text{ gals}/\text{day} = 0.47 \text{ lb}/\text{day}$$

$$\text{PE} - 6.47 \text{ lbs}/1000 \text{ gal} * 9360 \text{ gals}/\text{yr} * 1 \text{ ton}/2000 \text{ lbs} = 0.03 \text{ ton}/\text{year}$$

f. Emission Limitation:

Visible particulate emissions shall not exceed 20% opacity, as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

VI. Miscellaneous Requirements

None

Emissions Unit: C.A.R.Lab #1 (B138)

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit: C.A.R.Lab #2 (B139)

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

Emissions Unit ID: C.A.R.Lab #2 (B139)
 Activity Description: C.A.R. Facility Engine Dynamometer Lab #2

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
190 HP Engine Dynamometer Lab 2	OAC rule 3745-31-05(A)(3) (PTI 01-08695)	Organic compound emissions shall not exceed 10.66 lbs/day and 0.69 ton/year. Carbon monoxide emissions shall not exceed 101.52 lbs/day and 6.60 tons/year. Nitrogen oxides emissions shall not exceed 7.34 lbs/day and 0.48 ton/year. Sulfur dioxide emissions shall not exceed 0.38 lb/day and 0.02 ton/year. Particulate emissions shall not exceed 0.47 lb/day and 0.03 ton/year. Visible particulate emissions shall not exceed 20% opacity as a 6-minute average. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C).
	OAC rule 3745-31-05(C) (PTI 01-08695)	Carbon monoxide emissions shall not exceed 6.60 tons per year, based on a rolling, 12-month summation of the monthly carbon monoxide emissions.

Emissions Unit: C.A.R.Lab #2 (B139)

	See A.II.2 below.
OAC rule 3745-17-07(A)	None, see A.I.2.a below.
OAC rule 3745-17-11(B)(1)	None, see A.I.2.b below.
OAC rule 3745-18-06	None, exempt pursuant to OAC rule 3745-18-06(B).
OAC rule 3745-21-07(B)	None, see A.I.2.c below.
OAC rule 3745-23-06(B)	None, see A.I.2.c below.

2. Additional Terms and Conditions

- 2.a** This emissions unit is exempt from the visible particulate emission limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because the emissions unit is not subject to the requirements of OAC rule 3745-17-11, see A.I.2.b.
- 2.b** The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11, does not apply because the process weight, as defined in OAC rule 3745-17-01(B)(14), is equal to zero.
- 2.c** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-07 for control of organic materials from stationary sources and OAC rule 3745-23-06 for control of nitrogen oxides emissions from stationary sources, respectively, by committing to comply with the best available technology requirements of OAC rule 3745-31-05(A)(3) in Permit to Install 01-08695.

II. Operational Restrictions

- 1. The maximum daily fuel usage for this emissions unit shall not exceed 72 gallons of gasoline per day.
- 2. The maximum annual fuel usage for this emissions unit shall not exceed 9,360 gallons of gasoline based on a rolling, 12-month summation of the monthly gasoline fuel usages.

III. Monitoring and/or Record Keeping Requirements

- 1. The permittee shall maintain records of the following information:

Emissions Unit: C.A.R.Lab #2 (B139)

- a. the daily gasoline usage for this emissions unit (gallons);
 - b. the monthly gasoline usage for this emissions unit (gallons);
 - c. the rolling, 12-month summation of the monthly gasoline fuel usages for this emissions unit (gallons);
 - d. the monthly carbon monoxide emissions for this emissions unit (tons); and
 - e. the rolling, 12-month summation of the monthly carbon monoxide emissions for this emissions unit.
2. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the vent serving this emissions unit. The presence or absence of any visible emissions shall be noted in a operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operation, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

The visible emissions check is not required to be performed by individuals certified to conduct U.S. EPA Reference Method 9 observations.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the daily and rolling, 12-month fuel usage and carbon monoxide emission limitation for this emissions unit. These reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.
2. The permittee shall submit quarterly written reports that (a) identify all days during which any visible particulate emissions were observed from the vent serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted on the dates specified in section A.1.c.ii of the General Terms and Conditions of this permit.

Emissions Unit: C.A.R.Lab #2 (B139)

3. The permittee shall submit annual reports that specify the total emissions of particulates, sulfur dioxide, nitrogen oxides, volatile organic compounds, and carbon monoxide from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data from this emissions unit in the annual Fee Emission Report.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of the terms and conditions of this permit shall be determined in accordance with the following methods:

- a. Emission Limitations:

Organic compound (OC) emissions shall not exceed 10.66 lbs/day and 0.69 ton/year.

Applicable Compliance Method:

Compliance with the short term limitation shall be demonstrated by multiplying the emission factor of 148.00 pounds of OC per 1,000 gallons of gasoline burned (U.S. EPA's Factor Information Retrieval Data System (FIRE) Version 6.23) by the maximum daily gasoline usage of 72 gallons per day. Compliance with the long term limitation shall be demonstrated by multiplying the emission factor of 148.00 pounds of OC per 1,000 gallons of gasoline burned (U.S. EPA's Factor Information Retrieval Data System (FIRE) Version 6.23) by the maximum annual gasoline usage of 9,360 gallons per year and dividing by 2,000 pounds per ton.

$$\text{OC} - 148.00 \text{ lbs}/1000 \text{ gal} * 72 \text{ gals}/\text{day} = 10.66 \text{ lbs}/\text{day}$$

$$\text{OC} - 148.00 \text{ lbs}/1000 \text{ gal} * 9360 \text{ gals}/\text{yr} * 1 \text{ ton}/2000 \text{ lbs} = 0.69 \text{ ton}/\text{year}$$

- b. Emission Limitations:

Carbon monoxide (CO) emissions shall not exceed 101.52 lbs/day and 6.60 tons/year.

Applicable Compliance Method:

Compliance with the short term limitation shall be demonstrated by multiplying the emission factor of 1,410 pounds of CO per 1,000 gallons of gasoline burned (emissions test, June 5, 2002) by the maximum daily gasoline usage of 72 gallons per day. Compliance with the long term limitation shall be demonstrated by multiplying the emission factor of 1,410 pounds of CO per 1,000 gallons of gasoline burned (emissions test, June 5, 2002) by the maximum annual gasoline usage of 9,360 gallons per year and dividing by 2,000 pounds per ton.

$$\text{CO} - 1,410 \text{ lbs}/1000 \text{ gal} * 72 \text{ gals}/\text{day} = 101.52 \text{ lbs}/\text{day}$$

$$\text{CO} - 1,410 \text{ lbs}/1000 \text{ gal} * 9360 \text{ gals}/\text{yr} * 1 \text{ ton}/2000 \text{ lbs} = 6.60 \text{ tons}/\text{year}$$

Emissions Unit: C.A.R.Lab #2 (B139)

c. Emission Limitations:

Nitrogen oxides (NO_x) emissions shall not exceed 7.34 lbs/day and 0.48 ton/year.

Applicable Compliance Method:

Compliance with the short term limitation shall be demonstrated by multiplying the emission factor of 102.00 pounds of NO_x per 1,000 gallons of gasoline burned (U.S. EPA's Factor Information Retrieval Data System (FIRE) Version 6.23) by the maximum daily gasoline usage of 72 gallons per day. Compliance with the long term limitation shall be demonstrated by multiplying the emission factor of 102.00 pounds of NO_x per 1,000 gallons of gasoline burned (U.S. EPA's Factor Information Retrieval Data System (FIRE) Version 6.23) by the maximum annual gasoline usage of 9,360 gallons per year and dividing by 2,000 pounds per ton.

$$\text{NO}_x - 102.00 \text{ lbs}/1000 \text{ gal} * 72 \text{ gals}/\text{day} = 7.34 \text{ lbs}/\text{day}$$

$$\text{NO}_x - 102.00 \text{ lbs}/1000 \text{ gal} * 9360 \text{ gals}/\text{yr} * 1 \text{ ton}/2000 \text{ lbs} = 0.48 \text{ ton}/\text{year}$$

d. Emission Limitations:

Sulfur dioxide (SO₂) emissions shall not exceed 0.38 lb/day and 0.02 ton/year.

Applicable Compliance Method:

Compliance with the short term limitation shall be demonstrated by multiplying the emission factor of 5.31 pounds of SO₂ per 1,000 gallons of gasoline burned (U.S. EPA's Factor Information Retrieval Data System (FIRE) Version 6.23) by the maximum daily gasoline usage of 72 gallons per day. Compliance with the long term limitation shall be demonstrated by multiplying the emission factor of 5.31 pounds of SO₂ per 1,000 gallons of gasoline burned (U.S. EPA's Factor Information Retrieval Data System (FIRE) Version 6.23) by the maximum annual gasoline usage of 9,360 gallons per year and dividing by 2,000 pounds per ton.

$$\text{SO}_2 - 5.31 \text{ lbs}/1000 \text{ gal} * 72 \text{ gals}/\text{day} = 0.38 \text{ lb}/\text{day}$$

$$\text{SO}_2 - 5.31 \text{ lbs}/1000 \text{ gal} * 9360 \text{ gals}/\text{yr} * 1 \text{ ton}/2000 \text{ lbs} = 0.02 \text{ ton}/\text{year}$$

e. Emission Limitations:

Particulate emissions (PE) shall not exceed 0.47 lb/day and 0.03 ton/year.

Applicable Compliance Method:

Compliance with the short term limitation shall be demonstrated by multiplying the emission factor of 6.47 pounds of PE per 1,000 gallons of gasoline burned (U.S. EPA's

Emissions Unit: C.A.R.Lab #2 (B139)

Factor Information Retrieval Data System (FIRE) Version 6.23) by the maximum daily gasoline usage of 72 gallons per day. Compliance with the long term limitation shall be demonstrated by multiplying the emission factor of 6.47 pounds of PE per 1,000 gallons of gasoline burned (U.S. EPA's Factor Information Retrieval Data System (FIRE) Version 6.23) by the maximum annual gasoline usage of 9,360 gallons per year and dividing by 2,000 pounds per ton.

$$\text{PE} - 6.47 \text{ lbs}/1000 \text{ gal} * 72 \text{ gals}/\text{day} = 0.47 \text{ lb}/\text{day}$$

$$\text{PE} - 6.47 \text{ lbs}/1000 \text{ gal} * 9360 \text{ gals}/\text{yr} * 1 \text{ ton}/2000 \text{ lbs} = 0.03 \text{ ton}/\text{year}$$

f. Emission Limitation:

Visible particulate emissions shall not exceed 20% opacity, as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

VI. Miscellaneous Requirements

None

Emissions Unit: C.A.R.Lab #2 (B139)

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit: McCracken New Boiler #1 (B140)

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

Emissions Unit ID: McCracken New Boiler #1 (B140)
Activity Description: New Boiler #1 to be installed (replace B125)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
206 mmBtu/hr gas/oil-fired water tube boiler with low NOx burner - New Boiler 1 (replaces B125)	OAC rule 3745-31-05(A)(3) (PTI 01-08714)	<p>Nitrogen oxides (NOx) emissions shall not exceed 0.035 lb/mmBtu when firing natural gas and 0.10 lb/mmBtu when firing number 2 fuel oil.</p> <p>NOx emissions shall not exceed 59.15 tons per year when firing natural gas and/or number 2 fuel oil.</p> <p>Carbon monoxide (CO) emissions shall not exceed 0.04 lb/mmBtu when firing natural gas and 0.08 lb/mmBtu when firing number 2 fuel oil.</p> <p>CO emissions shall not exceed 52.74 tons per year when firing natural gas and/or number 2 fuel oil.</p> <p>Particulate emissions (PE) shall not exceed 0.005 lb/mmBtu when firing natural gas and 0.02 lb/mmBtu when firing number 2 fuel oil.</p> <p>PE shall not exceed 10.93 tons per year when firing natural gas and/or number 2 fuel oil.</p>

Emissions Unit: McCracken New Boiler #1 (B140)

	<p>Volatile organic compound (VOC) emissions shall not exceed 0.004 lb/mmBtu when firing natural gas and 0.004 lb/mmBtu when firing number 2 fuel oil.</p> <p>VOC emissions shall not exceed 3.54 tons per year when firing natural gas and/or number 2 fuel oil.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 0.0006 lb/mmBtu when firing natural gas and 0.052 lb/mmBtu when firing number 2 fuel oil.</p> <p>SO₂ emissions shall not exceed 22.82 tons per year when firing natural gas and/or number 2 fuel oil.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A) and 40 CFR Part 60, Subpart Db.</p> <p>See A.II.3 below.</p>
OAC rule 3745-17-07(A)	<p>Visible PE shall not exceed 20% opacity, as a 6-minute average when firing natural gas, except as provided by rule.</p>
40 CFR Part 60, Subpart Db	<p>Visible PE shall not exceed 20% opacity, as a 6-minute average, except for one 6-minute period per hour of not more than 27% opacity, when firing number 2 fuel oil.</p>
OAC rule 3745-21-08(B) OAC rule 3745-23-06(B)	<p>See A.I.2.a below.</p>
OAC rule 3745-31-13(D)(1)	<p>See A.I.2.b below.</p>
OAC rule 3745-17-10(B)(1) OAC rule 3745-18-06(D)	<p>The emission limitations established pursuant to OAC rule 3745-31-05(A)(3)</p>

Emissions Unit: McCracken New Boiler #1 (B140)

40 CFR Part 63, Subpart DDDDD

are more stringent than the emission limitations established by these rules.

See Attachment 1 of this permit.

2. Additional Terms and Conditions

- 2.a** The permittee satisfies the “best available control techniques and operating practices” and “latest available control techniques and operating practices” required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively, by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3) in Permit to Install 1-08714.

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.

- 2.b** As a non-profit education institution, the permittee requested and received a discretionary exemption from the Director on March 14, 2003, to exempt this emissions unit from the PSD requirements contained in OAC rules 3745-31-10 through 3745-31-20.

