John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

8/11/2014

Genevieve Damico *Via E-Mail Notification*
United States Environmental Protection Agency
Mail Code: AR-18J
77 West Jackson Blvd.
Chicago, IL 60604-3507

RE: PROPOSED AIR POLLUTION TITLE V PERMIT
Facility Name: The Ohio State University
Facility ID: 0125042608
Permit Type: Renewal
Permit Number: P0083317

Dear Ms. Damico:

A proposed OAC Chapter 3745-77 Title V permit for the referenced facility has been issued for review by U.S. EPA. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab. If U.S. EPA does not object to this proposed permit, the permit will be processed for issuance as a final action not less than 45 days from the date of this letter. Please contact me at (614) 644-3631 by the end of the 45 day review period if you wish to object to the proposed permit.

Sincerely,

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

Cc: Ohio EPA DAPC, Central District Office

PROPOSED

Division of Air Pollution Control
Title V Permit
for
The Ohio State University

Facility ID:	0125042608
Permit Number:	P0083317
Permit Type:	Renewal
Issued:	8/11/2014
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance

Division of Air Pollution Control
Title V Permit
for
The Ohio State University

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Authorization

Facility ID:	0125042608
Facility Description:	Colleges, universities and professional schools.
Application Number(s):	A0013684, A0013685, A0013686, A0038270, A0049235, A0049985, A0050574
Permit Number:	P0083317
Permit Description:	Title V renewal for boilers, associated emission sources and coating lines.
Permit Type:	Renewal
Issue Date:	8/11/2014
Effective Date:	To be entered upon final issuance
Expiration Date:	To be entered upon final issuance
Superseded Permit Number:	P0083316

This document constitutes issuance of an OAC Chapter 3745-77 Title V permit to:

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

Ohio Environmental Protection Agency (EPA)District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Central District Office
50 West Town Street, 6th Floor
P.O. Box 1049
Columbus, OH 43216-1049
(614)728-3778

The above named entity is hereby granted a Title V permit pursuant to Chapter 3745-77 of the Ohio Administrative Code. 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. You will be sent a notice approximately 18 months prior to the expiration date regarding the renewal of this permit. If you do not receive a notice, please contact the Ohio EPA DAPC, Central District Office. 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, if a timely renewal application is submitted. A renewal application will be considered timely if it is submitted no earlier than 18 months and no later than 6 months prior to the expiration date.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Craig W. Butler
Director

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

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

(1) Standard Term and Condition A. 24., Reporting Requirements Related to Monitoring and Record Keeping Requirements of State-Only Enforceable Permit Terms and Conditions

(2) Standard Term and Condition A. 25., Records Retention Requirements for State-Only Enforceable Permit Terms and Conditions

(3) Standard Term and Condition A. 27., Scheduled Maintenance/Malfunction Reporting For State-Only Requirements

(4) Standard Term and Condition A. 29., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

(5) Standard Term and Condition A. 30.

(Authority for term: ORC 3704.036(A))

2. 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 C. Emissions Unit Terms and Conditions of this Title V permit), the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

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

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

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

(4) The analytical techniques or methods used.

(5) The results of such analyses.

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

(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 recordingsfor 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:

(1) 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 Standard Term and Condition A.2.c)(2) below; and each report shall cover the previous calendar quarter. An exceedance of the visible emission limitations specified in OAC rule 3745-17-07(A)(1) that is caused by a malfunction is not a violation and does not need to be reported as a deviation if the owner or operator of the affected air contaminant source or air pollution control equipment complies with the requirements of OAC rule 3745-17-07(A)(3)(c).

In accordance with OAC rule 3745-15-06, a malfunction reportable under OAC rule 3745-15-06(B) 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 submittedscheduled maintenancerequests, 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))

(2) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit or, in some cases, in section B. Facility-Wide Terms and Conditions 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 submitted promptly to the Ohio EPA DAPC, Central District Office. 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 deviation reports shall satisfy the requirements 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. Full compliance with OAC rule 3745-77-07(A)(3)(c) requires reporting of all other deviations of the federally enforceable requirements specified in the permit as required by such rule.

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 satisfies the reporting requirements specified in this Standard 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 (for the deviations so reported) the requirements 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 Standard Term and Condition.

See A.29 below if no deviations occurred during the quarter.

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

(3) 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 Standard Term and Condition A.2)c)(2) above shall be submitted in the following manner:

Unless otherwise specified by rule, written reports that identify deviations of the following federally enforceable requirements contained in this permit; Standard Terms and Conditions: A.3, A.4, A.5, A.7.e), A.8, A.13, A.15, A.19, A.20, A.21, and A.23 of this Title V permit, as well as any deviations from the requirements in section C. Emissions Unit Terms and Conditions of this Title V permit, and any monitoring, record keeping, and reporting requirements, which are not reported in accordance with Standard Term and Condition A.2.c)(2) above shall be submitted to the Ohio EPA DAPC, Central District Office by January 31 and July 31 of each year; and each report shall cover the previous six calendar months. Unless otherwise specified by rule, all other deviations from federally enforceable requirements identified in this permit shall be submitted annually as part of the annual compliance certification, including deviations of federally

enforceable requirements not specifically addressed by permit or rule for the insignificant activities or emissions levels (IEU) identified in section B. Facility-Wide Terms and Conditions of this Title V permit. Annual reporting of deviations is deemed adequate to meet the deviation reporting requirements for IEUs unless otherwise specified by permit or rule.

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 and 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 Standard Term and Condition A.2.c)(2) 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) and OAC rule 3745-77-07(A)(13)(b))

(4) 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." Signature by the Responsible Official may be represented by entry of the personal identification number (PIN) by the Responsible Official as part of the electronic submission process or by the scanned attestation document signed by the Responsible Official that is attached to the electronically submitted written report.

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

(5) Consistent with A.2.c.1. above, reports of any required monitoring and/or record keeping information required to be submitted to Ohio EPA shall be submitted to Ohio EPA DAPC, Central District Office unless otherwise specified.

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

3. Reporting of Any Exceedence of a Federally Enforceable Emission Limitation or Control Requirement Resulting From 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 Standard Term and Condition A.2.c)(1) above.

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

4. 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))

5. 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))

6. 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))

7. General Requirements

a) 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 permitexcept as provided pursuant to A.16 below.

c) This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with A.11 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.

f) Except as otherwise indicated below, this Title V permit, or permit modification, is effective for five years from the original effective date specified in the permit. In the event that this facility becomes eligible for non-title V permits, this permit shall cease to be enforceable when:

(1) the permittee submits an approved facility-wide potential to emit analysis supporting a claim that the facility no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on the permanent shutdown and removal of one or more emissions units identified in this permit; or

(2) the permittee no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on obtaining restrictions on the facility-wide potential(s) to emit that are federally enforceable or legally and practically enforceable ; or

(3) a combination of (1) and (2) above.

The permittee shall continue to comply with all applicable OAC Chapter 3745-31 requirements for all regulated air contaminant sources once this permit ceases to be enforceable. The permittee shall comply with any residual requirements, such as quarterly deviation reports, semi-annual deviation reports, and annual compliance certifications covering the period during which this Title V permit was enforceable. All records relating to this permit must be maintained in accordance with law.

(Authority for term: OAC rule 3745-77-01(W), OAC rule 3745-77-07(A)(3)(b)(ii), OAC rule 3745-77(A)(7))

8. 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))

9. 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))

10. 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 standard terms and conditions shall apply to all operating scenarios authorized in this permit.

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

11. 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))

12. 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))

13. 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

Officialthat, 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:

(1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.

(3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

(4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

c) The permittee shall submit progress reports to the Ohio EPA DAPC, Central District Office concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

(1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

(2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

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 Ohio EPA DAPC, Central District Office) and the Administrator of the U.S. EPA in the following manner and with the following content:

(1) 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.

(2) Compliance certifications shall include the following:

a. Identification of each term or condition that is the basis of the certification. The identification may include a statement by the Responsible Official that every term and condition that is federally enforceable has been reviewed, and such terms and conditions with which there has been continuous compliance throughout the year are not separately identified.

b. The permittee's current compliance status.

c. Whether compliance was continuous or intermittentconsistent with A.13.d.2.a above.

d. The method(s) used for determining the compliance status of the source currently and over the required reporting period consistent with A.13.d.2.a above.

e. Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.

(3) 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))

14. 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))

15. 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 Ohio EPA DAPC, Central District Office 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 Ohio EPA DAPC, Central District Office 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))

16. 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))

17. 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, except that no such notice shall be required for changes that qualify as insignificant emissions levels or activities as defined in OAC rule 3745-77-01(U). 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))

18. 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 Federal Register 8314, Feb. 24, 1997), in the context of any future proceeding.

(This term is provided for informational purposes only.)

19. Insignificant Activities or Emissions Levels

Each IEU that is subject to one or more applicable requirements shall comply with those applicable requirements.

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

20. 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))

21. 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))

22. 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 from the Responsible Official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the Responsible Official that the emissions unit was permanently shut down.

After the date on which 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 Title V permit 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.

Unless otherwise exempted, noemissions unit identified in this permit that has beencertified 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.

(Authority for term: OAC rule 3745-77-01)

23. Title VI Provisions

If applicable, the permittee shall comply with the standards for recycling and reducing emissions of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

a) Persons operating appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 CFR 82.156.

b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment specified in 40 CFR 82.158.

c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

(Authority for term: OAC rule 3745-77-01(H)(11)))

24. Reporting Requirements Related to Monitoring and Record Keeping RequirementsUnder State Law Only

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 theOhio EPA DAPC, Central District Office.

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 Ohio EPA DAPC, Central District Office. 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, 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.)

25. Records Retention RequirementsUnder State Law Only

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.

26. 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.

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

27. Scheduled Maintenance/Malfunction Reporting For State-Only Requirements

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 Ohio EPA DAPC, Central District Office 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).

28. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The Ohio EPA DAPC, Central District Office must be notified in writing of any transfer of this permit.

(Authority for term: OAC rule 3745-77-01(C))

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

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 Standard Term and Condition A.2.c)(2); or

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 potential to emit; or

c) where the company's Responsible Official has certified that an emissions unit has been permanently shut down.

30. Submitting Documents Required by this Permit

All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event ofan alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the Ohio EPA DAPC, Central District Office, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the Responsible Official may be represented as provided through procedures established in Air Services.

B. Facility-Wide Terms and Conditions

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

   a) None.

2. Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) [Synthetic minor to avoid 40 CFR Part 63, Subpart DDDDD]	See a)(1)a.

   (1) Additional Terms and Conditions

   a. This permit establishes the following federally enforceable limitations on emissions of hazardous air pollutants (HAPs), as identified in Section 112(b) of Title III of theClean Air Act, for the purpose of avoiding Maximum Achievable Control Technology (MACT) regulations and Title V permitting requirements:

   i. The actual emissions from emissions units B104, B105,B132, B140, B141, B142, B143, B270 and all other emission sources that emit hexane emissions at the facility, including but not limited to any de minimis emissions units as defined in OAC rule 3745-15-05, or any registration status and/or permit exempt/permit-by-rule emissions units pursuant to OAC rule 3745-31-03, combined, shall not exceed 9.9 tons for hexane, based upon a rolling, 12-month summation.

   Hexane emissions shall be calculated using EPA-approved emission factors or emission factors otherwise approved by the Central District Office and the natural gas consumption from emission sources' natural gas fuel flow meters, as available, and from the natural gas supplier's monthly invoicing of gas consumption for emission units that do not have dedicated gas fuel flow meters.

   b) Operational Restrictions

   (1) None.

   c) Monitoring and/or Recordkeeping Requirements

   (1) The permittee shall collect and record the following information each month for the purpose of calculating the rolling, 12-month summation of hexane emissions:

(a) the total uncontrolled emissions of hexane from emissions units B104, B105, B132, B140, B141, B142, B143 and B270, in tons, calculated in accordance with f)(1);

(b) the total uncontrolled emissions of hexane from any de minimis emissions units that emit hexane emissions as defined in OAC rule 3745-15-05, any registration status and/or permit exempt/permit-by-rule emissions units pursuant to OAC rule 3745-31-03, in tons calculated in accordance with f)(1); and

(c) the rolling, 12-month summation of hexane emissions from all emissions units operating at the facility that emit hexane emissions, in tons.

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(C)(1)]

d) Reporting Requirements

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

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

(2) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. any exceedance of the rolling, 12-month hexane emission limitation;

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

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(A)(3)(c)]

e) Testing Requirements

(1) <u>Emission Limitation:</u>

Emissions of hexane shall not exceed 9.9 tons per rolling, 12-month period

<u>Applicable Compliance Method(s):</u>

The permittee shall calculate hexane emissions consistent with the information presented in the installation and/or operating permit application using U.S. EPA-approved emission factors or emission factors otherwise approved by the Central District Office; and the natural gas consumption from emission sources' natural gas fuel flow meters, as available, and from the natural gas supplier's monthly invoicing of gas consumption for emission units that do not have dedicated gas fuel flow meters.

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(C)(1)]

f) Miscellaneous Requirements

(1) None.

3. The following emissions units contained in this permit are subject to 40 CFR Part 60, Subpart Db: B140, B141, B142, and B143. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the Central District Office.

4. The Ohio EPA has determined that this facility is subject to the requirements of 40 CFR Part 63, Subpart ZZZZ, the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Station Reciprocating Internal Combustion Engines (RICE). Although Ohio EPA has determined that this Generally Available Control Technology (GACT) applies to the pre-NSPS engine(s) identified in this permit, at this time Ohio EPA is not accepting delegation for area sources subject to GACT requirements. Instead, U.S. EPA will retain the authority to enforce this standard for area sources. Please be advised, that all requirements associated with 40 CFR Part 63, Subpart ZZZZ are in effect and be enforced by U.S. EPA. The complete requirements of this rule (including Part 63 General Provisions) may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the Central District Office.

5. The Ohio EPA has determined that this facility is subject to the requirements of 40 CFR Part 63 Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Area Source Boilers. Although Ohio EPA has determined that this Generally Available Control TechnologyNESHAP (GACT) applies, at this time Ohio EPA does not have the authority to enforce this standard. Instead, U.S. EPA has the authority to enforce this standard. Please be advised, that all requirements associated with this rule are in effect and shall be enforced by U.S. EPA. For more information on the area source rules, please refer to the following U.S. EPA website: http://www.epa.gov/ttn/atw/area/arearules.html**.**

6. The permittee shall ensure that any CAIR NOx, SO2, or NOx ozone season unit(s) complies with the requirements of OAC Chapter 3745-109, which includes submitting timely permit applications. The permittee shall ensure that the affected emissions units comply with those requirements as outlined in the permit application submitted as required by OAC rules 3745-109-03, 109-10, and 109-16 for the affected emissions unit(s). The permittee shall also comply with any subsequent federally mandated programs that may replace the CAIR program affecting electric generating facilities.

7. Clean Air Interstate Rule – OAC Chapter 3745-109

   B132 – Boiler #5 gas/oil fired water tube boiler with low NOx burner; 313.1 mmBtu/hr when firing natural gas; 300.1 mmBtu/hr when firing fuel oil

   Note: Ohio EPA DAPC has completed rule amendments for OAC Chapter 3745-14, specifically, OAC rule 3745-14-01 and OAC rule 3745-14-06, which facilitate the transition of the affected units from OAC Chapter 3745-14 into the federal Clean Air Interstate Rule (CAIR) program which began with the 2009 control periods. This began the process of "sunsetting" the parts of OAC Chapter 3745-14 which were no longer needed as a result of Ohio's CAIR rules (OAC Chapter 3745-109). On July 6, 2010, US EPA announced the proposed CAIR replacement rule, the "Transport Rule" as required by the original court vacatur of the federal CAIR program in July 2008. On August 21, 2012, the United States Court of Appeals for the D.C. Circuit vacated the "Transport Rule" and ordered EPA to continue administering CAIR until it promulgates a replacement.