II. Operational Restrictions

1. The maximum annual number 2 fuel oil usage for this emissions unit shall not exceed 6,285,300 gallons.
2. The quality of the number 2 fuel oil burned in this emissions unit shall meet, on an as-received basis, a sulfur content which is equal to or less than 0.5 weight percent sulfur and is sufficient to comply with the allowable sulfur dioxide emission limitation specified in Section A.I above.
3. The permittee shall operate low NO_x burners and employ flue gas recirculation at all times this emissions unit is in operation.
4. The permittee shall operate and maintain equipment to continuously monitor and record the opacity of the particulate emissions from this emissions unit when combusting number 2 fuel oil.
5. The permittee shall operate and maintain equipment to continuously monitor and record the NO_x emissions from this emissions unit when combusting natural gas and/or number 2 fuel oil.

Emissions Unit: McCracken New Boiler #1 (B140)

6. The permittee shall burn only natural gas and/or number 2 fuel oil in this emissions unit.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below.

- a. Alternative 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).) A shipment may be comprised of multiple tank truck loads from the same supplier's batch, and the quality of the oil for those loads may be represented by a single batch analysis from the supplier.

- b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).)

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240 and D4294), or equivalent methods as approved by the Director.

2. For each day during which the permittee burns a fuel other than natural gas or number 2 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
3. The permittee shall maintain daily records of the following information:
 - a. the natural gas consumption for each day (in million cubic feet);

Emissions Unit: McCracken New Boiler #1 (B140)

- b. the number 2 fuel oil consumption for each day (in gallons);
- c. the total actual heat input to the emissions unit, calculated as follows:

$$DI = DI_g + DI_o$$

DI = Total heat input for each day, mmBtu
DI_g = Daily heat input rate from Gas
DI_o = Daily heat input rate from Oil

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.
10³ = Conversion of thousand Btu to mmBtu.

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

$$DI_o = V_{oil-rate} * D_{oil} * (GCV_o / 10^6)$$

Where:

DI_o = Daily heat input rate from oil, mmBtu/day.
V_{oil-rate} = Volume rate of oil consumed per day, measured in gal/day
D_{oil} = Density of oil, measured in lb/gal
GCV_o = Gross calorific value of oil, as measured by ASTM D240-87, ASTM D2015-91, or ASTM D2382-88 for each batch of oil burned, Btu/unit mass, lbs.
10⁶ = Conversion of Btu to mmBtu.

- d. beginning after the initial compliance demonstration, the rolling, 30-day average NOx emission rate, in pounds per mmBtu, when firing natural gas; and
- e. beginning after the initial compliance demonstration, the rolling, 30-day average NOx emission rate, in pounds per mmBtu, when firing number 2 fuel oil.

Emissions Unit: McCracken New Boiler #1 (B140)

4. The permittee shall collect and record the following information for the purpose of determining annual mass emissions:
 - a. the amounts of natural gas used (in million cubic feet);
 - b. the amounts of number 2 fuel oil used (in gallons); and
 - c. the annual emissions of each pollutant listed in term A.I.1 emitted from this emissions unit, in tons.
5. The permittee shall properly operate and maintain equipment to continuously monitor and record the opacity of the particulate emissions from this emissions unit when combusting number 2 fuel oil. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

Each continuous emission monitoring system consists of all the equipment used to acquire data and includes the data recording/processing hardware and software.

The permittee shall maintain a certification letter from the Ohio EPA documenting that the continuous opacity monitoring system has been certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 1. This letter of certification shall be made available to the Director upon request.

The permittee shall maintain records of the following data obtained by the continuous opacity monitoring system: percent opacity on a 6-minute average basis, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

6. Within 180 days of startup of this emissions unit, 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.
7. The permittee shall properly operate and maintain equipment to continuously monitor and record NOx emissions from this emissions unit, in units of the applicable standard(s). Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13. Each continuous 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.

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The permittee shall maintain on-site documentation from the Ohio EPA that the continuous NO_x monitoring system has been certified in accordance with 40 CFR Part 60. The letter of certification shall be made available to the Director upon request.

The permittee shall maintain records of the following data obtained by the continuous NO_x monitoring system: emissions of NO_x in pounds per mmBtu of actual heat input on an hourly average basis, emissions of NO_x in pounds per mmBtu on a rolling 30-day average basis, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

8. Within 180 days of startup of this emissions unit, the permittee shall develop a written quality assurance/quality control plan for the continuous NO_x monitoring system designed to ensure continuous valid and representative readings of NO_x emissions in units of the applicable standard. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x monitoring system must be kept on site and available for inspection during regular office hours.
9. The permittee shall calculate the annual capacity factor each calendar as defined in 40 CFR Part 60.41b individually for each fuel burned 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.

IV. Reporting Requirements

1. The permittee shall submit annual reports of the following information:
 - a. the annual capacity factor over the previous 12 months; and
 - b. the average fuel nitrogen content during the reporting period, if any number 2 fuel oil that had a nitrogen content greater than 0.05 was percent is fired.
2. The permittee shall notify the Director (the Ohio EPA, Central District Office) in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation based upon the calculated sulfur dioxide emission rate and any record which shows a deviation of the allowable sulfur content. The notification shall include a copy of such record and shall be set to the Director (the Ohio EPA, Central District Office) within 45 days after the deviation occurs.
3. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas and/or number 2 fuel oil was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
4. The permittee shall submit reports (hardcopy or electronic format) within 30 days following the end of each calendar quarter to the Ohio EPA, Central District Office documenting all instances of opacity valued in excess of the limitations specified above when firing number 2 fuel oil, detailing the date, commencement and completion times, duration, magnitude (percent opacity),

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reason (if known), and corrective action(s) taken (if any) of each 6-minute block average above the applicable opacity limitation(s).

The reports shall also identify any continuous opacity monitoring system downtime while the emissions unit was on line (date, time, duration and reason) when firing number 2 fuel oil, 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 until 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 also 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 date, time, reason, and corrective action(s) taken for each time period of monitoring system malfunction. 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 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter.

5. The permittee shall submit reports (hardcopy or electronic format) within 30 days following the end of each calendar quarter to the Ohio EPA, Central District Office documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective action(s) taken (if any), of all 30-day average NO_x values in excess of the applicable NO_x emission rate (pound per mmBtu).

The reports shall also identify any continuous NO_x 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 until 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 also 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 date, time, reason, and corrective action(s) taken for each time period of monitoring system malfunction. 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 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter.

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6. The permittee shall submit quarterly reports certifying that only very low sulfur oil meeting the definition in 40 CFR Part 60.41b (i.e. containing no more than 0.5 weight percent sulfur) was combusted in this emissions unit during the preceding quarter.

These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year.

7. The permittee shall submit annual reports that specify the total particulate, SO₂, VOC, NO_x and CO emissions and natural gas and number 2 fuel oil usages for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Within 60 days after achieving the maximum production rate at which this emissions unit will be operated, but not later than 180 days after its initial startup, the permittee shall conduct performance tests to demonstrate compliance with the particulate, NO_x, CO and VOC emission limitations while firing number 2 fuel oil.

The particulate emission test shall be conducted in accordance with the procedures specified in 40 CFR Parts 60.8 and 60.46b(d). The test shall be conducted while the emissions unit is operating at or near its maximum capacity, while firing number 2 fuel oil.

The NO_x performance test shall be conducted using the NO_x monitoring system in accordance with the procedures specified in 40 CFR Parts 60.8 and 60.46b(e). The test shall be conducted while the emissions unit is operating at or near its maximum capacity, while firing number 2 fuel oil.

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).
3. Personnel from the Ohio EPA, Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
4. A comprehensive written report on the results of the emission(s) test(s) shall be submitted to the Ohio EPA, Central District Office within 30 days following the completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Central District Office.

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5. Compliance with the emission limitations in Section A.I. of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitations:

NO_x emissions shall not exceed 0.035 lb/mmBtu of actual heat input while firing natural gas and 0.10 lb/mmBtu of actual heat input while firing number 2 fuel oil.

Applicable Compliance Method:

Following the initial performance test, when firing number 2 fuel oil, compliance with the emission limitation shall be demonstrated on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO_x emission data for the preceding 30 steam generating unit operating days.

When firing natural gas, compliance with the emission limitation shall be demonstrated on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO_x emission data for the preceding 30 steam generating unit operating days.

b. Emission Limitation:

Nitrogen oxides NO_x emissions shall not exceed 59.15 tons per year when firing natural gas and/or number 2 fuel oil.

Applicable Compliance Method:

Compliance shall be demonstrated by summing the annual natural gas and number 2 fuel oil emissions.

The annual natural gas emissions shall be determined by multiplying the CEMS emission data (lbs NO_x/mmBtu) by the average annual natural gas heat content (Btu/cu ft) by the annual natural gas usage (mmcu ft/yr) and dividing by 2,000 lbs/ton.

The annual number 2 fuel oil emissions shall be determined by multiplying the CEMS emission data (lbs NO_x/mmBtu) by the average annual number 2 fuel oil heat content (Btu/gal) by the annual number 2 fuel oil usage (gal/yr) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton.

c. Emission Limitations:

CO emissions shall not exceed 0.04 lb/mmBtu of actual heat input while firing natural gas and 0.08 lb/mmBtu of actual heat input while firing number 2 fuel oil.

Applicable Compliance Method:

Compliance may be demonstrated with the boiler manufacturer's emission factor data: 0.04 lb/mmBtu for natural gas and 0.08 lb/mmBtu for number 2 fuel oil (Nebraska Boiler Company, boiler engineering calculations dated 08/28/2002) until initial

Emissions Unit: McCracken New Boiler #1 (B140)

emission testing is completed, at which time the site-specific emission factor for number 2 fuel oil shall be used.

If required, the permittee shall demonstrate compliance with the emission limitation for natural gas through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10, while firing natural gas.

- d. Emission Limitation:
CO emissions shall not exceed 52.74 tons per year when firing natural gas and/or number 2 fuel oil.

Applicable Compliance Method:
Compliance shall be demonstrated by summing the annual natural gas and number 2 fuel oil emissions.

The annual natural gas emissions shall be determined by multiplying annual natural gas usage (cu ft/yr) by the heat content of the gas (Btu/cu ft) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company) for CO in natural gas combustion (0.04 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton.

The annual number 2 fuel oil emissions shall be determined by multiplying the annual number 2 fuel oil usage (gal/yr) by the heat content of the oil (Btu/gal) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company) for CO in number 2 fuel oil combustion (0.08 lb/mmBtu) and dividing by 1,000,000 BTU/mmBtu and again by 2,000 lbs/ton. This emission factor shall be used until initial emission testing is completed, at which time the site-specific emission factor shall be used.

- e. Emission Limitations:
Particulate emissions (PE) shall not exceed 0.005 lb/mmBtu of actual heat input when firing natural gas and 0.02 lb/mmBtu of actual heat input when firing number 2 fuel oil.

Applicable Compliance Method:
Compliance may be demonstrated with the boiler manufacturer's emission factor data: 0.005 lb/mmBtu for natural gas and 0.02 lb/mmBtu for number 2 fuel oil (Nebraska Boiler Company, boiler engineering calculations dated 08/28/2002) until initial emission testing is completed, at which time the site-specific emission factor for number 2 fuel oil shall be used.

If required, the permittee shall demonstrate compliance with the emission limitation for natural gas through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, while firing natural gas.

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- f. **Emission Limitation:**
Particulate emissions (PE) shall not exceed 10.93 tons per year when firing natural gas and/or number 2 fuel oil.
- Applicable Compliance Method:**
Compliance shall be demonstrated by summing the annual natural gas and number 2 fuel oil emissions.
- The annual natural gas emissions shall be determined by multiplying the annual natural gas usage (cu ft/yr) by the heat content of the gas (Btu/cu ft) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company) for PE in natural gas combustion (0.005 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton.
- The annual number 2 fuel oil emissions shall be determined by multiplying the annual number 2 fuel oil usage (gal/yr) by the heat content of the oil (Btu/gal) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company) for PE in number 2 fuel oil combustion (0.02 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton. This emission factor shall be used until initial emission testing is completed, at which time the site-specific emission factor for number 2 fuel oil shall be used.
- g. **Emission Limitations:**
Volatile organic compound (VOC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input when firing natural gas and 0.004 lb/mmBtu of actual heat input when firing number 2 fuel oil.
- Applicable Compliance Method:**
Compliance may be demonstrated with the boiler manufacturer's emission factor data: 0.004 lb/mmBtu for natural gas and 0.004 lb/mmBtu for number 2 fuel oil (Nebraska Boiler Company, boiler engineering calculations dated 08/28/2002) until initial emission testing is completed, at which time the site-specific emission factor for number 2 fuel oil shall be used.
- If required, the permittee shall demonstrate compliance with the emission limitation for natural gas through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 25, while firing natural gas.
- h. **Emission Limitation:**
Volatile organic compound emissions (VOC) shall not exceed 3.54 tons/year when firing natural gas and/or number 2 fuel oil.
- Applicable Compliance Method:**
Compliance shall be demonstrated by summing the annual natural gas and number 2 fuel oil emissions.

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The annual natural gas emissions shall be determined by multiplying annual natural gas usage (cu ft/yr) by the heat content of the gas (Btu/cu ft) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company) for VOC in natural gas combustion (0.004 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton.

The annual number 2 fuel oil emissions shall be determined by multiplying annual number 2 fuel oil usage (gal/yr) by the heat content of the oil (Btu/gal) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company) for VOC in number 2 fuel oil combustion (0.004 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton. This emission factor shall be used until initial emission testing is completed, at which time the site-specific emission factor for number 2 fuel oil shall be used.

i. Emission Limitations:

Sulfur dioxide (SO₂) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input when firing natural gas and 0.052 lb/mmBtu of actual heat input when firing number 2 fuel oil.

Applicable Compliance Method:

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

When firing natural gas, compliance with this limitation will be assumed due to the negligible percent sulfur, by weight, in the fuel.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6, while firing number 2 fuel oil.

j. Emission Limitation:

Sulfur dioxide (SO₂) emissions shall not exceed 22.82 tons/year when firing natural gas and/or number 2 fuel oil.