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

B014 – Woody Hayes/Biggs Athletic 2
B015 – Woody Hayes/Biggs Athletic 3
B041 – 1315 Kinnear Rd., 1.9 mmBtu/hr boiler
B042 – 1315 Kinnear Rd., 1.9 mmBtu/hr boiler
B076 – 151917, McCampbell Hall, Continental Boiler
B088 – 140496, Print Facility 1
B089 – 140497, Print Facility 2
B128 – Mount Hall 1
B129 – Mount Hall 2
B148 – Child Care 1
B149 – Child Care 2
B150 – Child Care 3
B151 – Child Care 4
B152 – Child Care 5
B153 – Child Care 6
B154 – Child Care 7
B155 – Scott House 1, 125941
B156 – Scott House 2, 125942
B157 – Scott House 3, 124943
B158 – Child Care 8
B159 – Child Care 9
B160 – Child Care 10
G003 – 9-G GDF
K005 – KODAK, NexPress 2100 digital color printer
T015 – 4000 gal tank, Neuropsychiatric Facility UST
T016 – 2000 gal diesel tank, Riffe UST
T018 – 3000 gal tank, James Cancer Hospital
T019 – 1000 g. diesel, 500 g. gas, 500 g. kerosene; Agronomy Field HQ
T020 – 250 gal diesel tank, Kinnear UST
T022 – McCracken oil tank for diesel
T025 – 5000 gal No. 2 fuel oil storage tank, Goss Lab
T026 – 1000 gal diesel fuel storage tank, Hamilton Hall
T031 – 2500 gal diesel storage tank, Maintenance Building
T032 – 1000 gal diesel storage tank, Mershon Auditorium
T033 – 10,000 gal diesel storage tank, Service Building Annex
T034 – 1000 used oil storage tank, Service Building Annex
T035 – 2000 gal diesel storage tank, Sisson Hall
T039 – 3000 gal No. 2 fuel oil storage tank, Fawcett Center
T040 – 3000 gal No. 2 fuel oil storage tank, Fawcett Center
T041 – storage tank, Telecommunication Building
T042 – 1000 gal diesel storage tank, Dodd/Davis Hall
T043 – 2500 gal diesel storage tank, Dodd/Davis Hall
Z004 – Allied Medical EG, 15 kw
Z006 – Starling/Loving EG, 33 kw
Z012 – Bioscience 2, EG
Z013 – Bioscience 3, EG
Z028 – Postlehall, EG, 40 kw
Z043 – Scott Hall 2, EG, 25 kw
Z045 – St John's/Ice Rink, EG, 50 kw

Z049 – McCampbell 2, EG, 50 kw
Z053 – 35 KW EG, Chemical Engineering Storage Building
Z058 – 140496, Print Facility 1
Z059 – 140497, Print Facility 2
Z060 – 140498 (3 small printing presses), Printing Facility 3
Z101 – 047, EG, 30 kw
Z105 – 078/main shop area, Kohler EG, 30 kw
Z106 – 078/main shop area on first floor, maintenance activities
Z108 – 089/0309 Doan Hall, Histology Lab
Z109 – 089/0309A, Doan Hall Histology Lab
Z110 – 089/basement, Doan Hall, RM 194, 4000 gallon diesel tank
Z111 – 089/outside, Doan Hall, 5000 gallon diesel tank
Z128 – 165/655M, Neuropsychiatric Facility, 4000 gallon tank
Z141 – 183/maintenance shop, Royer Center maintenance facility
Z143 – 266/outside, 2000 gallon diesel UST
Z150 – 274/011 Hitchcock Hall, offset printing machine
Z151 – 274/011, Hitchcock Hall, offset printing machine
Z152 – 274/011, Hitchcock Hall, offset printing machine
Z155 – Fawcett Center, printing press
Z161 – 290, Heidelberg offset
Z170 – 290/duplicating room, AB Dick 9910
Z175 – AgEng, ONAN EG, 30 kw
Z176 – 299/1143, Vet Hospital, ETO sterilizer
Z177 – 299/1143, Vet Hospital, ETO sterilizer
Z184 – 354/0324S, Rhodes Hall, clinical chemistry, hood #7
Z185 – 354/0324S, Rhodes Hall, clinical chemistry, hood #5
Z186 – Rhodes UST, 2000 gallons
Z191 – Celeste, EG, 33 kw
Z192 – 372/1128, drug development, hood #14
Z193 – James Cancer Hospital, 3000 gallon AST
Z194 – 386/61, Wexner Center, Painting Room
Z198 – 951/1314, Biology Collections Museum, storage
Z199 – 951/1686, Biology Collections Museum, fish
Z203 – 284/005, Fawcett Center, OEPA/Development Mail Center
Z204 – 294/140E, Wilce Student Health Center, X-ray developer
Z211 – 354/0306S, Rhodes Hall, Hood
Z226 – McCracken EG #2, 600-G storage tank
Z227 – McCracken EG #3, 600-G storage tank

[Authority for term: OAC rule 3745-15-05]

9. The following insignificant emissions units located at this facility are exempt from permitting requirements because it meets the “permit-by-rule” criteria established in OAC rule 3745-31-03(A)(4):

B001 – Atwell Hall, 5.6 mmBtu/hr boiler
B002 – Atwell Hall, 453 W. 10th Ave, 5.6 mmBtu/hr boiler
B011 – Bevis Hall, Carmack, 6.2 mmBtu/hr boiler
B012 – Bevis Hall, Carmack, 6.2 mmBtu/hr boiler
B013 – Bevis Hall, Carmack, 6.2 mmBtu/hr boiler

B025 – 171/1096M, Dodd Hall, American Standard Kewanee Boiler 5.123 mmBtu/hr
B026 – 171/1096M, Dodd Hall, American Standard Kewanee Boiler 8.0 mmBtu/hr
B027 – 171/1096M, Dodd Hall, American Standard Kewanee Boiler 8.0 mmBtu/hr
B029 – Drackett Tower, 161 Curl Dr., 5.2 mmBtu/hr boiler
B030 – Drackett Tower, 161 Curl Dr., 5.2 mmBtu/hr boiler
B035 – Drake River Union, 1849 Cannon Dr., 4.0 mmBtu/hr boilers
B036 – Drake River Union, 1849 Cannon Dr., 4.0 mmBtu/hr boilers
B039 – Fawcett Center for Tomorrow, 2400 Olentangy River Rd., 8.375 mmBtu/hr boilers
B040 – Fawcett Center for Tomorrow, 2400 Olentangy River Rd., 8.375 mmBtu/hr boilers
B041 – 1315 Kinnear Rd., 1.9 mmBtu/hr boiler
B042 – 1315 Kinnear Rd., 1.9 mmBtu/hr boiler
B056 – 267/Penthouse, Jones Tower, 101 Curl Dr., 5.1 mmBtu/hr boiler
B057 – 267/Penthouse, Jones Tower, 101 Curl Dr., 5.1 mmBtu/hr boiler
B080 – Morrill Tower, 1900 Cannon Dr., 4.3 mmBtu/hr boiler
B081 – Morrill Tower, 1900 Cannon Dr., 4.3 mmBtu/hr boiler
B082 – Morrill Tower, 1900 Cannon Dr., 4.3 mmBtu/hr boiler
B083 – Morrill Tower, 1900 Cannon Dr., 4.2 mmBtu/hr boiler
B084 – Morrill Tower, 1900 Cannon Dr., 4.2 mmBtu/hr boiler
B085 – North Commons, 157 Curl Dr., 4.1 mmBtu/hr boiler
B086 – North Commons, 157 Curl Dr., 4.1 mmBtu/hr boiler
B087 – North Commons, 157 Curl Dr., 4.1 mmBtu/hr boiler
B093 – Research Center (73) and 1314 Kinnear Rd (126) are supplied by the power house (130), 4.4 mmBtu/hr boiler
B094 – Research Center (73) and 1314 Kinnear Rd (126) are supplied by the power house (130), 4.4 mmBtu/hr boiler
B095 - Research Center (73) and 1314 Kinnear Rd (126) are supplied by the power house (130), 4.4 mmBtu/hr boiler
B096 - Research Center (73) and 1314 Kinnear Rd (126) are supplied by the power house (130), 4.4 mmBtu/hr boiler
B097 - Research Center (73) and 1314 Kinnear Rd (126) are supplied by the power house (130), 4.4 mmBtu/hr boiler
B098 – Royer Commons, 85 Curl Dr., 4.2 mmBtu/hr boiler
B099 – Royer Commons, 85 Curl Dr., 4.2 mmBtu/hr boiler
B100 – Royer Commons, 85 Curl Dr., 4.2 mmBtu/hr boiler
B106 – 394/060A Biotech Support 5.23 mmBtu/hr NG
B112 – 268/Penthouse, Taylor Hall, Cleaver Brooks, 5.2 mmBtu/hr boiler
B113 – 268/Penthouse, Taylor Hall, Cleaver Brooks, 5.2 mmBtu/hr boiler
B165 – Lincoln Tower – 135636, 135637, 135638, 135639, 135640
B166 - Lincoln Tower – 135636, 135637, 135638, 135639, 135640
B167 - Lincoln Tower – 135636, 135637, 135638, 135639, 135640
B168 - Lincoln Tower – 135636, 135637, 135638, 135639, 135640
B169 - Lincoln Tower – 135636, 135637, 135638, 135639, 135640
B176 – 395/M, 1275 Kinnear Rd., 5.8 mmBtu/hr boiler
B177 – 395/M, 1275 Kinnear Rd., 5.8 mmBtu/hr boiler
B179 – Cummins EG, 350 kw
B180 – Goss Lab, Caterpillar EG, 125 kw
B181 – Howlett Greenhouse, Caterpillar EG, 376.5 kw
B182 – Parker Food Science, Kohler EG, 280 kw
B184 – Rightmire SE, Cummins EG, 300 kw

B185 – Rightmire SE, Cummins EG, 250 kw
B186 – Biotech, Stamford EG, 170 kw
B187 – Rightmire PH, Cummins EG, 175 kw
B188 – Sisson Hall, Caterpillar EG, 558 kw
B189 – Vet Medicine Acad, Caterpillar EG, 370 kw
B190 – Vet Hospital, Caterpillar EG, 367.5 kw
B191 – Blankenship Hall, Cummins EG, 150 kw
B192 – BSL 3, Kohler EG, 100 kw
B193 – KRC Bldg C, Cummins EG, 350 kw
B194 – KRC Bldg D, Caterpillar EG, 520 kw
B195 – Scott Hall, Kohler EG, 170 kw
B196 – Telecomm Center, Kohler EG, 400 kw
B197 – Hamilton Hall, Kohler EG, 465 kw
B198 – Graves Hall PH, ONAN EG, 170 kw
B199 – Graves Hall W, ONAN EG, 250 kw
B201 – Aronoff 1, Kohler EG, 350 kw
B202 – Aronoff 2, Kohler EG, 350 kw
B203 – Aronoff 3, Kohler EG, 350 kw
B205 – Compr Cancer Ctr, Cummins EG, 275 kw
B206 – Davis Heart & Lung, Caterpillar EG, 1250 kw
B207 – Lazenby Hall, Kohler EG, 97 kw
B208 – Riffe Center, Kohler EG, 400 kw
B209 – Tzagournis Hall, Caterpillar EG, 1250 kw
B210 – Wiseman Hall 1, DELCO EG, 200 kw
B211 – Wiseman Hall 2, Cummins EG, 275 kw
B212 – Dreese Lab, Caterpillar EG, 85 kw
B213 – Fisher Hall, Caterpillar EG, 595 kw
B214 – Hitchcock Hall, Cummins EG, 85 kw
B215 – Math Tower, Caterpillar EG, 995 kw
B216 – Knowlton School, Detroit Diesel EG, 280 kw
B217 – Mershon Auditorium, Cummins EG, 160 kw
B218 – McPherson Lab, Caterpillar EG, 310 kw
B219 – Newman/Wolfrom Lab, Caterpillar EG, 130 kw
B220 – Hagerty Hall, Kohler EG, 600 kw
B221 – Mendenhall Lab, Kohler EG, 60 kw
B222 – Page Hall, Kohler EG, 405 kw
B223 – OSU Stadium East, Caterpillar EG, 500 kw
B224 – OSU Stadium West, Caterpillar EG, 1000 kw
B225 – OSU Stadium South, Caterpillar EG, 1000 kw
B226 – Schottenstein Center, Detroit Diesel EG, 600 kw
B227 – Fawcett Center 1, Elliot Magnetech EG, 600 kw
B228 – Drackett Tower, Detroit Diesel EG, 175 kw
B229 – Drake Union, Chevy EG, 100 kw
B230 – Jones Tower, Cat EG, 250 kw
B231 – Lincoln Tower, John Deere EG, 150 kw
B232 – Morrill Tower, John Deere EG, 150 kw
B233 – Taylor Tower, Cat EG, 250 kw
B234 – Younkin Center, Kohler 60 kw
B235 – Blackwell Inn, Cat EG, 275 kw

B236 – RPAC, Cummins EG, 80 kw
B237 – Adventure Rec Ctr, Kohler EG, 60 kw
B238 – James Cancer Ctr 1, Cummins EG, 1000 kw
B239 – James Cancer Ctr 2, Cummins EG, 1000 kw
B240 – Doan Hall 1, Cat EG, 2000 kw
B241 – Doan Hall 2, Cat EG, 2000 kw
B242 – Doan Hall 3, Cat EG, 2000 kw
B243 – Doan Hall 4, Cat EG, 2000 kw
B244 – Dodd/Davis Hall, Cat EG, 319 kw
B245 – Neuropsychiatric, Detroit Diesel EG, 505 kw
B247 – McCraken 2, Cat EG, 21.5 mmBtu/hr
B248 – McCraken 3, Cat EG, 21.5 mmBtu/hr
B249 – McCraken 1, Cat EG, 1500 kw
B250 – Ohio MIcroMD, ONAN EG, 57 kw
B251 – Med Ctr Ackerman 3, Cummins EG, 1250 kw
B252 – Med Ctr Ackerman 1, Kohler EG, 100 kw
B255 – 670 Ackerman Rd., 9.0 mmBtu/hr boiler
B256 – Ackerman Road Library, ONAN EG, 55 kw
B257 – Lab Animal Center 1, Generac EG, 130 kw
B258 – Lab Animal Center 2, General EG, 130 kw
B260 – Thompson Library, Cummins EG, 800 kw
B261 – Ohio Union, Cummins EG, 1000 kw
B262 – Baker Systems Engineering, Kohler EG, 150 kw
B263 – Lane Avenue Residence Hall, Kohler EG, 275 kw
B264 – Student Academic Services Building, Cummins EG, 500 kw
B265 – Cunz Hall, Cummins EG, 500 kw
B266 – Emergency Generator SG-1, 2800 kw
B267 – Emergency Generator SG-2, 2800 kw
B268 – Kennedy Commons 1, Cummins EG, 150 kw
B269 – Kennedy Commons 2, Cummins EG, 150 kw
B271 – McCampbell Hall 303, Kohler EG, 50 kw
B272 – Postle Hall 024, Kohler EG, 50 kw
B273 – Med Ctr Ackerman 4, Cummins EG, 1250 kw
B274 – Ice Rink 229, Kurz& Root EG, 50 kw
B275 – North Commons 192, Kohler EG, 40 kw
B277 – Park-Stradley Hall 096, Cat EG, 600 kw
B278 – Residence on Tenth 850, Cummins EG, 600 kw
B280 – Siebert Hall 099, Kohler EG, 300 kw
B281 – Smith Hall 109, Kohler EG, 500 kw
B282 – Prior Health Science Library, Cummins EG, 450 kw
B289 – IBMR 460 Medical Center Drive, Bryan steam boiler, 4.2 mmBtu/hr NG boiler
G006 – 2578 Kenny Rd., Service building annex, GDF
T001 – McCracken Oil Tank No. 1, No. 2 fuel oil storage, 50,000 gallons
T002 – McCracken Oil Tank No. 2, No. 2 fuel oil storage, 50,000 gallons
T003 – McCracken Oil Tank No. 3, No. 2 fuel oil storage, 50,000 gallons
T004 – McCracken Oil Tank No. 4, No. 2 fuel oil storage, 50,000 gallons
T005 – McCracken Oil Tank No. 5, No. 2 fuel oil storage, 50,000 gallons
T006 – McCracken Oil Tank No. 6, No. 2 fuel oil storage, 40,000 gallons
T007 – McCracken Oil Tank No. 7, No. 2 fuel oil storage, 40,000 gallons