Applicable Compliance Method:

Compliance shall be demonstrated by summing the annual natural gas and number 2 fuel oil emissions.

The annual natural gas emissions shall be determined by multiplying annual natural gas usage (cu ft/yr) by the heat content of the gas (Btu/cu ft) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company, 08/28/2002) for SO₂ in natural gas combustion (0.0006 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton.

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The annual number 2 fuel oil emissions shall be determined by multiplying annual number 2 fuel oil usage (gal/yr) by the heat content of the oil (Btu/gal) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company, 08/28/2002) for SO₂ in number 2 fuel oil combustion (0.052 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton.

- k. Emission Limitation:
Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average when firing natural gas, except as provided by rule.

Applicable Compliance Method:

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

- l. Emission Limitation:
Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except for one 6-minute period per hour of not more than 27% opacity when firing number 2 fuel oil.

Applicable Compliance Method:

Compliance may be determined by data collected and recorded for the COM and, if required, by visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

VI. Miscellaneous Requirements

1. Ambient air quality impacts from the shut down and removal of emissions unit B125 are being used as ambient air quality impact credits towards the increase in ambient air quality impacts associated with this emissions unit. Therefore, at no time shall both emissions units B125 and B140 operate at the same time.

Emissions Unit: McCracken New Boiler #1 (B140)

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit: McCracken New Boiler #3 (B141)

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

Emissions Unit ID: McCracken New Boiler #3 (B141)
Activity Description: McCracken New Boiler #3 to be installed (Replace B124)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
206 mmBtu/hr gas/oil-fired water tube boiler with low NOx burner - New Boiler 3 (replaces B124)	OAC rule 3745-31-05(A)(3) (PTI 01-08714)	<p>Nitrogen oxides (NOx) emissions shall not exceed 0.035 lb/mmBtu when firing natural gas and 0.10 lb/mmBtu when firing number 2 fuel oil.</p> <p>NOx emissions shall not exceed 59.15 tons per year when firing natural gas and/or number 2 fuel oil.</p> <p>Carbon monoxide (CO) emissions shall not exceed 0.04 lb/mmBtu when firing natural gas and 0.08 lb/mmBtu when firing number 2 fuel oil.</p> <p>CO emissions shall not exceed 52.74 tons per year when firing natural gas and/or number 2 fuel oil.</p> <p>Particulate emissions (PE) shall not exceed 0.005 lb/mmBtu when firing natural gas and 0.02 lb/mmBtu when firing number 2 fuel oil.</p> <p>PE shall not exceed 10.93 tons per year when firing natural gas and/or number 2 fuel oil.</p>

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	<p>Volatile organic compound (VOC) emissions shall not exceed 0.004 lb/mmBtu when firing natural gas and 0.004 lb/mmBtu when firing number 2 fuel oil.</p> <p>VOC emissions shall not exceed 3.54 tons per year when firing natural gas and/or number 2 fuel oil.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 0.0006 lb/mmBtu when firing natural gas and 0.052 lb/mmBtu when firing number 2 fuel oil.</p> <p>SO₂ emissions shall not exceed 22.82 tons per year when firing natural gas and/or number 2 fuel oil.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A) and 40 CFR Part 60, Subpart Db.</p> <p>See A.II.3 below.</p>
OAC rule 3745-17-07(A)	<p>Visible PE shall not exceed 20% opacity, as a 6-minute average when firing natural gas, except as provided by rule.</p>
40 CFR Part 60, Subpart Db	<p>Visible PE shall not exceed 20% opacity, as a 6-minute average, except for one 6-minute period per hour of not more than 27% opacity, when firing number 2 fuel oil.</p> <p>See A.I.2.a below.</p>
OAC rule 3745-21-08(B) OAC rule 3745-23-06(B)	<p>See A.I.2.b below.</p>
OAC rule 3745-31-13(D)(1)	<p>The emission limitations established pursuant to OAC rule 3745-31-05(A)(3)</p>

Emissions Unit: McCracken New Boiler #3 (B141)

OAC rule 3745-17-10(B)(1) OAC rule 3745-18-06(D)	are more stringent than the emission limitations established by these rules.
40 CFR Part 63, Subpart DDDDD	See Attachment 1 of this permit.

2. Additional Terms and Conditions

2.a The permittee satisfies the “best available control techniques and operating practices” and “latest available control techniques and operating practices” required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively, by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3) in Permit to Install 01-08714.

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.

2.b As a non-profit education institution, the permittee requested and received a discretionary exemption from the Director on March 14, 2003, to exempt this emissions unit from the PSD requirements contained in OAC rules 3745-31-10 through 3745-31-20.

II. Operational Restrictions

1. The maximum annual number 2 fuel oil usage for this emissions unit shall not exceed 6,285,300 gallons.
2. The quality of the number 2 fuel oil burned in this emissions unit shall meet, on an as-received basis, a sulfur content which is equal to or less than 0.5 weight percent sulfur and is sufficient to comply with the allowable sulfur dioxide emission limitation specified in Section A.I above.
3. The permittee shall operate low NOx burners and employ flue gas recirculation at all times this emissions unit is in operation.
4. The permittee shall operate and maintain equipment to continuously monitor and record the opacity of the particulate emissions from this emissions unit when combusting number 2 fuel oil.

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5. The permittee shall operate and maintain equipment to continuously monitor and record the NOx emissions from this emissions unit when combusting natural gas and/or number 2 fuel oil.
6. The permittee shall burn only natural gas and/or number 2 fuel oil in this emissions unit.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below.

a. Alternative 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).) A shipment may be comprised of multiple tank truck loads from the same supplier's batch, and the quality of the oil for those loads may be represented by a single batch analysis from the supplier.

b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).)

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240 and D4294), or equivalent methods as approved by the Director.

2. For each day during which the permittee burns a fuel other than natural gas or number 2 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

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3. The permittee shall maintain daily records of the following information:
- a. the natural gas consumption for each day (in million cubic feet);
 - b. the number 2 fuel oil consumption for each day (in gallons);
 - c. the total actual heat input to the emissions unit, calculated as follows:

$$DI = DI_g + DI_o$$

DI = Total heat input for each day, mmBtu
DI_g = Daily heat input rate from Gas
DI_o = Daily heat input rate from Oil

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.
10³ = Conversion of thousand Btu to mmBtu.

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

$$DI_o = V_{oil-rate} * D_{oil} * (GCV_o / 10^6)$$

Where:

DI_o = Daily heat input rate from oil, mmBtu/day.
V_{oil-rate} = Volume rate of oil consumed per day, measured in gal/day
D_{oil} = Density of oil, measured in lb/gal
GCV_o = Gross calorific value of oil, as measured by ASTM D240-87, ASTM D2015-91, or ASTM D2382-88 for each batch of oil burned, Btu/unit mass, lbs.
10⁶ = Conversion of Btu to mmBtu.

- d. beginning after the initial compliance demonstration, the rolling, 30-day average NO_x emission rate, in pounds per mmBtu, when firing natural gas; and

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- e. beginning after the initial compliance demonstration, the rolling, 30-day average NO_x emission rate, in pounds per mmBtu, when firing number 2 fuel oil.
4. The permittee shall collect and record the following information for the purpose of determining annual mass emissions:
 - a. the amounts of natural gas used (in million cubic feet);
 - b. the amounts of number 2 fuel oil used (in gallons); and
 - c. the annual emissions of each pollutant listed in term A.I.1 emitted from this emissions unit, in tons.
 5. The permittee shall properly operate and maintain equipment to continuously monitor and record the opacity of the particulate emissions from this emissions unit when combusting number 2 fuel oil. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

Each continuous emission monitoring system consists of all the equipment used to acquire data and includes the data recording/processing hardware and software.

The permittee shall maintain a certification letter from the Ohio EPA documenting that the continuous opacity monitoring system has been certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 1. This letter of certification shall be made available to the Director upon request.

The permittee shall maintain records of the following data obtained by the continuous opacity monitoring system: percent opacity on a 6-minute average basis, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

6. Within 180 days of startup of this emissions unit, 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.
7. The permittee shall properly operate and maintain equipment to continuously monitor and record NO_x emissions from this emissions unit, in units of the applicable standard(s). Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR

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Part 60.13. Each continuous 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.

The permittee shall maintain on-site documentation from the Ohio EPA that the continuous NOx monitoring system has been certified in accordance with 40 CFR Part 60. The letter of certification shall be made available to the Director upon request.

The permittee shall maintain records of the following data obtained by the continuous NOx monitoring system: emissions of NOx in pounds per mmBtu of actual heat input on an hourly average basis, emissions of NOx in pounds per mmBtu on a rolling 30-day average basis, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

8. Within 180 days of startup of this emissions unit, the permittee shall develop a written quality assurance/quality control plan for the continuous NOx monitoring system designed to ensure continuous valid and representative readings of NOx emissions in units of the applicable standard. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous NOx monitoring system must be kept on site and available for inspection during regular office hours.
9. The permittee shall calculate the annual capacity factor each calendar as defined in 40 CFR Part 60.41b individually for each fuel burned 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.

IV. Reporting Requirements

1. The permittee shall submit annual reports of the following information:
 - a. the annual capacity factor over the previous 12 months; and
 - b. the average fuel nitrogen content during the reporting period, if any number 2 fuel oil that had a nitrogen content greater than 0.05 was percent is fired.
2. The permittee shall notify the Director (the Ohio EPA, Central District Office) in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation based upon the calculated sulfur dioxide emission rate and any record which shows a deviation of the allowable sulfur content. The notification shall include a copy of such record and shall be set to the Director (the Ohio EPA, Central District Office) within 45 days after the deviation occurs.
3. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas and/or number 2 fuel oil was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

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4. The permittee shall submit reports (hardcopy or electronic format) within 30 days following the end of each calendar quarter to the Ohio EPA, Central District Office documenting all instances of opacity valued in excess of the limitations specified above when firing number 2 fuel oil, detailing the date, commencement and completion times, duration, magnitude (percent opacity), reason (if known), and corrective action(s) taken (if any) of each 6-minute block average above the applicable opacity limitation(s).

The reports shall also identify any continuous opacity monitoring system downtime while the emissions unit was on line (date, time, duration and reason) when firing number 2 fuel oil, 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 until 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 also 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 date, time, reason, and corrective action(s) taken for each time period of monitoring system malfunction. 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 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter.

5. The permittee shall submit reports (hardcopy or electronic format) within 30 days following the end of each calendar quarter to the Ohio EPA, Central District Office documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective action(s) taken (if any), of all 30-day average NO_x values in excess of the applicable NO_x emission rate (pound per mmBtu).

The reports shall also identify any continuous NO_x 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 until 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 also 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 date, time, reason, and corrective action(s) taken for each time period of monitoring system malfunction. 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.

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These quarterly excess emission 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.

6. The permittee shall submit quarterly reports certifying that only very low sulfur oil meeting the definition in 40 CFR Part 60.41b (i.e. containing no more than 0.5 weight percent sulfur) was combusted in this emissions unit during the preceding quarter.

These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year.

7. The permittee shall submit annual reports that specify the total particulate, SO₂, VOC, NO_x and CO emissions and natural gas and number 2 fuel oil usages for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Within 60 days after achieving the maximum production rate at which this emissions unit will be operated, but not later than 180 days after its initial startup, the permittee shall conduct performance tests to demonstrate compliance with the particulate, NO_x, CO and VOC emission limitations while firing number 2 fuel oil.

The particulate emission test shall be conducted in accordance with the procedures specified in 40 CFR Parts 60.8 and 60.46b(d). The test shall be conducted while the emissions unit is operating at or near its maximum capacity, while firing number 2 fuel oil.

The NO_x performance test shall be conducted using the NO_x monitoring system in accordance with the procedures specified in 40 CFR Parts 60.8 and 60.46b(e). The test shall be conducted while the emissions unit is operating at or near its maximum capacity, while firing number 2 fuel oil.

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

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permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Central District Office.

5. Compliance with the emission limitations in Section A.I. of the terms and conditions of this permit shall be determined in accordance with the following methods:

- a. Emission Limitations:

NO_x emissions shall not exceed 0.035 lb/mmBtu of actual heat input while firing natural gas and 0.10 lb/mmBtu of actual heat input while firing number 2 fuel oil.

Applicable Compliance Method:

Following the initial performance test, when firing number 2 fuel oil, compliance with the emission limitation shall be demonstrated on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO_x emission data for the preceding 30 steam generating unit operating days.

When firing natural gas, compliance with the emission limitation shall be demonstrated on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO_x emission data for the preceding 30 steam generating unit operating days.

- b. Emission Limitation:

NO_x emissions shall not exceed 59.15 tons per year when firing natural gas and/or number 2 fuel oil.

Applicable Compliance Method:

Compliance shall be demonstrated by summing the annual natural gas and number 2 fuel oil emissions.

The annual natural gas emissions shall be determined by multiplying the CEMS emission data (lbs NO_x/mmBtu) by the average annual natural gas heat content (Btu/cu ft) by the annual natural gas usage (mmcu ft/yr) and dividing by 2,000 lbs/ton.

The annual number 2 fuel oil emissions shall be determined by multiplying the CEMS emission data (lbs NO_x/mmBtu) by the average annual number 2 fuel oil heat content (Btu/gal) by the annual number 2 fuel oil usage (gal/yr) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton.

- c. Emission Limitations:

CO emissions shall not exceed 0.04 lb/mmBtu of actual heat input while firing natural gas and 0.08 lb/mmBtu of actual heat input while firing number 2 fuel oil.

Applicable Compliance Method:

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Compliance may be demonstrated with the boiler manufacturer's emission factor data: 0.04 lb/mmBtu for natural gas and 0.08 lb/mmBtu for number 2 fuel oil (Nebraska Boiler Company, boiler engineering calculations dated 08/28/2002) until initial emission testing is completed, at which time the site-specific emission factor for number 2 fuel oil shall be used.

If required, the permittee shall demonstrate compliance with the emission limitation for natural gas through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10, while firing natural gas.

- d. Emission Limitation:
CO emissions shall not exceed 52.74 tons per year when firing natural gas and/or number 2 fuel oil.

Applicable Compliance Method:
Compliance shall be demonstrated by summing the annual natural gas and number 2 fuel oil emissions.

The annual natural gas emissions shall be determined by multiplying annual natural gas usage (cu ft/yr) by the heat content of the gas (Btu/cu ft) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company) for CO in natural gas combustion (0.04 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton.

The annual number 2 fuel oil emissions shall be determined by multiplying the annual number 2 fuel oil usage (gal/yr) by the heat content of the oil (Btu/gal) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company) for CO in number 2 fuel oil combustion (0.08 lb/mmBtu) and dividing by 1,000,000 BTU/mmBtu and again by 2,000 lbs/ton. This emission factor shall be used until initial emission testing is completed, at which time the site-specific emission factor shall be used.

- e. Emission Limitations:
Particulate emissions (PE) shall not exceed 0.005 lb/mmBtu of actual heat input when firing natural gas and 0.02 lb/mmBtu of actual heat input when firing number 2 fuel oil.

Applicable Compliance Method:
Compliance may be demonstrated with the boiler manufacturer's emission factor data: 0.005 lb/mmBtu for natural gas and 0.02 lb/mmBtu for number 2 fuel oil (Nebraska Boiler Company, boiler engineering calculations dated 08/28/2002) until initial emission testing is completed, at which time the site-specific emission factor for number 2 fuel oil shall be used.

If required, the permittee shall demonstrate compliance with the emission limitation for natural gas through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, while firing natural gas.

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- f. **Emission Limitation:**
Particulate emissions (PE) shall not exceed 10.93 tons per year when firing natural gas and/or number 2 fuel oil.
- Applicable Compliance Method:**
Compliance shall be demonstrated by summing the annual natural gas and number 2 fuel oil emissions.
- The annual natural gas emissions shall be determined by multiplying the annual natural gas usage (cu ft/yr) by the heat content of the gas (Btu/cu ft) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company) for PE in natural gas combustion (0.005 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton.
- The annual number 2 fuel oil emissions shall be determined by multiplying the annual number 2 fuel oil usage (gal/yr) by the heat content of the oil (Btu/gal) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company) for PE in number 2 fuel oil combustion (0.02 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton. This emission factor shall be used until initial emission testing is completed, at which time the site-specific emission factor for number 2 fuel oil shall be used.
- g. **Emission Limitations:**
Volatile organic compound (VOC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input when firing natural gas and 0.004 lb/mmBtu of actual heat input when firing number 2 fuel oil.
- Applicable Compliance Method:**
Compliance may be demonstrated with the boiler manufacturer's emission factor data: 0.004 lb/mmBtu for natural gas and 0.004 lb/mmBtu for number 2 fuel oil (Nebraska Boiler Company, boiler engineering calculations dated 08/28/2002) until initial emission testing is completed, at which time the site-specific emission factor for number 2 fuel oil shall be used.
- If required, the permittee shall demonstrate compliance with the emission limitation for natural gas through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 25, while firing natural gas.
- h. **Emission Limitation:**
Volatile organic compound emissions (VOC) shall not exceed 3.54 tons/year when firing natural gas and/or number 2 fuel oil.
- Applicable Compliance Method:**
Compliance shall be demonstrated by summing the annual natural gas and number 2 fuel oil emissions.

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The annual natural gas emissions shall be determined by multiplying annual natural gas usage (cu ft/yr) by the heat content of the gas (Btu/cu ft) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company) for VOC in natural gas combustion (0.004 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton.

The annual number 2 fuel oil emissions shall be determined by multiplying annual number 2 fuel oil usage (gal/yr) by the heat content of the oil (Btu/gal) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company) for VOC in number 2 fuel oil combustion (0.004 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton. This emission factor shall be used until initial emission testing is completed, at which time the site-specific emission factor for number 2 fuel oil shall be used.

i. Emission Limitations:

Sulfur dioxide (SO₂) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input when firing natural gas and 0.052 lb/mmBtu of actual heat input when firing number 2 fuel oil.

Applicable Compliance Method:

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

When firing natural gas, compliance with this limitation will be assumed due to the negligible percent sulfur, by weight, in the fuel.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6, while firing number 2 fuel oil.

j. Emission Limitation:

Sulfur dioxide (SO₂) emissions shall not exceed 22.82 tons/year when firing natural gas and/or number 2 fuel oil.

Applicable Compliance Method:

Compliance shall be demonstrated by summing the annual natural gas and number 2 fuel oil emissions.

The annual natural gas emissions shall be determined by multiplying annual natural gas usage (cu ft/yr) by the heat content of the gas (Btu/cu ft) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company, 08/28/2002) for SO₂ in natural gas combustion (0.0006 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton.

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The annual number 2 fuel oil emissions shall be determined by multiplying annual number 2 fuel oil usage (gal/yr) by the heat content of the oil (Btu/gal) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company, 08/28/2002) for SO₂ in number 2 fuel oil combustion (0.052 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton.

- k. Emission Limitation:
Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average when firing natural gas, except as provided by rule.

Applicable Compliance Method:

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

- l. Emission Limitation:
Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except for one 6-minute period per hour of not more than 27% opacity when firing number 2 fuel oil.

Applicable Compliance Method:

Compliance may be determined by data collected and recorded for the COM and, if required, by visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

VI. Miscellaneous Requirements

1. Ambient air quality impacts from the shut down and removal of emissions unit B124 are being used as ambient air quality impact credits towards the increase in ambient air quality impacts associated with this emissions unit. Therefore, at no time shall both emissions units B124 and B141 operate at the same time.

Emissions Unit: McCracken New Boiler #3 (B141)

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit: McCracken New Boiler #6 (B142)

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

Emissions Unit ID: McCracken New Boiler #6 (B142)
Activity Description: McCracken New Boiler #6 to be installed (Replace B121)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
206 mmBtu/hr gas/oil-fired water tube boiler with low NOx burner - New Boiler 6 (replaces B121)	OAC rule 3745-31-05(A)(3) (PTI 01-08714)	<p>Nitrogen oxides (NOx) emissions shall not exceed 0.035 lb/mmBtu when firing natural gas and 0.10 lb/mmBtu when firing number 2 fuel oil.</p> <p>NOx emissions shall not exceed 59.15 tons per year when firing natural gas and/or number 2 fuel oil.</p> <p>Carbon monoxide (CO) emissions shall not exceed 0.04 lb/mmBtu when firing natural gas and 0.08 lb/mmBtu when firing number 2 fuel oil.</p> <p>CO emissions shall not exceed 52.74 tons per year when firing natural gas and/or number 2 fuel oil.</p> <p>Particulate emissions (PE) shall not exceed 0.005 lb/mmBtu when firing natural gas and 0.02 lb/mmBtu when firing number 2 fuel oil.</p> <p>PE shall not exceed 10.93 tons per year when firing natural gas and/or number 2 fuel oil.</p>

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	<p>Volatile organic compound (VOC) emissions shall not exceed 0.004 lb/mmBtu when firing natural gas and 0.004 lb/mmBtu when firing number 2 fuel oil.</p> <p>VOC emissions shall not exceed 3.54 tons per year when firing natural gas and/or number 2 fuel oil.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 0.0006 lb/mmBtu when firing natural gas and 0.052 lb/mmBtu when firing number 2 fuel oil.</p> <p>SO₂ emissions shall not exceed 22.82 tons per year when firing natural gas and/or number 2 fuel oil.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A) and 40 CFR Part 60, Subpart Db.</p> <p>See A.II.3 below.</p>
OAC rule 3745-17-07(A)	<p>Visible PE shall not exceed 20% opacity, as a 6-minute average when firing natural gas, except as provided by rule.</p>
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0 CFR Part 60, Subpart Db	<p>Visible PE shall not exceed 20% opacity, as a 6-minute average, except for one 6-minute period per hour of not more than 27% opacity, when firing number 2 fuel oil.</p> <p>See A.I.2.a below.</p>
OAC rule 3745-21-08(B) OAC rule 3745-23-06(B)	<p>See A.I.2.b below.</p>
OAC rule 3745-31-13(D)(1)	<p>The emission limitations established pursuant to OAC rule 3745-31-05(A)(3)</p>

Emissions Unit: McCracken New Boiler #6 (B142)

OAC rule 3745-17-10(B)(1) OAC rule 3745-18-06(D)	are more stringent than the emission limitations established by these rules.
40 CFR Part 63, Subpart DDDDD	See Attachment 1 of this permit.

2. Additional Terms and Conditions

2.a The permittee satisfies the “best available control techniques and operating practices” and “latest available control techniques and operating practices” required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively, by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3) in Permit to Install 01-08714.

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.

2.b As a non-profit education institution, the permittee requested and received a discretionary exemption from the Director on March 14, 2003, to exempt this emissions unit from the PSD requirements contained in OAC rules 3745-31-10 through 3745-31-20.

II. Operational Restrictions

1. The maximum annual number 2 fuel oil usage for this emissions unit shall not exceed 6,285,300 gallons.
2. The quality of the number 2 fuel oil burned in this emissions unit shall meet, on an as-received basis, a sulfur content which is equal to or less than 0.5 weight percent sulfur and is sufficient to comply with the allowable sulfur dioxide emission limitation specified in Section A.I above.
3. The permittee shall operate low NOx burners and employ flue gas recirculation at all times this emissions unit is in operation.
4. The permittee shall operate and maintain equipment to continuously monitor and record the opacity of the particulate emissions from this emissions unit when combusting number 2 fuel oil.

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5. The permittee shall operate and maintain equipment to continuously monitor and record the NOx emissions from this emissions unit when combusting natural gas and/or number 2 fuel oil.
6. The permittee shall burn only natural gas and/or number 2 fuel oil in this emissions unit.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below.

a. Alternative 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).) A shipment may be comprised of multiple tank truck loads from the same supplier's batch, and the quality of the oil for those loads may be represented by a single batch analysis from the supplier.

b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).)

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240 and D4294), or equivalent methods as approved by the Director.

2. For each day during which the permittee burns a fuel other than natural gas or number 2 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

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3. The permittee shall maintain daily records of the following information:
- the natural gas consumption for each day (in million cubic feet);
 - the number 2 fuel oil consumption for each day (in gallons);
 - the total actual heat input to the emissions unit, calculated as follows:

$$DI = DI_g + DI_o$$

DI = Total heat input for each day, mmBtu
DI_g = Daily heat input rate from Gas
DI_o = Daily heat input rate from Oil

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.
10³ = Conversion of thousand Btu to mmBtu.

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

$$DI_o = V_{oil-rate} * D_{oil} * (GCV_o / 10^6)$$

Where:

DI_o = Daily heat input rate from oil, mmBtu/day.
V_{oil-rate} = Volume rate of oil consumed per day, measured in gal/day
D_{oil} = Density of oil, measured in lb/gal
GCV_o = Gross calorific value of oil, as measured by ASTM D240-87, ASTM D2015-91, or ASTM D2382-88 for each batch of oil burned, Btu/unit mass, lbs.
10⁶ = Conversion of Btu to mmBtu.

- beginning after the initial compliance demonstration, the rolling, 30-day average NO_x emission rate, in pounds per mmBtu, when firing natural gas; and

Emissions Unit: McCracken New Boiler #6 (B142)

- e. beginning after the initial compliance demonstration, the rolling, 30-day average NO_x emission rate, in pounds per mmBtu, when firing number 2 fuel oil.
4. The permittee shall collect and record the following information for the purpose of determining annual mass emissions:
 - a. the amounts of natural gas used (in million cubic feet);
 - b. the amounts of number 2 fuel oil used (in gallons); and
 - c. the annual emissions of each pollutant listed in term A.I.1 emitted from this emissions unit, in tons.
 5. The permittee shall properly operate and maintain equipment to continuously monitor and record the opacity of the particulate emissions from this emissions unit when combusting number 2 fuel oil. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

Each continuous emission monitoring system consists of all the equipment used to acquire data and includes the data recording/processing hardware and software.

The permittee shall maintain a certification letter from the Ohio EPA documenting that the continuous opacity monitoring system has been certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 1. This letter of certification shall be made available to the Director upon request.

The permittee shall maintain records of the following data obtained by the continuous opacity monitoring system: percent opacity on a 6-minute average basis, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

6. Within 180 days of startup of this emissions unit, 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.
7. The permittee shall properly operate and maintain equipment to continuously monitor and record NO_x emissions from this emissions unit, in units of the applicable standard(s). Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR

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Part 60.13. Each continuous 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.

The permittee shall maintain on-site documentation from the Ohio EPA that the continuous NOx monitoring system has been certified in accordance with 40 CFR Part 60. The letter of certification shall be made available to the Director upon request.

The permittee shall maintain records of the following data obtained by the continuous NOx monitoring system: emissions of NOx in pounds per mmBtu of actual heat input on an hourly average basis, emissions of NOx in pounds per mmBtu on a rolling 30-day average basis, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

8. Within 180 days of startup of this emissions unit, the permittee shall develop a written quality assurance/quality control plan for the continuous NOx monitoring system designed to ensure continuous valid and representative readings of NOx emissions in units of the applicable standard. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous NOx monitoring system must be kept on site and available for inspection during regular office hours.
9. The permittee shall calculate the annual capacity factor each calendar as defined in 40 CFR Part 60.41b individually for each fuel burned 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.