T008 – McCracken Oil Tank No. 8, No. 2 fuel oil storage, 40,000 gallons
T009 – McCracken Oil Tank No. 9, No. 2 fuel oil storage, 40,000 gallons
T010 – McCracken Oil Tank No. 10, No. 2 fuel oil storage, 40,000 gallons
T011 – McCracken Oil Tank No. 11, No. 2 fuel oil storage, 30,000 gallons
T012 – McCracken Oil Tank No. 12, No. 2 fuel oil storage, 30,000 gallons
T021 – OSU Hospital behind Rhodes Hall, 15,000 gallon diesel UST
Z104 – 066/144, Plumb Hall, 202 Coffey Rd., Cattle Blood Typing Room
Z121 – 149/071, Hopkins Hall, maintenance activities
Z200 – 963/outside, Agronomy field HQ, ASTs (1000 gal. diesel, 500 gal. gas, 500 gal. kerosene)

[Authority for term: OAC rule 3745-31-03]

C. Emissions Unit Terms and Conditions

1. Emissions Unit Group -Scott Hall Boilers: B104,B105

EU ID	Operations, Property and/or Equipment Description
B104	Scott Hall, Carmack, 10.4 mmBTU/hr boiler
B105	310/024M, Scott Hall, Cleaver Brooks boiler, 10.4 mmBTU/hr boiler

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% as a 6-minute average, except as provided by the rule.
b.	OAC rule 3745-17-10(B)	Particulate emissions (PE) shall not exceed 0.020 pound per mmBtu (lb/mmBtu) of actual heat input.
c.	OAC rule 3745-18-06	See b)(2)a.

(2) Additional Terms and Conditions

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 SO_2 emission limitation from OAC Chapter 3745-18 for these emissions units.

c) Operational Restrictions

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

[Authority for term: OAC rule 3745-17-10(B) and OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping 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 these emissions units.

[Authority for term: OAC rule 3745-17-10(B) and OAC rule 3745-77-07(C)]

e) Reporting Requirements

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

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

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

[Authority for term: OAC rule 3745-17-10(B) and OAC rule 3745-77-07(A)(3)(c)]

f) Testing Requirements

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

a. Emission Limitation(s):

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

Applicable Compliance Method(s):

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).

[Authority for term: OAC rule 3745-17-07(A) and OAC rule 3745-77-07(C)(1)]

b. Emissions Limitation(s):

PE shall not exceed 0.020 lb/mmBtu of actual heat input

Applicable Compliance Method(s):

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) emissions 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).

[Authority for term: OAC 3745-17-10(B) and OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

2. B132, BOILER #5

Operations, Property and/or Equipment Description:

Boiler 5 - gas/oil fired water tube boiler with low NOx burner. Boiler 5 is rated 313.1mmBtu/hr when firing natural gas and 300.1 mmBtu/hr when firing fuel oil.

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) [Established by PTI P0105626, issued final 05/26/10]	Nitrogen oxides (NOx) emissionsshall not exceed 0.036 lb/mmBtuwhen firing natural gas and 0.12lb/mmBtu when firing number 2distillate fuel oil. NOx emissions shall not exceed103.52 tons per year when firingnatural gas and/or number 2distillate fuel oil. Carbon monoxide (CO) emissionsshall not exceed 0.072 lb/mmBtuwhen firing natural gas and 0.17lb/mmBtu when firing number 2distillate fuel oil. CO emissions shall not exceed161.04 tons per year when firingnatural gas and/or number 2distillate fuel oil. Particulate emissions (PE) shall notexceed 0.007 lb/mmBtu when firingnatural gas and 0.0196 lb/mmBtuwhen firing number 2 distillate fueloil. PE shall not exceed 17.68 tons peryear when firing natural gas and/ornumber 2 distillate fuel oil.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Volatile organic compound (VOC)emissions shall not exceed 0.008lb/mmBtu when firing natural gasand 0.009 lb/mmBtu when firingnumber 2 distillate fuel oil. VOC emissions shall not exceed 11.40 tons per year when firing natural gas and/or number 2 distillate fuel oil. Sulfur dioxide (SO2) emissions shall not exceed 0.0006 lb/mmBtu when firing natural gas and 0.056 lb/mmBtu when firing number 2 distillate fuel oil. SO2 emissions shall not exceed 37.80 tons per year when firing natural gas and/or number 2 distillate 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 c)(3) below.
b.	OAC rule 3745-18-06(A)	Fuel burning equipment is exempt from paragraphs (D), of OAC rule 3745-18-06, during any calendar day in which natural gas is the only fuel burned.
c.	OAC rule 3745-18-06(D) OAC rule 3745-17-10(B)(1) 40 CFR Part 60.44b	The emission limitations established pursuant to OAC rule 3745-31-05(A)(3) are more stringent than the emissions limitations established by these rules.
d.	40 CFR Part 60, Subpart Db	When firing number 2 distillate fuel oil, visible PE shall not exceed 20% opacity, as a6-minute average, except for one 6-minuteperiod per hour of not more than 27%opacity, and because this emissions unitemploys a high heat release rate as defined in40 CFR Part 60.41b, the NOx emissions heatinput limitation shall not exceed 0.2lb/mmBtu expressed as NO2.
e.	40 CFR Part 60, Subpart A	See b)(2)e.
f.	OAC rule 3745-17-07(A)	Visible PE shall not exceed 20% opacity, asa 6-minute average when firing natural gas,except as provided by rule.
g.	OAC rule 3745-31-13(D)(1)	See b)(2)a.

(2) Additional Terms and Conditions

a. 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.

b. This emissions unit is subject to the applicable provisions of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60. The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

c. Each continuous NOx predictive emissions monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 16. At least 45 days before commencing certification testing of the NOx predictive emissions monitoring system(s), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of NOx predictive emissions continuous monitor(s), in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix B, Performance Specification 16. The quality assurance/quality control plan and a logbook dedicated to the continuous NOx predictive emissions monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct daily sensor evaluations; to conduct quarterly relative accuracy audits; and to conduct yearly relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60, Appendix B, Performance Specification 16.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendix B, Performance Specification 16]

d. The predictive emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes all sensors, algorithms, and data recording/processing hardware and software. Any change to algorithms used to predict NOx emissions shall require new certification testing of the NOx predictive emissions monitoring systems.

[Authority for term: 40 CFR 60.2 and Appendix B to 40 CFR Part 60]

e. The permittee shall comply with the applicable requirements identified in 40 CFR Part 60, Subpart Db in accordance with the applicable provisions of 40 CFR Part 60, Subpart A.

c) Operational Restrictions

(1) The maximum annual fuel oil usage for this emissions unit shall not exceed 9,526,500 gallons.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(1)]

(2) The quality of the number 2 distillate 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 b)(1) above.

[Authority for term: OAC rule 3745-31-05(A)(3), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(A)(1)]

(3) The permittee shall burn only liquid (excluding residual oil) or gaseous fuels with potential SO2 emissions rates of 0.060 lb/MMbtu(26 ng/J) or less and does not use a post-combustion technology to reduce SO2 or PM emissions. The owner or operator must maintain fuel records of the sulfur content of the fuels burned, as described under 40 CFR 60.49b(r).

[Authority for term: OAC rule 3745-31-05(A)(3), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(A)(1)]

(4) The permittee shall operate low NOx burners and employ flue gas recirculation at all times this emissions unit is in operation.

[Authority for term: OAC rule 3745-31-05(A)(3), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(A)(1)]

(5) The permittee shall operate and maintain predictive monitoring equipment to continuously predict and record the NOx emissions from this emissions unit when combusting natural gas and/or number 2 distillate fuel oil.

[Authority for term: OAC rule 3745-31-05(A)(3), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(A)(1)]

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

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

(1) For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the 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.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)]

(2) 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.

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 testfiring, 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).)

[Authority for term: OAC rule 3745-31-05(A)(3), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(C)]

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

[Authority for term: OAC rule 3745-77-07(C)]

(4) 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 distillate 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.
10^3 = Conversion of thousand Btu to mmBtu.

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

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

Where:
DI_o = Daily heat input rate from oil, mmBtu/day.
$V_{oil\text{-}rate}$ = 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.
10^6 = Conversion of Btu to mmBtu.

d. the rolling, 30-day average NOx emission rate, in pounds per mmBtu, when firing natural gas; and

e. the rolling, 30-day average NOx emission rate, in pounds per mmBtu, when firing number 2 distillate fuel oil.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)]

(5) The permittee shall collect and record the following information for the purpose of determining annual mass emissions:

a. the amount of natural gas used (in million cubic feet);

b. the amount of number 2 distillate fuel oil used (in gallons); and

c. the total amount of mass annual emissions of each pollutant listed in b)(1) emitted from this emissions unit, in pounds or tons.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)]

(6) The Ohio EPA, Central Office shall approve the initial certification testing protocol, and shall review all initial certification testing data. Upon a satisfactory review of the initial certification testing data, Ohio EPA shall acknowledge that the NOx predictive emissions monitoring system meets the requirements of Performance Specification 16 by sending a Certification Letter. Once received, the letter/document of certification shall be maintained on-site and shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

Initial certification of B132 was granted in a letter dated April 13, 2010, by Ohio EPA, Central Office, Division of Air Pollution Control.

The predictive emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes all sensors, algorithms, and data recording/processing hardware and software.

[Authority for term: OAC rule 3745-31-05(A)(3), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(C)]

(7) 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.

[Authority for term: OAC rule 3745-31-05(A)(3), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(C)]

(8) The permittee shall install, operate, and maintain equipment to continuously predict and record NOx emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

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

a. predicted emissions of NOx in parts per million on an instantaneous (one-minute) basis;

b. predicted emissions of a diluents (O2 or CO2) in percent on an instantaneous (one-minute) basis;

c. predicted flow rates of the emissions stream, in dry standard cubic feet per minute (this is required only for NOx predictive emissions monitoring systems that are being used to demonstrate compliance with a NOx pound-per-hour limit.);

d. emissions of NOx in all units of the applicable standard(s) in the appropriate averaging period;

e. results of quarterly relative accuracy audits;

f. results of daily sensor checks and a list of adjustments or repairs/replacements that are made;

g. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

h. hours of operation of the emissions unit, NOx predictive emissions monitoring system, and control equipment;

i. the date, time, and hours of operation of the emissions unit without the control equipment and/or the NOx predictive emissions monitoring system;

j. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the NOx predictive emissions monitoring system; as well as,

k. the reason (if known) and the corrective actions taken (if any) for each such event in i. and j.

[Authority for term: OAC rule 3745-31-05(A)(3), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(C)]

e) Reporting Requirements

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

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

(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 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 set to the Director (the Ohio EPA, Central District Office) within 45 days after the deviation occurs.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(3)(c)]

(3) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas and/or number 2 distillate fuel oil was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(3)(c)]

(4) The permittee shall submit reports (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 predictive 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 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

[Authority for term: OAC rule 3745-31-05(A)(3), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(A)(3)(c)]

(5) The permittee shall submit quarterly reports of the following information:

a. certifying that only very low sulfur oil meeting the definition in 40 CFR Part 60.41b was combusted in this emissions unit during the preceding quarter;

b. if the certification specified in e)(5)a. is not submitted, then the permittee shall submit the following information along with the appropriate information contained within 40 CFR Part 60.49b(k):

i. the number of hourly averages available for outlet emissions rates and inlet emissions rates;

ii. the standard deviation of hourly averages for outlet emissions rates and inlet rates, as determined in 40 CFR Part 60, Subpart A, Method 19, section 7;

iii. the lower confidence limit for the mean outlet emission rate and upper confidence limit for the mean inlet emission rate, as calculated in 40 CFR Part 60, Subpart A, Method 19, section 7; and

iv. the ratio of the lower confidence limit for the mean outlet emission rate and the allowable emission rate, as calculated in 40 CFR Part 60, Subpart A, Method 19, section 7.

[Authority for term: OAC rule 3745-31-05(A)(3), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(A)(3)(c)]

(6) The permittee shall submit annual reports that specify the total particulate, SO2, VOC, NOx, CO emissions and natural gas and fuel oil usages for 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 for this emissions unit in the annual Fee Emission Report.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(3)(c)]

(7) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its NOx predictive emissions monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of NOx predicted emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapters 3745-14 and 3745-23, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).

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

i. the facility name and address;

ii. the manufacturer, model number, and serial number of the NOx predictive emissions monitoring systems;

iii. a description of any change in the equipment that comprises the predictive emission monitoring system, including any change to the hardware, and/or changes to the software in the predictive algorithms;

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

v. the total NOx emissions for the calendar quarter (tons);

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

vii. the total operating time of the NOx predictive emissions monitoring system while the emissions unit was in operation;

viii. results and dates of quarterly relative accuracy audits;

ix. unless previously submitted, the results of any relative accuracy test audit showing the NOx predictive emissions monitor out-of-control and the compliant results following any corrective actions;

x. the date, time, and duration of any/each malfunction** of the NOx predictive monitoring system, emissions unit, and/or control equipment;

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

xii. the reason (if known) and the corrective actions taken (if any) for each event in x. and xi.

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

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

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

[Authority for tem: OAC rule 3745-31-05(A)(3), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(A)(3)(c)]

f) Testing Requirements

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

a. The permittee performed an initial certification test for each predictive emissions monitoring system in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 16 in November 2009. Annual recertification testing shall be performed in accordance with and at the frequencies required by 40 CFR Part 60, Appendix B, Performance Specification 16 and ORC section 3704.03(I).

Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA,

one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification of the NOx predictive emissions monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specification 16 and ORC section 3704.03(I).

Initial certification of the B140, B141, B142, and B143 PEMs was granted in a letter dated January 25, 2010, by Ohio EPA, Central Office, Division of Air Pollution Control.

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 60.13 and 40 CFR Part 60, Appendix B]

b. Within 60 days after achieving the maximum production rate at which these emissions units 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 emission limitation and NOx emission limitation while firing number 2 distillate fuel oil. The permittee has completed this test.

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 units are operating at or near its maximum capacity, while firing number 2 distillate fuel oil.

The NOx performance test shall be conducted using the NOx 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 distillate fuel oil.

c. 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).

d. 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.

e. 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 units and the

testing procedures provide a valid characterization of the emissions from the emissions units and/or the performance of the control equipment.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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

a. Emission Limitation(s):

NOx emissions shall not exceed 0.036 lb/mmBtu of actual heat input while firing natural gas and 0.12 lb/mmBtu of actual heat input while firing number 2 distillate fuel oil.

Applicable Compliance Method(s):

When firing number 2 distillate fuel oil, compliance with the emissions limitations 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 NOx emission data for the preceding 30 steam generating unit operating days.

When firing natural gas, compliance with the emissions limitations 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 NOx emission data for the preceding 30 steam generating unit operating days.

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

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation(s):

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

Applicable Compliance Method(s):

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

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

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

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

c. Emission Limitation(s):

CO emissions shall not exceed 0.072 lb/mmBtu of actual heat input while firing natural gas and 0.17 lb/mmBtu of actual heat input while firing number 2 distillate fuel oil.

Applicable Compliance Method(s):

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

When firing number 2 distillate fuel oil, compliance shall 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 test performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

d. Emission Limitation(s):

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

Applicable Compliance Method(s):

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

The annual natural gas emissions shall be determined by multiplying annual natural gas usage (cu ft/yr) by the emission factor supplied by the boiler manufacturer (Babcock and Wilcox, 04/29/2001) for CO in natural gas combustion (74.5 lbs of CO/mmcuft) and dividing by 2,000 lbs/ton.

The annual number 2 distillate fuel oil emissions shall be determined by multiplying annual number 2 distillate fuel oil usage (gal/yr) by the heat content of the oil (Btu/gal) by the emission factor supplied by the boiler manufacturer

(Babcock and Wilcox, 04/24/1998) for CO in number 2 distillate fuel oil combustion (0.17 lb CO/mmBtu) and dividing by 2,000 lbs/ton and by 1,000,000 Btu/mmBtu.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

e. Emission Limitation(s):

PE shall not exceed 0.007 lb/mmBtu of actual heat input when firing natural gas and 0.0196 lb/mmBtu of actual heat input when firing number 2 distillate fuel oil.

Applicable Compliance Method(s):

When firing natural gas, compliance shall be demonstrated by multiplying the maximum hourly gas burning capacity of the emissions unit (302,512 cu ft/hr) by the boiler manufacturer's emission factor (Babcock and Wilcox, 04/24/1998) for PE in natural gas combustion (7.25 lbs PE/mmcuft) and dividing by the maximum hourly heat input capacity of the emissions unit (313 mmBtu/hr).