IV. Reporting Requirements

1. The permittee shall submit annual reports of the following information:
 - a. the annual capacity factor over the previous 12 months; and
 - b. the average fuel nitrogen content during the reporting period, if any number 2 fuel oil that had a nitrogen content greater than 0.05 was percent is fired.
2. The permittee shall notify the Director (the Ohio EPA, Central District Office) in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation based upon the calculated sulfur dioxide emission rate and any record which shows a deviation of the allowable sulfur content. The notification shall include a copy of such record and shall be set to the Director (the Ohio EPA, Central District Office) within 45 days after the deviation occurs.
3. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas and/or number 2 fuel oil was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

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4. The permittee shall submit reports (hardcopy or electronic format) within 30 days following the end of each calendar quarter to the Ohio EPA, Central District Office documenting all instances of opacity valued in excess of the limitations specified above when firing number 2 fuel oil, detailing the date, commencement and completion times, duration, magnitude (percent opacity), reason (if known), and corrective action(s) taken (if any) of each 6-minute block average above the applicable opacity limitation(s).

The reports shall also identify any continuous opacity monitoring system downtime while the emissions unit was on line (date, time, duration and reason) when firing number 2 fuel oil, 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 until 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 also 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 date, time, reason, and corrective action(s) taken for each time period of monitoring system malfunction. 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 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter.

5. The permittee shall submit reports (hardcopy or electronic format) within 30 days following the end of each calendar quarter to the Ohio EPA, Central District Office documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective action(s) taken (if any), of all 30-day average NO_x values in excess of the applicable NO_x emission rate (pound per mmBtu).

The reports shall also identify any continuous NO_x 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 until 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 also 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 date, time, reason, and corrective action(s) taken for each time period of monitoring system malfunction. 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.

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These quarterly excess emission 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.

6. The permittee shall submit quarterly reports certifying that only very low sulfur oil meeting the definition in 40 CFR Part 60.41b (i.e. containing no more than 0.5 weight percent sulfur) was combusted in this emissions unit during the preceding quarter.

These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year.

7. The permittee shall submit annual reports that specify the total particulate, SO₂, VOC, NO_x and CO emissions and natural gas and number 2 fuel oil usages for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Within 60 days after achieving the maximum production rate at which this emissions unit will be operated, but not later than 180 days after its initial startup, the permittee shall conduct performance tests to demonstrate compliance with the particulate, NO_x, CO and VOC emission limitations while firing number 2 fuel oil.

The particulate emission test shall be conducted in accordance with the procedures specified in 40 CFR Parts 60.8 and 60.46b(d). The test shall be conducted while the emissions unit is operating at or near its maximum capacity, while firing number 2 fuel oil.

The NO_x performance test shall be conducted using the NO_x monitoring system in accordance with the procedures specified in 40 CFR Parts 60.8 and 60.46b(e). The test shall be conducted while the emissions unit is operating at or near its maximum capacity, while firing number 2 fuel oil.

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

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permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Central District Office.

5. Compliance with the emission limitations in Section A.I. of the terms and conditions of this permit shall be determined in accordance with the following methods:

- a. Emission Limitations:

NO_x emissions shall not exceed 0.035 lb/mmBtu of actual heat input while firing natural gas and 0.10 lb/mmBtu of actual heat input while firing number 2 fuel oil.

Applicable Compliance Method:

Following the initial performance test, when firing number 2 fuel oil, compliance with the emission limitation shall be demonstrated on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO_x emission data for the preceding 30 steam generating unit operating days.

When firing natural gas, compliance with the emission limitation shall be demonstrated on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO_x emission data for the preceding 30 steam generating unit operating days.

- b. Emission Limitation:

NO_x emissions shall not exceed 59.15 tons per year when firing natural gas and/or number 2 fuel oil.

Applicable Compliance Method:

Compliance shall be demonstrated by summing the annual natural gas and number 2 fuel oil emissions.

The annual natural gas emissions shall be determined by multiplying the CEMS emission data (lbs NO_x/mmBtu) by the average annual natural gas heat content (Btu/cu ft) by the annual natural gas usage (mmcu ft/yr) and dividing by 2,000 lbs/ton.

The annual number 2 fuel oil emissions shall be determined by multiplying the CEMS emission data (lbs NO_x/mmBtu) by the average annual number 2 fuel oil heat content (Btu/gal) by the annual number 2 fuel oil usage (gal/yr) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton.

- c. Emission Limitations:

CO emissions shall not exceed 0.04 lb/mmBtu of actual heat input while firing natural gas and 0.08 lb/mmBtu of actual heat input while firing number 2 fuel oil.

Applicable Compliance Method:

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Compliance may be demonstrated with the boiler manufacturer's emission factor data: 0.04 lb/mmBtu for natural gas and 0.08 lb/mmBtu for number 2 fuel oil (Nebraska Boiler Company, boiler engineering calculations dated 08/28/2002) until initial emission testing is completed, at which time the site-specific emission factor for number 2 fuel oil shall be used.

If required, the permittee shall demonstrate compliance with the emission limitation for natural gas through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10, while firing natural gas.

- d. Emission Limitation:
CO emissions shall not exceed 52.74 tons per year when firing natural gas and/or number 2 fuel oil.

Applicable Compliance Method:
Compliance shall be demonstrated by summing the annual natural gas and number 2 fuel oil emissions.

The annual natural gas emissions shall be determined by multiplying annual natural gas usage (cu ft/yr) by the heat content of the gas (Btu/cu ft) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company) for CO in natural gas combustion (0.04 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton.

The annual number 2 fuel oil emissions shall be determined by multiplying the annual number 2 fuel oil usage (gal/yr) by the heat content of the oil (Btu/gal) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company) for CO in number 2 fuel oil combustion (0.08 lb/mmBtu) and dividing by 1,000,000 BTU/mmBtu and again by 2,000 lbs/ton. This emission factor shall be used until initial emission testing is completed, at which time the site-specific emission factor shall be used.

- e. Emission Limitations:
Particulate emissions (PE) shall not exceed 0.005 lb/mmBtu of actual heat input when firing natural gas and 0.02 lb/mmBtu of actual heat input when firing number 2 fuel oil.

Applicable Compliance Method:
Compliance may be demonstrated with the boiler manufacturer's emission factor data: 0.005 lb/mmBtu for natural gas and 0.02 lb/mmBtu for number 2 fuel oil (Nebraska Boiler Company, boiler engineering calculations dated 08/28/2002) until initial emission testing is completed, at which time the site-specific emission factor for number 2 fuel oil shall be used.

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If required, the permittee shall demonstrate compliance with the emission limitation for natural gas through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, while firing natural gas.

- f. Emission Limitation:
Particulate emissions (PE) shall not exceed 10.93 tons per year when firing natural gas and/or number 2 fuel oil.

Applicable Compliance Method:
Compliance shall be demonstrated by summing the annual natural gas and number 2 fuel oil emissions.

The annual natural gas emissions shall be determined by multiplying the annual natural gas usage (cu ft/yr) by the heat content of the gas (Btu/cu ft) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company) for PE in natural gas combustion (0.005 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton.

The annual number 2 fuel oil emissions shall be determined by multiplying the annual number 2 fuel oil usage (gal/yr) by the heat content of the oil (Btu/gal) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company) for PE in number 2 fuel oil combustion (0.02 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton. This emission factor shall be used until initial emission testing is completed, at which time the site-specific emission factor for number 2 fuel oil shall be used.

- g. Emission Limitations:
Volatile organic compound (VOC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input when firing natural gas and 0.004 lb/mmBtu of actual heat input when firing number 2 fuel oil.

Applicable Compliance Method:
Compliance may be demonstrated with the boiler manufacturer's emission factor data: 0.004 lb/mmBtu for natural gas and 0.004 lb/mmBtu for number 2 fuel oil (Nebraska Boiler Company, boiler engineering calculations dated 08/28/2002) until initial emission testing is completed, at which time the site-specific emission factor for number 2 fuel oil shall be used.

If required, the permittee shall demonstrate compliance with the emission limitation for natural gas through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 25, while firing natural gas.

- h. Emission Limitation:
Volatile organic compound emissions (VOC) shall not exceed 3.54 tons/year when firing natural gas and/or number 2 fuel oil.

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Applicable Compliance Method:

Compliance shall be demonstrated by summing the annual natural gas and number 2 fuel oil emissions.

The annual natural gas emissions shall be determined by multiplying annual natural gas usage (cu ft/yr) by the heat content of the gas (Btu/cu ft) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company) for VOC in natural gas combustion (0.004 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton.

The annual number 2 fuel oil emissions shall be determined by multiplying annual number 2 fuel oil usage (gal/yr) by the heat content of the oil (Btu/gal) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company) for VOC in number 2 fuel oil combustion (0.004 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton. This emission factor shall be used until initial emission testing is completed, at which time the site-specific emission factor for number 2 fuel oil shall be used.

i. **Emission Limitations:**

Sulfur dioxide (SO₂) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input when firing natural gas and 0.052 lb/mmBtu of actual heat input when firing number 2 fuel oil.

Applicable Compliance Method:

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

When firing natural gas, compliance with this limitation will be assumed due to the negligible percent sulfur, by weight, in the fuel.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6, while firing number 2 fuel oil.

j. **Emission Limitation:**

Sulfur dioxide (SO₂) emissions shall not exceed 22.82 tons/year when firing natural gas and/or number 2 fuel oil.

Applicable Compliance Method:

Compliance shall be demonstrated by summing the annual natural gas and number 2 fuel oil emissions.

The annual natural gas emissions shall be determined by multiplying annual natural gas usage (cu ft/yr) by the heat content of the gas (Btu/cu ft) by the emission factor

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supplied by the boiler manufacturer (Nebraska Boiler Company, 08/28/2002) for SO₂ in natural gas combustion (0.0006 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton.

The annual number 2 fuel oil emissions shall be determined by multiplying annual number 2 fuel oil usage (gal/yr) by the heat content of the oil (Btu/gal) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company, 08/28/2002) for SO₂ in number 2 fuel oil combustion (0.052 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton.

- k. Emission Limitation:
Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average when firing natural gas, except as provided by rule.

Applicable Compliance Method:

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

- l. Emission Limitation:
Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except for one 6-minute period per hour of not more than 27% opacity when firing number 2 fuel oil.

Applicable Compliance Method:

Compliance may be determined by data collected and recorded for the COM and, if required, by visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 .

VI. Miscellaneous Requirements

1. Ambient air quality impacts from the shut down and removal of emissions unit B121 are being used as ambient air quality impact credits towards the increase in ambient air quality impacts associated with this emissions unit. Therefore, at no time shall both emissions units B121 and B142 operate at the same time.

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit: McCracken New Boiler #7 (B143)

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

Emissions Unit ID: McCracken New Boiler #7 (B143)
Activity Description: McCracken New Boiler #7 to be installed (Replace B122)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
206 mmBtu/hr gas/oil-fired water tube boiler with low NOx burner - New Boiler 7 (replaces B122)	OAC rule 3745-31-05(A)(3) (PTI 01-08714)	<p>Nitrogen oxides (NOx) emissions shall not exceed 0.035 lb/mmBtu when firing natural gas and 0.10 lb/mmBtu when firing number 2 fuel oil.</p> <p>NOx emissions shall not exceed 59.15 tons per year when firing natural gas and/or number 2 fuel oil.</p> <p>Carbon monoxide (CO) emissions shall not exceed 0.04 lb/mmBtu when firing natural gas and 0.08 lb/mmBtu when firing number 2 fuel oil.</p> <p>CO emissions shall not exceed 52.74 tons per year when firing natural gas and/or number 2 fuel oil.</p> <p>Particulate emissions (PE) shall not exceed 0.005 lb/mmBtu when firing natural gas and 0.02 lb/mmBtu when firing number 2 fuel oil.</p> <p>PE shall not exceed 10.93 tons per year when firing natural gas and/or number 2 fuel oil.</p>

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	<p>Volatile organic compound (VOC) emissions shall not exceed 0.004 lb/mmBtu when firing natural gas and 0.004 lb/mmBtu when firing number 2 fuel oil.</p> <p>VOC emissions shall not exceed 3.54 tons per year when firing natural gas and/or number 2 fuel oil.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 0.0006 lb/mmBtu when firing natural gas and 0.052 lb/mmBtu when firing number 2 fuel oil.</p> <p>SO₂ emissions shall not exceed 22.82 tons per year when firing natural gas and/or number 2 fuel oil.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A) and 40 CFR Part 60, Subpart Db.</p> <p>See A.II.3 below.</p>
OAC rule 3745-17-07(A)	<p>Visible PE shall not exceed 20% opacity, as a 6-minute average when firing natural gas, except as provided by rule.</p>
40 CFR Part 60, Subpart Db	<p>Visible PE shall not exceed 20% opacity, as a 6-minute average, except for one 6-minute period per hour of not more than 27% opacity, when firing number 2 fuel oil.</p>
OAC rule 3745-21-08(B) OAC rule 3745-23-06(B)	<p>See A.I.2.a below.</p>
OAC rule 3745-31-13(D)(1)	<p>See A.I.2.b below.</p>
OAC rule 3745-17-10(B)(1) OAC rule 3745-18-06(D)	<p>The emission limitations established pursuant to OAC rule 3745-31-05(A)(3)</p>

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40 CFR Part 63, Subpart DDDDD

are more stringent than the emission limitations established by these rules.

See Attachment 1 of this permit.

2. Additional Terms and Conditions

- 2.a** The permittee satisfies the “best available control techniques and operating practices” and “latest available control techniques and operating practices” required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively, by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3) in Permit to Install 01-08714.

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.

- 2.b** As a non-profit education institution, the permittee requested and received a discretionary exemption from the Director on March 14, 2003, to exempt this emissions unit from the PSD requirements contained in OAC rules 3745-31-10 through 3745-31-20.

II. Operational Restrictions

1. The maximum annual number 2 fuel oil usage for this emissions unit shall not exceed 6,285,300 gallons.
2. The quality of the number 2 fuel oil burned in this emissions unit shall meet, on an as-received basis, a sulfur content which is equal to or less than 0.5 weight percent sulfur and is sufficient to comply with the allowable sulfur dioxide emission limitation specified in Section A.I above.
3. The permittee shall operate low NOx burners and employ flue gas recirculation at all times this emissions unit is in operation.
4. The permittee shall operate and maintain equipment to continuously monitor and record the opacity of the particulate emissions from this emissions unit when combusting number 2 fuel oil.
5. The permittee shall operate and maintain equipment to continuously monitor and record the NOx emissions from this emissions unit when combusting natural gas and/or number 2 fuel oil.