When firing number 2 distillate fuel oil, compliance shall be demonstrated by the most recent emission test.

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

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

f. Emission Limitation(s):

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

Applicable Compliance Method(s):

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

The natural gas annual emissions shall be determined by multiplying the annual natural gas usage (mmcuft/yr) by the boiler manufacturer's emission factor (Babcock and Wilcox, 04/24/1998) for PE in natural gas combustion (7.25 lbs PE/mmcuft), and dividing by 2,000 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 PE/mmBtu) by the annual number 2 fuel oil usage (gal/yr) by the annual average fuel oil heating value (Btu/gal) and dividing by 1,000,000 Btu/mmBtu and by 2,000 pounds per ton.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

g. Emission Limitation(s):

VOC emissions shall not exceed 0.008 lb/mmBtu of actual heat input when firing natural gas and 0.009 lb/mmBtu of actual heat input when firing number 2 distillate fuel oil.

Applicable Compliance Method(s):

When firing natural gas, compliance shall be demonstrated by multiplying the maximum hourly gas burning capacity of the emissions unit (302,512 cu ft/hr) 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/mmcuft), and dividing by the maximum hourly heat input capacity of the emissions unit (313 mmBtu/hr).

When firing number 2 distillate fuel oil, compliance with this emission limitation may be demonstrated by multiplying the maximum fuel oil burning capacity of the emissions unit (2,144 gal/hr) by the boiler manufacturer's emission factor (Babcock and Wilcox, 04/24/1998) for volatile organic compounds in number 2 distillate fuel oil combustion (1.26 lbs 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.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

h. Emission Limitation(s):

VOC shall not exceed 11.40 tons/year when firing natural gas and/or number 2 distillate fuel oil.
Applicable Compliance Method(s):

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

The natural gas annual emissions shall be determined by multiplying the annual natural gas usage (cu ft/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/mmcuft), and dividing by 2,000 pounds per ton.

The number 2 distillate fuel oil emissions shall be determined by multiplying the annual number 2 distillate fuel oil usage (gal) by the boiler manufacturer's emission factor (Babcock and Wilcox, 04/24/1998) for volatile organic compounds in number 2 distillate fuel oil combustion (1.26 lbs VOC/1000 gal), and dividing by 2,000 pounds per ton.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

i. Emission Limitation(s):

SO2 emissions shall not exceed 0.0006 lb/mmBtu of actual heat input when firing natural gas and 0.056 lb/mmBtu of actual heat input when firing number 2 distillate fuel oil.

Applicable Compliance Method(s):

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 distillate fuel oil.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

j. Emission Limitation(s):

SO2 emissions shall not exceed 37.80 tons/year when firing natural gas and/or number 2 distillate fuel oil.

Applicable Compliance Method(s):

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

The natural gas annual emissions shall be determined by multiplying the annual natural gas usage (cu ft/yr) by the emission factor from AP-42 Table 1.4-2 (07/1998) for SO2 in natural gas combustion (0.6 lb SO2/mmcuft), and dividing by 2,000 pounds per ton.

When firing number 2 distillate fuel oil compliance with the allowable sulfur dioxide emission limitation shall be demonstrated by multiplying the annual number 2 distillate fuel oil consumption (gal/year) by the emission factor of 142*S lbs SO2/1,000 gal, where S equals sulfur content (from AP-42, Table 1.3-1, 04/2000) and dividing by 2,000 pounds per ton.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

k. Emission Limitation(s):

Visible PE shall not exceed 20% opacity, as a 6-minute average when firing natural gas, except as provided by rule.

Applicable Compliance Method(s):

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).

[Authority for term: OAC rule 3745-31-05(A)(3), OAC rule 3745-17-07(A) and OAC rule 3745-77-07(C)(1)]

l. Emission Limitation(s):

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 distillate fuel oil.

Applicable Compliance Method(s):

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

[Authority for term: OAC rule 3745-31-05(A)(3), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) Per the permittee's air permit to install application dated January 2003, the permittee shall comply with all applicable provisions of OAC rule 3745-14 for emissions unit B132 if appropriate, including but not limited to, certain NOx emissions limitations in the emissions trading program, obtain permits, comply with trading procedures and meet the monitoring and reporting requirements in this rule. See B.2. and B.3. in the facility-wide terms and conditions section of this permit.

3. Emissions Unit Group -McCracken Boilers: B140,B141,B142,B143

EU ID	Operations, Property and/or Equipment Description
B140	New Boiler 1 - 206 mmBtu/hr gas/oil fired water tube boiler with low NOx burner
B141	New Boiler 3 - 206 mmBtu/hr gas/oil fired water tube boiler with low NOx burner
B142	New Boiler 6 - 206 mmBtu/hr gas/oil fired water tube boiler with low NOx burner
B143	New Boiler 7 - 206 mmBtu/hr gas/oil fired water tube boiler with low NOx burner

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) [Established by P0105626, issued final 05/26/10]	Nitrogen oxides (NOx) emissions shall not exceed 0.035 lb/mmBtu when firing natural gas and 0.10 lb/mmBtu when firing number 2 distillate fuel oil. NOx emissions shall not exceed 59.15 tons per year when firing natural gas and/or number 2 distillate fuel oil. Carbon monoxide (CO) emissions shall not exceed 0.04 lb/mmBtu when firing natural gas and 0.08 lb/mmBtu when firing number 2 distillate fuel oil. CO emissions shall not exceed 52.74 tons per year when firing natural gas and/or number 2 distillate fuel oil. Particulate emissions (PE) shall not exceed 0.005 lb/mmBtu when firing natural gas and 0.02 lb/mmBtu when firing number 2 distillate fuel oil. PE shall not exceed 10.93 tons per year when firing natural gas and/or number 2

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		distillate fuel oil. 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 distillate fuel oil. VOC emissions shall not exceed 3.54 tons per year when firing natural gas and/or number 2 distillate fuel oil. Sulfur dioxide (SO2) emissions shall not exceed 0.0006 lb/mmBtu when firing natural gas and 0.052 lb/mmBtu when firing number 2 distillate fuel oil. SO2 emissions shall not exceed 22.82 tons per year when firing natural gas and/or number 2 distillate 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 c)(4)
b.	OAC rule 3745-17-07(A)	Visible PE shall not exceed 20% opacity, as a 6-minute average when firing natural gas, except as provided by rule.
c.	OAC rule 3745-18-06(A)	Fuel burning equipment is exempt from paragraphs (D), of OAC rule 3745-18-06, during any calendar day in which natural gas is the only fuel burned.
d.	OAC rule 3745-17-10(B)(1) OAC rule 3745-18-06(D)	The emission limitations established pursuant to OAC rule 3745-31-05(A)(3) are more stringent than the emission limitations established by these rules.
e.	40 CFR Part 60, Subpart Db	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 distillate fuel oil.
f.	40 CFR Part 60, Subpart A	See b)(2)e.
g.	OAC rule 3745-31-13(D)(1)	See b)(2)a.

(2) Additional Terms and Conditions

a. 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.

b. These emissions units are subject to the applicable provisions of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60. The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

c. Each continuous NOx predictive emissions monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 16. At least 45 days before commencing certification testing of the NOx predictive emissions monitoring system(s), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of NOx predictive emissions continuous monitor(s), in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix B, Performance Specification 16. The quality assurance/quality control plan and a logbook dedicated to the continuous NOx predictive emissions monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct daily sensor evaluations; to conduct quarterly relative accuracy audits; and to conduct yearly relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60, Appendix B, Performance Specification 16.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60,Appendix B, Performance Specification 16]

d. The predictive emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes all sensors, algorithms, and data recording/processing hardware and software. Any change to algorithms used to predict NOx emissions shall require new certification testing of the NOx predictive emissions monitoring systems.

[Authority for term: 40 CFR 60.2 and Appendix B to 40 CFR Part 60]

e. The permittee shall comply with the applicable requirements identified in 40 CFR Part 60, Subpart Db in accordance with the applicable provisions of 40 CFR Part 60, Subpart A.

c) Operational Restrictions

(1) The maximum annual fuel oil usage for each emissions unit shall not exceed 6,285,300 gallons.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(1)]

(2) The quality of the number 2 distillate fuel oil burned in these emissions units 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 b)(1) above.