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6. The permittee shall burn only natural gas and/or number 2 fuel oil in this emissions unit.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below.

- a. Alternative 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).) A shipment may be comprised of multiple tank truck loads from the same supplier's batch, and the quality of the oil for those loads may be represented by a single batch analysis from the supplier.

- b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).)

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240 and D4294), or equivalent methods as approved by the Director.

2. For each day during which the permittee burns a fuel other than natural gas or number 2 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
3. The permittee shall maintain daily records of the following information:
 - a. the natural gas consumption for each day (in million cubic feet);

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- b. the number 2 fuel oil consumption for each day (in gallons);
- c. the total actual heat input to the emissions unit, calculated as follows:

$$DI = DI_g + DI_o$$

- DI = Total heat input for each day, mmBtu
- DI_g = Daily heat input rate from Gas
- DI_o = Daily heat input rate from Oil

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.
- 10³ = Conversion of thousand Btu to mmBtu.

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

$$DI_o = V_{oil-rate} * D_{oil} * (GCV_o / 10^6)$$

Where:

- DI_o = Daily heat input rate from oil, mmBtu/day.
- V_{oil-rate} = Volume rate of oil consumed per day, measured in gal/day
- D_{oil} = Density of oil, measured in lb/gal
- GCV_o = Gross calorific value of oil, as measured by ASTM D240-87, ASTM D2015-91, or ASTM D2382-88 for each batch of oil burned, Btu/unit mass, lbs.
- 10⁶ = Conversion of Btu to mmBtu.

- d. beginning after the initial compliance demonstration, the rolling, 30-day average NO_x emission rate, in pounds per mmBtu, when firing natural gas; and
- e. beginning after the initial compliance demonstration, the rolling, 30-day average NO_x emission rate, in pounds per mmBtu, when firing number 2 fuel oil.

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4. The permittee shall collect and record the following information for the purpose of determining annual mass emissions:
 - a. the amounts of natural gas used (in million cubic feet);
 - b. the amounts of number 2 fuel oil used (in gallons); and
 - c. the annual emissions of each pollutant listed in term A.I.1 emitted from this emissions unit, in tons.
5. The permittee shall properly operate and maintain equipment to continuously monitor and record the opacity of the particulate emissions from this emissions unit when combusting number 2 fuel oil. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

Each continuous emission monitoring system consists of all the equipment used to acquire data and includes the data recording/processing hardware and software.

The permittee shall maintain a certification letter from the Ohio EPA documenting that the continuous opacity monitoring system has been certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 1. This letter of certification shall be made available to the Director upon request.

The permittee shall maintain records of the following data obtained by the continuous opacity monitoring system: percent opacity on a 6-minute average basis, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

6. Within 180 days of startup of this emissions unit, 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.
7. The permittee shall properly operate and maintain equipment to continuously monitor and record NO_x emissions from this emissions unit, in units of the applicable standard(s). Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13. Each continuous 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.

Emissions Unit: McCracken New Boiler #7 (B143)

The permittee shall maintain on-site documentation from the Ohio EPA that the continuous NOx monitoring system has been certified in accordance with 40 CFR Part 60. The letter of certification shall be made available to the Director upon request.

The permittee shall maintain records of the following data obtained by the continuous NOx monitoring system: emissions of NOx in pounds per mmBtu of actual heat input on an hourly average basis, emissions of NOx in pounds per mmBtu on a rolling 30-day average basis, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

8. Within 180 days of startup of this emissions unit, the permittee shall develop a written quality assurance/quality control plan for the continuous NOx monitoring system designed to ensure continuous valid and representative readings of NOx emissions in units of the applicable standard. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous NOx monitoring system must be kept on site and available for inspection during regular office hours.
9. The permittee shall calculate the annual capacity factor each calendar as defined in 40 CFR Part 60.41b individually for each fuel burned 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.

IV. Reporting Requirements

1. The permittee shall submit annual reports of the following information:
 - a. the annual capacity factor over the previous 12 months; and
 - b. the average fuel nitrogen content during the reporting period, if any number 2 fuel oil that had a nitrogen content greater than 0.05 was percent is fired.
2. The permittee shall notify the Director (the Ohio EPA, Central District Office) in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation based upon the calculated sulfur dioxide emission rate and any record which shows a deviation of the allowable sulfur content. The notification shall include a copy of such record and shall be set to the Director (the Ohio EPA, Central District Office) within 45 days after the deviation occurs.
3. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas and/or number 2 fuel oil was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
4. The permittee shall submit reports (hardcopy or electronic format) within 30 days following the end of each calendar quarter to the Ohio EPA, Central District Office documenting all instances of opacity valued in excess of the limitations specified above when firing number 2 fuel oil, detailing the date, commencement and completion times, duration, magnitude (percent opacity),

Emissions Unit: McCracken New Boiler #7 (B143)

reason (if known), and corrective action(s) taken (if any) of each 6-minute block average above the applicable opacity limitation(s).

The reports shall also identify any continuous opacity monitoring system downtime while the emissions unit was on line (date, time, duration and reason) when firing number 2 fuel oil, 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 until 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 also 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 date, time, reason, and corrective action(s) taken for each time period of monitoring system malfunction. 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 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter.

5. The permittee shall submit reports (hardcopy or electronic format) within 30 days following the end of each calendar quarter to the Ohio EPA, Central District Office documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective action(s) taken (if any), of all 30-day average NOx values in excess of the applicable NOx emission rate (pound per mmBtu).

The reports shall also identify any continuous NOx 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 until 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 also 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 date, time, reason, and corrective action(s) taken for each time period of monitoring system malfunction. 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 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter.

Emissions Unit: McCracken New Boiler #7 (B143)

6. The permittee shall submit quarterly reports certifying that only very low sulfur oil meeting the definition in 40 CFR Part 60.41b (i.e. containing no more than 0.5 weight percent sulfur) was combusted in this emissions unit during the preceding quarter.

These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year.

7. The permittee shall submit annual reports that specify the total particulate, SO₂, VOC, NO_x and CO emissions and natural gas and number 2 fuel oil usages for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Within 60 days after achieving the maximum production rate at which this emissions unit will be operated, but not later than 180 days after its initial startup, the permittee shall conduct performance tests to demonstrate compliance with the particulate, NO_x, CO and VOC emission limitations while firing number 2 fuel oil.

The particulate emission test shall be conducted in accordance with the procedures specified in 40 CFR Parts 60.8 and 60.46b(d). The test shall be conducted while the emissions unit is operating at or near its maximum capacity, while firing number 2 fuel oil.

The NO_x performance test shall be conducted using the NO_x monitoring system in accordance with the procedures specified in 40 CFR Parts 60.8 and 60.46b(e). The test shall be conducted while the emissions unit is operating at or near its maximum capacity, while firing number 2 fuel oil.

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).
3. Personnel from the Ohio EPA, Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
4. A comprehensive written report on the results of the emission(s) test(s) shall be submitted to the Ohio EPA, Central District Office within 30 days following the completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Central District Office.

Emissions Unit: McCracken New Boiler #7 (B143)

5. Compliance with the emission limitations in Section A.I. of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitations:

NO_x emissions shall not exceed 0.035 lb/mmBtu of actual heat input while firing natural gas and 0.10 lb/mmBtu of actual heat input while firing number 2 fuel oil.

Applicable Compliance Method:

Following the initial performance test, when firing number 2 fuel oil, compliance with the emission limitation shall be demonstrated on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO_x emission data for the preceding 30 steam generating unit operating days.

When firing natural gas, compliance with the emission limitation shall be demonstrated on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO_x emission data for the preceding 30 steam generating unit operating days.

b. Emission Limitation:

NO_x emissions shall not exceed 59.15 tons per year when firing natural gas and/or number 2 fuel oil.

Applicable Compliance Method:

Compliance shall be demonstrated by summing the annual natural gas and number 2 fuel oil emissions.

The annual natural gas emissions shall be determined by multiplying the CEMS emission data (lbs NO_x/mmBtu) by the average annual natural gas heat content (Btu/cu ft) by the annual natural gas usage (mmcu ft/yr) and dividing by 2,000 lbs/ton.

The annual number 2 fuel oil emissions shall be determined by multiplying the CEMS emission data (lbs NO_x/mmBtu) by the average annual number 2 fuel oil heat content (Btu/gal) by the annual number 2 fuel oil usage (gal/yr) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton.

c. Emission Limitations:

CO emissions shall not exceed 0.04 lb/mmBtu of actual heat input while firing natural gas and 0.08 lb/mmBtu of actual heat input while firing number 2 fuel oil.

Applicable Compliance Method:

Compliance may be demonstrated with the boiler manufacturer's emission factor data: 0.04 lb/mmBtu for natural gas and 0.08 lb/mmBtu for number 2 fuel oil (Nebraska Boiler Company, boiler engineering calculations dated 08/28/2002) until initial

Emissions Unit: McCracken New Boiler #7 (B143)

emission testing is completed, at which time the site-specific emission factor for number 2 fuel oil shall be used.

If required, the permittee shall demonstrate compliance with the emission limitation for natural gas through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10, while firing natural gas.

- d. Emission Limitation:
CO emissions shall not exceed 52.74 tons per year when firing natural gas and/or number 2 fuel oil.

Applicable Compliance Method:
Compliance shall be demonstrated by summing the annual natural gas and number 2 fuel oil emissions.

The annual natural gas emissions shall be determined by multiplying annual natural gas usage (cu ft/yr) by the heat content of the gas (Btu/cu ft) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company) for CO in natural gas combustion (0.04 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton.

The annual number 2 fuel oil emissions shall be determined by multiplying the annual number 2 fuel oil usage (gal/yr) by the heat content of the oil (Btu/gal) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company) for CO in number 2 fuel oil combustion (0.08 lb/mmBtu) and dividing by 1,000,000 BTU/mmBtu and again by 2,000 lbs/ton. This emission factor shall be used until initial emission testing is completed, at which time the site-specific emission factor shall be used.

- e. Emission Limitations:
Particulate emissions (PE) shall not exceed 0.005 lb/mmBtu of actual heat input when firing natural gas and 0.02 lb/mmBtu of actual heat input when firing number 2 fuel oil.

Applicable Compliance Method:
Compliance may be demonstrated with the boiler manufacturer's emission factor data: 0.005 lb/mmBtu for natural gas and 0.02 lb/mmBtu for number 2 fuel oil (Nebraska Boiler Company, boiler engineering calculations dated 08/28/2002) until initial emission testing is completed, at which time the site-specific emission factor for number 2 fuel oil shall be used.

If required, the permittee shall demonstrate compliance with the emission limitation for natural gas through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, while firing natural gas.

Emissions Unit: McCracken New Boiler #7 (B143)

- f. **Emission Limitation:**
Particulate emissions (PE) shall not exceed 10.93 tons per year when firing natural gas and/or number 2 fuel oil.
- Applicable Compliance Method:**
Compliance shall be demonstrated by summing the annual natural gas and number 2 fuel oil emissions.
- The annual natural gas emissions shall be determined by multiplying the annual natural gas usage (cu ft/yr) by the heat content of the gas (Btu/cu ft) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company) for PE in natural gas combustion (0.005 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton.
- The annual number 2 fuel oil emissions shall be determined by multiplying the annual number 2 fuel oil usage (gal/yr) by the heat content of the oil (Btu/gal) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company) for PE in number 2 fuel oil combustion (0.02 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton. This emission factor shall be used until initial emission testing is completed, at which time the site-specific emission factor for number 2 fuel oil shall be used.
- g. **Emission Limitations:**
Volatile organic compound (VOC) emissions shall not exceed 0.004 lb/mmBtu of actual heat input when firing natural gas and 0.004 lb/mmBtu of actual heat input when firing number 2 fuel oil.
- Applicable Compliance Method:**
Compliance may be demonstrated with the boiler manufacturer's emission factor data: 0.004 lb/mmBtu for natural gas and 0.004 lb/mmBtu for number 2 fuel oil (Nebraska Boiler Company, boiler engineering calculations dated 08/28/2002) until initial emission testing is completed, at which time the site-specific emission factor for number 2 fuel oil shall be used.
- If required, the permittee shall demonstrate compliance with the emission limitation for natural gas through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 25, while firing natural gas.
- h. **Emission Limitation:**
Volatile organic compound emissions (VOC) shall not exceed 3.54 tons/year when firing natural gas and/or number 2 fuel oil.
- Applicable Compliance Method:**
Compliance shall be demonstrated by summing the annual natural gas and number 2 fuel oil emissions.

Emissions Unit: McCracken New Boiler #7 (B143)

The annual natural gas emissions shall be determined by multiplying annual natural gas usage (cu ft/yr) by the heat content of the gas (Btu/cu ft) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company) for VOC in natural gas combustion (0.004 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton.

The annual number 2 fuel oil emissions shall be determined by multiplying annual number 2 fuel oil usage (gal/yr) by the heat content of the oil (Btu/gal) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company) for VOC in number 2 fuel oil combustion (0.004 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton. This emission factor shall be used until initial emission testing is completed, at which time the site-specific emission factor for number 2 fuel oil shall be used.

i. Emission Limitations:

Sulfur dioxide (SO₂) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input when firing natural gas and 0.052 lb/mmBtu of actual heat input when firing number 2 fuel oil.

Applicable Compliance Method:

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

When firing natural gas, compliance with this limitation will be assumed due to the negligible percent sulfur, by weight, in the fuel.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6, while firing number 2 fuel oil.

j. Emission Limitation:

Sulfur dioxide (SO₂) emissions shall not exceed 22.82 tons/year when firing natural gas and/or number 2 fuel oil.

Applicable Compliance Method:

Compliance shall be demonstrated by summing the annual natural gas and number 2 fuel oil emissions.

The annual natural gas emissions shall be determined by multiplying annual natural gas usage (cu ft/yr) by the heat content of the gas (Btu/cu ft) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company, 08/28/2002) for SO₂ in natural gas combustion (0.0006 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton.

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The annual number 2 fuel oil emissions shall be determined by multiplying annual number 2 fuel oil usage (gal/yr) by the heat content of the oil (Btu/gal) by the emission factor supplied by the boiler manufacturer (Nebraska Boiler Company, 08/28/2002) for SO₂ in number 2 fuel oil combustion (0.052 lb/mmBtu) and dividing by 1,000,000 Btu/mmBtu and again by 2,000 lbs/ton.

- k. Emission Limitation:
Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average when firing natural gas, except as provided by rule.

Applicable Compliance Method:

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

- l. Emission Limitation:
Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except for one 6-minute period per hour of not more than 27% opacity when firing number 2 fuel oil.

Applicable Compliance Method:

Compliance may be determined by data collected and recorded for the COM and, if required, by visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

VI. Miscellaneous Requirements

1. Ambient air quality impacts from the shut down and removal of emissions unit B122 are being used as ambient air quality impact credits towards the increase in ambient air quality impacts associated with this emissions unit. Therefore, at no time shall both emissions units B122 and B143 operate at the same time.

Emissions Unit: McCracken New Boiler #7 (B143)

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit: Bldg290-17 (K001)

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Bldg290-17 (K001)

Activity Description: 290/ , Heidelberg Speedmaster 5 Color Press

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
offset, lithographic 5-color printing press	OAC rule 3745-31-05(A)(3) (PTI 01-8361)	Organic compound (OC) emissions shall not exceed 8 lbs/hr, 40 lbs/day and 7.31 tons/yr. See Sections A.I.2.a through A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	The requirements established pursuant to this rule are equivalent to the requirements of OAC rule 3745-31-05(A)(3).

2. **Additional Terms and Conditions**

- 2.a The OC content of the ink shall not exceed 5%, by weight.
- 2.b The OC content of the fountain solution shall not exceed 2.8 pounds per gallon.
- 2.c The OC content of the blanket wash components shall not exceed 6.96 pounds per gallon.
- 2.d The OC content of the isopropyl alcohol (IPA) shall not exceed 6.6 pounds per gallon.

II. Operational Restrictions

None

Emissions Unit: Bldg290-17 (K001)

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain the following information on a daily basis for the coating operation:
 - a. the company identification for each coating, ink and cleanup material employed;
 - b. the number of gallons of each coating, ink and cleanup material employed;
 - c. the OC content of each coating, ink and cleanup material, in pounds per gallon;
 - d. the total OC emission rate for all coatings, inks and cleanup materials (i.e., the summation of (b) * (c), for all coatings, inks and cleanup materials) in pounds per day;
 - e. the total number of hours the emissions unit was in operation; and
 - f. the average hourly OC emission rate for all coatings, inks and cleanup materials, i.e., (d)/(e), in pounds per hour (average).
2. The permittee shall maintain records of the annual OC emission rate calculated as the sum of the daily OC emission rates from Section A.III.1.d for the calendar year.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. an identification of each day during which the average hourly OC emissions from the coatings, inks and cleanup materials exceeded 8 pounds per hour;
 - b. an identification for each day during which the OC emissions from the coatings, inks and cleanup materials exceeded 40 pounds per day.
2. The permittee shall submit quarterly deviation (excursion) reports that identify any exceedance of the OC content limitations specified in Sections A.I.2.a through A.I.2.d.
3. The quarterly deviations reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.
4. The permittee shall also submit annual reports that specify the total OC emissions for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

Emissions Unit: Bldg290-17 (K001)

1.a Emission Limitations:

OC emissions shall not exceed 8 pounds per hour and 40 pounds per day.

Applicable Compliance Method:

The record keeping requirements in Section A.III of this permit may be used to determine compliance with the above limitations.

If required, the permittee shall demonstrate compliance with the pounds per hour emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 18.

1.b Emission Limitation:

OC emissions shall not exceed 7.31 tons per year.

Applicable Compliance Method:

The record keeping requirements in Section A.III of this permit may be used to determine compliance with the above limitation.

2. Formulation data or USEPA Method 24 shall be used to determine the organic compound contents of the coatings, inks and cleanup materials.

VI. Miscellaneous Requirements

None

Emissions Unit: Bldg290-17 (K001)

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
offset, lithographic 5-color printing press		See B.III below.

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permit to install for this emissions unit (K001) was evaluated based on the actual materials (typically coatings and cleanup 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 use of the SCREEN 3.0 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: isopropyl alcohol (IPA)

TLV (mg/m³): 983

Maximum Hourly Emission Rate (lbs/hr): 8 lbs/hr

Predicted 1-Hour Maximum Ground-Level

Emissions Unit: Bldg290-17 (K001)

Concentration (ug/m3): 2,965

MAGLC (ug/m3): 23,404.8

2. 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 (typically for coatings or cleanup materials), 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.).
3. 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.

Emissions Unit: Bldg290-17 (K001)

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit: Print facility (K002)

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Print facility (K002)

Activity Description: Printing facility, 6 color press

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
offset, lithographic 6-color printing press	OAC rule 3745-31-05(A)(3) (PTI 01-8361)	Organic compound (OC) emissions shall not exceed 8 lbs/hr, 40 lbs/day and 7.31 tons/yr.
	OAC rule 3745-21-07(G)(2)	See Sections A.I.2.a through A.I.2.d below. The requirements established pursuant to this rule are equivalent to the requirements of OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The OC content of the ink shall not exceed 5%, by weight.
- 2.b The OC content of the fountain solution shall not exceed 2.8 pounds per gallon.
- 2.c The OC content of the blanket wash components shall not exceed 6.96 pounds per gallon.
- 2.d The OC content of the isopropyl alcohol (IPA) shall not exceed 6.6 pounds per gallon.

II. Operational Restrictions

None

Emissions Unit: Print facility (K002)

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain the following information on a daily basis for the coating operation:
 - a. the company identification for each coating, ink and cleanup material employed;
 - b. the number of gallons of each coating, ink and cleanup material employed;
 - c. the OC content of each coating, ink and cleanup material, in pounds per gallon;
 - d. the total OC emission rate for all coatings, inks and cleanup materials (i.e., the summation of (b) * (c), for all coatings, inks and cleanup materials) in pounds per day;
 - e. the total number of hours the emissions unit was in operation; and
 - f. the average hourly OC emission rate for all coatings, inks and cleanup materials, i.e., (d)/(e), in pounds per hour (average).
2. The permittee shall maintain records of the annual OC emission rate calculated as the sum of the daily OC emission rates from Section A.III.1.d for the calendar year.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. an identification of each day during which the average hourly OC emissions from the coatings, inks and cleanup materials exceeded 8 pounds per hour;
 - b. an identification for each day during which the OC emissions from the coatings, inks and cleanup materials exceeded 40 pounds per day.
2. The permittee shall submit quarterly deviation (excursion) reports that identify any exceedance of the OC content limitations specified in Sections A.I.2.a through A.I.2.d.
3. The quarterly deviations reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.
4. The permittee shall also submit annual reports that specify the total OC emissions for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

Emissions Unit: Print facility (K002)

1.a Emission Limitations:

OC emissions shall not exceed 8 pounds per hour and 40 pounds per day.

Applicable Compliance Method:

The record keeping requirements in Section A.III of this permit may be used to determine compliance with the above limitations.

If required, the permittee shall demonstrate compliance with the pounds per hour emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 18.

1.b Emission Limitation:

OC emissions shall not exceed 7.31 tons per year.

Applicable Compliance Method:

The record keeping requirements in Section A.III of this permit may be used to determine compliance with the above limitation.

2. Formulation data or USEPA Method 24 shall be used to determine the organic compound contents of the coatings, inks and cleanup materials.

VI. Miscellaneous Requirements

None

Emissions Unit: Print facility (K002)

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
offset, lithographic 6-color printing press		See B.III below.

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permit to install for this emissions unit (K002) was evaluated based on the actual materials (typically coatings and cleanup 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 use of the SCREEN 3.0 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: isopropyl alcohol (IPA)

TLV (mg/m3): 983

Maximum Hourly Emission Rate (lbs/hr): 8 lbs/hr

Predicted 1-Hour Maximum Ground-Level

Emissions Unit: Print facility (K002)

Concentration (ug/m3): 2,965

MAGLC (ug/m3): 23,404.8

2. 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 (typically for coatings or cleanup materials), 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.).
3. 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.

Emissions Unit: Print facility (K002)

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit: Print facility (K003)

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Print facility (K003)

Activity Description: 2 color press. PTI is issued

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
offset, lithographic 2-color printing press	OAC rule 3745-31-05(A)(3) (PTI 01-8361)	Organic compound (OC) emissions shall not exceed 8 lbs/hr, 40 lbs/day and 4.96 tons/yr.
	OAC rule 3745-21-07(G)(2)	See Sections A.I.2.a through A.I.2.c below. The requirements established pursuant to this rule are equivalent to the requirements of OAC rule 3745-31-05(A)(3).

2. **Additional Terms and Conditions**

- 2.a The OC content of the ink shall not exceed 5%, by weight.
- 2.b The OC content of the fountain solution shall not exceed 2.8 pounds per gallon.
- 2.c The OC content of the blanket wash components shall not exceed 6.96 pounds per gallon.

II. Operational Restrictions

None

Emissions Unit: Print facility (K003)

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain the following information on a daily basis for the coating operation:
 - a. the company identification for each coating, ink and cleanup material employed;
 - b. the number of gallons of each coating, ink and cleanup material employed;
 - c. the OC content of each coating, ink and cleanup material, in pounds per gallon;
 - d. the total OC emission rate for all coatings, inks and cleanup materials (i.e., the summation of (b) * (c), for all coatings, inks and cleanup materials) in pounds per day;
 - e. the total number of hours the emissions unit was in operation; and
 - f. the average hourly OC emission rate for all coatings, inks and cleanup materials, i.e., (d)/(e), in pounds per hour (average).
2. The permittee shall maintain records of the annual OC emission rate calculated as the sum of the daily OC emission rates from Section A.III.1.d for the calendar year.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. an identification of each day during which the average hourly OC emissions from the coatings, inks and cleanup materials exceeded 8 pounds per hour;
 - b. an identification for each day during which the OC emissions from the coatings, inks and cleanup materials exceeded 40 pounds per day.
2. The permittee shall submit quarterly deviation (excursion) reports that identify any exceedance of the OC content limitations specified in Sections A.I.2.a through A.I.2.c.
3. The quarterly deviations reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.
4. The permittee shall also submit annual reports that specify the total OC emissions for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

Emissions Unit: Print facility (K003)

1.a Emission Limitations:

OC emissions shall not exceed 8 pounds per hour and 40 pounds per day.

Applicable Compliance Method:

The record keeping requirements in Section A.III of this permit may be used to determine compliance with the above limitations.

If required, the permittee shall demonstrate compliance with the pounds per hour emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 18.

1.b Emission Limitation:

OC emissions shall not exceed 4.96 tons per year.

Applicable Compliance Method:

The record keeping requirements in Section A.III of this permit may be used to determine compliance with the above limitation.

2. Formulation data or USEPA Method 24 shall be used to determine the organic compound contents of the coatings, inks and cleanup materials.

V.I Miscellaneous Requirements

None

Emissions Unit: Print facility (K003)

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
offset, lithographic 2-color printing press		See B.III below.

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permit to install for this emissions unit (K003) was evaluated based on the actual materials (typically coatings and cleanup 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 use of the SCREEN 3.0 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: stoddard solvent (mineral spirits, a component of Presspro

TLV (mg/m3): 573

Maximum Hourly Emission Rate (lbs/hr): 8 lbs/hr

Predicted 1-Hour Maximum Ground-Level

Emissions Unit: Print facility (K003)

Concentration (ug/m3): 2,965

MAGLC (ug/m3): 13,633.3

2. 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 (typically for coatings or cleanup materials), 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.).
3. 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.

Emissions Unit: Print facility (K003)

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit: RhodesETO1 (P001)

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: RhodesETO1 (P001)

Activity Description: ETO #1 at Rhodes Hall. Sterilizer for hospital equipment.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ethylene oxide sterilizer (ETO)	OAC rule 3745-31-05(A)(3) (PTI 01-08310)	Ethylene oxide emissions shall not exceed 1.34 lbs/hr and 0.25 ton/yr. HCFC emissions shall not exceed 12.06 lbs/hr and 2.2 tons/yr. See A.II.1 through A.II.3 below.

2. **Additional Terms and Conditions**

- 2.a None

II. Operational Restrictions

1. This emissions unit shall not exceed one (1) sterilization cycle per day.
2. The permittee shall not use a sterilant gas that contains greater than 10% ethylene oxide.
3. This emissions unit shall not release fugitive emissions of ethylene oxide.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain daily records of the following information for this emissions unit:
 - a. the number of operating cycles;

Emissions Unit: RhodesETO1 (P001)

- b. the ethylene oxide content of the sterilant gas if it exceeds 10%;
- c. the release of fugitive ethylene oxide emissions; and
- d. all supporting analyses and computations.

IV. Reporting Requirements

- 1. The permittee shall submit deviation (excursion) reports that identify the following:
 - a. each day during which more than one sterilization cycle took place;
 - b. each day during which a sterilant gas was used with greater than 10% ethylene oxide; and
 - c. each day during which fugitive ethylene oxide emissions were released.

Each report shall be submitted within 30 days of the date the deviation occurred.

V. Testing Requirements

- 1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
 - 1.a Emission Limitation:
Ethylene oxide emissions shall not exceed 1.34 lbs/hr.

Applicable Compliance Method:

This emission limitation was established by multiplying the maximum amount of sterilization solution used per operating cycle (13.4 lbs), by the restricted ethylene oxide content of the solution (10%), by the restricted number of operating cycles (1). Since each operating cycle yields one ventilation period that consumes less than one (1) hour, the emissions unit will emit no more than 1.34 lbs/hr.

Therefore, compliance with this emission limitation may be demonstrated by restricting the ethylene oxide content of the solution to no more than 10% and by restricting the emissions unit to no more than one (1) cycle per day.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with U.S. EPA-approved methods.

- 1.b Emission Limitation:
Ethylene oxide emissions shall not exceed 0.25 ton/yr.

Applicable Compliance Method:

Emissions Unit: RhodesETO1 (P001)

Since each sterilization operating cycle yields one ventilation period that consumes less than one (1) hour and the emissions unit is limited to no more than one (1) operating cycle per day, lbs of ethylene oxide emitted/hr equals lbs of ethylene oxide emitted/day.

This emission limitation was established by multiplying the maximum allowable daily ethylene oxide emission rate (1.34 lbs/day) by 365 days/yr, and dividing by 2000 lbs/ton.

Therefore, compliance with this emission limitation may be assumed provided that the permittee complies with the operational restrictions for this emissions unit.

- 1.c Emission Limitation:
HCFC emissions shall not exceed 12.06 lbs/hr.

Applicable Compliance Method:

This emission limitation was established by multiplying the maximum amount of sterilization solution used per operating cycle (13.4 lbs), by the HCFC content of the solution (90%), by the restricted number of operating cycles (1). Each operating cycle yields one ventilation period that consumes less than one (1) hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with U.S. EPA-approved methods.

- 1.d Emission Limitation:
HCFC emissions shall not exceed 2.2 tons/yr.

Applicable Compliance Method:

Since each sterilization operating cycle yields one ventilation period that consumes less than one (1) hour and the emissions unit is limited to no more than one (1) operating cycle per day, lbs of HCFC emitted/hr equals lbs of HCFC emitted/day.

This emission limitation was established by multiplying the daily HCFC emission rate (12.06 lbs/day) by 365 days/yr, and dividing by 2000 lbs/ton.

VI. Miscellaneous Requirements

None

Emissions Unit: RhodesETO1 (P001)

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ethylene oxide sterilizer (ETO)	none	See B.III below.

2. **Additional Terms and Conditions**

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permit to install for this emissions unit (P001) was evaluated based on the actual materials (typically coatings and cleanup 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 use of the SCREEN 3.0 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: Chlorodifluoro methane (HCFC)
 TLV (mg/m3): 3536.6
 Maximum Hourly Emission Rate (lbs/hr): 12.06
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 158
 MAGLC (ug/m3): 353.6

Pollutant: Ethylene oxide
 TLV (mg/m3): 180

Emissions Unit: RhodesETO1 (P001)

Maximum Hourly Emission Rate (lbs/hr): 1.34

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 158

MAGLC (ug/m3): 180

2. 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 (typically for coatings or cleanup materials), 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.).
3. 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.

Emissions Unit: RhodesETO1 (P001)

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit: McCracken Coal Handling (P901)

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: McCracken Coal Handling (P901)
 Activity Description: Coal storage bldg & transport to bunker - blower/bag filter

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
McCracken coal handling - fully enclosed loading, unloading and conveying operations controlled with a fabric filter; fully enclosed coal storage piles	OAC rule 3745-31-05(A)(3) (PTI 01-572)	Visible particulate emissions from any stack shall not exceed 20% opacity, except for a period of not more than 3 minutes in any 60 minutes when opacity of up to and including 60% is permitted. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-11(B)(1), 3745-17-07(B)(1), and 3745-17-08(B).
	OAC rule 3745-17-11(B)(1)	5.0 lbs/hr of particulate emissions
	OAC rule 3745-17-07(A)	The emission limitations specified by this rule are less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(B)(1)	Visible fugitive particulate emissions shall not exceed 20% opacity as a 3-minute average.

Emissions Unit: McCracken Coal Handling (P901)

| OAC rule 3745-17-08(B) | See A.II.1 through A.II.3 below.

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

1. The permittee shall maintain the enclosures for the coal unloading, coal crushing, coal sizing and coal conveying operations to minimize or eliminate visible emissions of fugitive dust.
2. The permittee shall spray the coal storage piles with a surfactant as needed to minimize or eliminate visible emissions of fugitive dust.
3. The permittee shall employ telescoping chutes to minimize the free-fall of coal loaded onto the enclosed coal storage piles if visible fugitive particulate emissions from the building containing this emissions unit are observed based on the monitoring in Section A.III.2.

III. Monitoring and/or Record Keeping Requirements

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

Emissions Unit: McCracken Coal Handling (P901)

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible emissions were observed from the fabric filter serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Director (the Ohio EPA, Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.
2. The permittee shall submit semiannual written reports that (a) identify all days during which visible emissions were observed from the non-stack egress points from the building housing this emissions unit or the associated roadways and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Director (the Ohio EPA, Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
 - 1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity, except for a period of not more than 3 minutes in any 60 minutes when opacity of up to and including 60% opacity is permitted.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.
 - 1.b Emission Limitation:
Visible fugitive particulate emissions shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3).
 - 1.c Emission Limitation:
5.0 lbs/hr of particulate emissions

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A.

Emissions Unit: McCracken Coal Handling (P901)

VI. Miscellaneous Requirements

None

Emissions Unit: McCracken Coal Handling (P901)

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit: McCracken Ash & Lime Handling (P902)

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: McCracken Ash & Lime Handling (P902)

Activity Description: Ash unloader, ash silo exhauster/bag filter, lime silo bin vent filter

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
McCracken ash unloading, ash silo with fabric filter and lime silo with fabric filter	OAC rule 3745-31-05(A)(3) (PTI 01-572)	Visible particulate emissions from any stack shall not exceed 20% opacity, except for a period of not more than 3 minutes in any 60 minutes when opacity of up to and including 60% is permitted. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-11(B)(1), 3745-17-07(B)(1), and 3745-17-08(B).
	OAC rule 3745-17-11(B)(1)	5.0 lbs/hr of particulate emissions
	OAC rule 3745-17-07(A)	The emission limitations specified by this rule are less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(B)(1)	Visible fugitive particulate emissions shall not exceed 20% opacity as a 3-minute average.

Emissions Unit: McCracken Ash & Lime Handling (P902)

OAC rule 3745-17-08(B)

See A.II.1 and A.II.2 below.

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

1. The permittee shall cover all trucks utilized for ash disposal.
2. The permittee shall not stockpile refuse at the facility.

III. Monitoring and/or Record Keeping Requirements

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

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible emissions were observed from the fabric filters serving this emissions unit and (b)

Emissions Unit: McCracken Ash & Lime Handling (P902)

describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Director (the Ohio EPA, Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit semiannual written reports that (a) identify all days during which visible emissions were observed from the non-stack egress points from the building housing this emissions unit or the associated roadways and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Director (the Ohio EPA, Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
 - 1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity, except for a period of not more than 3 minutes in any 60 minutes when opacity of up to and including 60% opacity is permitted.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.
 - 1.b Emission Limitation:
Visible fugitive particulate emissions shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3).
 - 1.c Emission Limitation:
5.0 lbs/hr of particulate emissions

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A.

VI. Miscellaneous Requirements

None

Emissions Unit: McCracken Ash & Lime Handling (P902)

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit: Booth #5B-RM301 McCracken Plant (R001)

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Booth #5B-RM301 McCracken Plant (R001)
Activity Description: Binks spray booth, model #FF 8-7T

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
wood and plastic furniture maintenance spray booth - Booth #5B	OAC rule 3745-21-07(G)(2)	Organic compound emissions shall not exceed 8 lbs/hr and 40 lbs/day.
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions shall not exceed 0.551 pound per hour.

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

1. The permittee shall operate the dry filtration system whenever this emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information for each day for the coating operation:
 - a. the company identification for each coating and cleanup material employed;

Emissions Unit: Booth #5B-RM301 McCracken Plant (R001)

- b. the company identification for each photochemically reactive cleanup material employed;
- c. the number of gallons of each coating and cleanup material employed;
- d. the organic compound content of each coating and cleanup material, in pounds per gallon;
- e. the total organic compound emission rate for all coatings and cleanup materials, in pounds per day;
- f. the total number of hours the emissions unit was in operation;
- g. the average hourly organic compound emission rate for all coatings and cleanup materials, i.e., (e)/(f), in pounds per hour (average);
- h. if the total organic compound emission rate for all coatings and cleanup materials exceeds 40 pounds per day, as found in (e), then the permittee shall record the organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per day; and
- i. if the average hourly organic compound emission rate for all coatings and cleanup materials exceeds 8 pounds per hour, as found in (g), then the permittee shall record the average hourly organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per hour (average).

[Note: The coating information must be for the coatings as employed, including any thinning solvents added at the emissions unit. Also, the definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).]

2. The permittee shall maintain daily records that document any time periods when the dry filtration system was not in service when the emissions unit was in operation.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. an identification of each hour during which the organic compound emissions from the coatings and photochemically reactive cleanup materials exceeded 8 lbs/hr, and the actual organic compound emissions for each such hour; and
 - b. an identification of each day during which the organic compound emissions from the coatings and photochemically reactive cleanup materials exceeded 40 lbs/day, and the actual organic compound emissions for each such day.

Emissions Unit: Booth #5B-RM301 McCracken Plant (R001)

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

2. The permittee shall notify the Director (the appropriate District Office or local air agency) in writing of any daily record showing that the dry filtration system was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Director (the appropriate District Office or local air agency) within 30 days after the event occurs.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitations:

Organic compound emissions shall not exceed 8 lbs/hr and 40 lbs/day.

Applicable Compliance Method:

Compliance may be demonstrated through the record keeping in Section A.III.1.

If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 18 or 25, as appropriate.

1.b Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

1.c Emission Limitation:

Particulate emissions shall not exceed 0.551 pound per hour.

Applicable Compliance Method:

To determine the actual worst case emission rate for particulates, the following equation may be used:

$$E = (M) * (1-TE) * (1-CE)$$

where:

E = particulate matter emission rate (lbs/hr),

M = maximum coating solids usage rate (lbs/hr),

Emissions Unit: Booth #5B-RM301 McCracken Plant (R001)

TE = transfer efficiency of coating equipment (ratio of the amount of coating solids deposited on the coated part to the amount of coating solids used),
CE = control efficiency of the control equipment.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in OAC rule 3745-17-03(B)(10).

VI. Miscellaneous Requirements

None

Emissions Unit: Booth #5B-RM301 McCracken Plant (R001)

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit: Booth #5A-RM301 McCracken Plant (R002)

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Booth #5A-RM301 McCracken Plant (R002)
 Activity Description: Binks spray booth, model #FF10-8-T

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
wood and plastic furniture maintenance spray booth - Booth #5A	OAC rule 3745-21-07(G)(2)	Organic compound emissions shall not exceed 8 lbs/hr and 40 lbs/day.
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions shall not exceed 0.551 pound per hour.

2. **Additional Terms and Conditions**

- 2.a None

II. Operational Restrictions

1. The permittee shall operate the dry filtration system whenever this emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information for each day for the coating operation:
 - a. the company identification for each coating and cleanup material employed;

Emissions Unit: Booth #5A-RM301 McCracken Plant (R002)

- b. the company identification for each photochemically reactive cleanup material employed;
- c. the number of gallons of each coating and cleanup material employed;
- d. the organic compound content of each coating and cleanup material, in pounds per gallon;
- e. the total organic compound emission rate for all coatings and cleanup materials, in pounds per day;
- f. the total number of hours the emissions unit was in operation;
- g. the average hourly organic compound emission rate for all coatings and cleanup materials, i.e., (e)/(f), in pounds per hour (average);
- h. if the total organic compound emission rate for all coatings and cleanup materials exceeds 40 pounds per day, as found in (e), then the permittee shall record the organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per day; and
- i. if the average hourly organic compound emission rate for all coatings and cleanup materials exceeds 8 pounds per hour, as found in (g), then the permittee shall record the average hourly organic compound emission rate for all coatings and photochemically reactive cleanup materials, in pounds per hour (average).

[Note: The coating information must be for the coatings as employed, including any thinning solvents added at the emissions unit. Also, the definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).]

- 2. The permittee shall maintain daily records that document any time periods when the dry filtration system was not in service when the emissions unit was in operation.

IV. Reporting Requirements

- 1. The permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. an identification of each hour during which the organic compound emissions from the coatings and photochemically reactive cleanup materials exceeded 8 lbs/hr, and the actual organic compound emissions for each such hour; and
 - b. an identification of each day during which the organic compound emissions from the coatings and photochemically reactive cleanup materials exceeded 40 lbs/day, and the actual organic compound emissions for each such day.

Emissions Unit: Booth #5A-RM301 McCracken Plant (R002)

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii of this permit.

2. The permittee shall notify the Director (the appropriate District Office or local air agency) in writing of any daily record showing that the dry filtration system was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Director (the appropriate District Office or local air agency) within 30 days after the event occurs.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitations:

Organic compound emissions shall not exceed 8 lbs/hr and 40 lbs/day.

Applicable Compliance Method:

Compliance may be demonstrated through the record keeping in Section A.III.1.

If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 18 or 25, as appropriate.

1.b Emission Limitation -

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

1.c Emission Limitation:

Particulate emissions shall not exceed 0.551 pound per hour.

Applicable Compliance Method:

To determine the actual worst case emission rate for particulates, the following equation may be used:

$$E = (M) * (1-TE) * (1-CE)$$

where:

E = particulate matter emission rate (lbs/hr),

M = maximum coating solids usage rate (lbs/hr),

Emissions Unit: Booth #5A-RM301 McCracken Plant (R002)

TE = transfer efficiency of coating equipment (ratio of the amount of coating solids deposited on the coated part to the amount of coating solids used),
CE = control efficiency of the control equipment.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in OAC rule 3745-17-03(B)(10).

VI. Miscellaneous Requirements

None

Emissions Unit: Booth #5A-RM301 McCracken Plant (R002)

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None