[Authority for term: OAC rule 3745-31-05(A)(3), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(A)(1)]

(3) The permittee shall burn only liquid (excluding residual oil) or gaseous fuels with potential SO2 emissions rates of 0.060 lb/MMbtu(26 ng/J) or less and does not use a post-combustion technology to reduce SO2 or PM emissions. The owner or operator must maintain fuel records of the sulfur content of the fuels burned, as described under 40 CFR 60.49b(r).

[Authority for term: OAC rule 3745-31-05(A)(3), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(A)(1)]

(4) The permittee shall operate low NOx burners and employ flue gas recirculation at all times these emissions units are in operation.

[Authority for term: OAC rule 3745-31-05(A)(3), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(A)(1)]

(5) The permittee shall operate and maintain predictive monitoring equipment to continuously predict and record the NOx emissions from this emissions unit when combusting natural gas and/or number 2 distillate fuel oil.

[Authority for term: OAC rule 3745-31-05(A)(3), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(A)(1)]

(6) The permittee shall burn only natural gas and/or number 2 distillate fuel oil in these emissions units.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

(1) For each shipment of oil received for burning in these emissions units, 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).) 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.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)]

(2) 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.

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

a. Alternative 1:

For each shipment of oil received for burning in these emissions units, 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 these emissions units 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 testfiring, 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).)

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)]

(3) For each day during which the permittee burns a fuel other than natural gas or number 2 distillate fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in these emissions units.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)]

(4) 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 distillate 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.
10^3 = Conversion of thousand Btu to mmBtu.

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

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

Where:
DI_o = Daily heat input rate from oil, mmBtu/day.
$V_{oil\text{-}rate}$ = 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.
10^6 = Conversion of Btu to mmBtu.

d. the rolling, 30-day average NOx emission rate, in pounds per mmBtu, when firing natural gas; and

e. the rolling, 30-day average NOx emission rate, in pounds per mmBtu, when firing number 2 distillate fuel oil.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)]

(5) The permittee shall collect and record the following information for the purpose of determining annual mass emissions for each emissions unit:

a. the amount of natural gas used (in million cubic feet);

b. the amount of number 2 distillate fuel oil used (in gallons); and

c. the total amount of mass annual emissions of each pollutant listed in b)(1) emitted from this emissions unit, in pounds or tons.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)]

(6) 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.

[Authority for term: OAC rule 3745-31-05(A)(3), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(C)]

(7) The Ohio EPA, Central Office shall approve the initial certification testing protocol, and shall review all initial certification testing data. Upon a satisfactory review of the initial certification testing data, Ohio EPA shall acknowledge that the NOx predictive emissions monitoring system meets the requirements of Performance Specification 16 by sending a Certification Letter. Once received, the letter/document of certification shall be maintained on-site and shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

Initial certification of B140, B141, B142, and B143 was granted in a letter dated January 25, 2010, by Ohio EPA, Central Office, Division of Air Pollution Control.

The predictive emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes all sensors, algorithms, and data recording/processing hardware and software.

[Authority for term: OAC rule 3745-31-05(A)(3), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(C)]

(8) The permittee shall install, operate, and maintain equipment to continuously predict and record NOx emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

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

a. predicted emissions of NOx in parts per million on an instantaneous (one-minute) basis;

b. predicted emissions of a diluents (O2 or CO2) in percent on an instantaneous (one-minute) basis;

c. predicted flow rates of the emissions stream, in dry standard cubic feet per minute (this is required only for NOx predictive emissions monitoring systems

that are being used to demonstrate compliance with a NOx pound-per-hour limit.);

d. emissions of NOx in all units of the applicable standard(s) in the appropriate averaging period;

e. results of quarterly relative accuracy audits;

f. results of daily sensor checks and a list of adjustments or repairs/replacements that are made;

g. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

h. hours of operation of the emissions unit, NOx predictive emissions monitoring system, and control equipment;

i. the date, time, and hours of operation of the emissions unit without the control equipment and/or the NOx predictive emissions monitoring system;

j. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the NOx predictive emissions monitoring system; as well as,

k. the reason (if known) and the corrective actions taken (if any) for each such event in i. and j.

[Authority for term: OAC rule 3745-31-05(A)(3), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(C)]

e) Reporting Requirements

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

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

(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 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 set to the Director (the Ohio EPA, Central District Office) within 45 days after the deviation occurs.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(3)(c)]

(3) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas and/or number 2 distillate fuel oil was burned in these emissions units. Each report shall be submitted within 30 days after the deviation occurs.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(3)(c)]

(4) Pursuant to OAC rule 3745-15-04 and ORC sections 3704.03(I) and 3704.031, the permittee shall submit reports (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 predictive 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 each emissions unit and the total operating time of the analyzer while each 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.

[Authority for term: OAC rule 3745-31-05(A)(3), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(A)(3)(c)]

(5) The permittee shall submit quarterly reports of the following information:

a. certifying that only very low sulfur oil meeting the definition in 40 CFR Part 60.41b was combusted in these emissions units during the preceding quarter;

b. if the certification in e)(5)a. is not submitted, then the permittee shall submit the following information along with the appropriate information contained within 40 CFR Part 60.49b(k):

i. the number of hourly averages available for outlet emissions rates and inlet emissions rates;

ii. the standard deviation of hourly averages for outlet emissions rates and inlet rates, as determined in 40 CFR Part 60, Subpart A, Method 19, section 7;

iii. the lower confidence limit for the mean outlet emission rate and upper confidence limit for the mean inlet emission rate, as calculated in 40 CFR Part 60, Subpart A, Method 19, section 7; and

iv. the ratio of the lower confidence limit for the mean outlet emission rate and the allowable emission rate, as calculated in 40 CFR Part 60, Subpart A, Method 19, section 7.

[Authority for term: OAC rule 3745-31-05(A)(3), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(A)(3)(c)]

(6) The permittee shall submit annual reports that specify the total particulate, SO2, VOC, NOx and CO emissions and natural gas and fuel oil usages for these emissions units 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 for this emissions unit in the annual Fee Emission Report.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(3)(c)]

(7) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its NOx predictive emissions monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of NOx predicted emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapters 3745-14 and 3745-23, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).

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

i. the facility name and address;

ii. the manufacturer, model number, and serial number of the NOx predictive emissions monitoring systems;

iii. a description of any change in the equipment that comprises the predictive emission monitoring system, including any change to the hardware, and/or changes to the software in the predictive algorithms;

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

v. the total NOx emissions for the calendar quarter (tons);

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

vii. the total operating time of the NOx predictive emissions monitoring system while the emissions unit was in operation;

viii. results and dates of quarterly relative accuracy audits;

ix. unless previously submitted, the results of any relative accuracy test audit showing the NOx predictive emissions monitor out-of-control and the compliant results following any corrective actions;

x. the date, time, and duration of any/each malfunction** of the NOx predictive monitoring system, emissions unit, and/or control equipment;

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

xii. the reason (if known) and the corrective actions taken (if any) for each event in x. and xi.

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

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

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

[Authority for term: OAC rule 3745-31-05(A)(3), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(A)(3)(c)]

f) Testing Requirements

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

a. The permittee performed an initial certification test for each predictive emissions monitoring system in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 16 in November 2009. Annual recertification testing shall be performed in accordance with and at the frequencies required by 40 CFR Part 60, Appendix B, Performance Specification 16 and ORC section 3704.03(I).

Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification of the NOx predictive emissions monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specification 16 and ORC section 3704.03(I).

Initial certification of the B140, B141, B142, and B143 PEMs was granted in a letter dated January 25, 2010, by Ohio EPA, Central Office, Division of Air Pollution Control.

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 60.13 and 40 CFR Part 60, Appendix B]

b. Within 60 days after achieving the maximum production rate at which these emissions units 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 emission limitation and NOx emission limitation while firing number 2 distillate fuel oil. The permittee has completed this test.

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 units are operating at or near its maximum capacity, while firing number 2 distillate fuel oil.

The NOx performance test shall be conducted using the NOx 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 distillate fuel oil.

c. 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).

d. 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.

e. 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 units and the testing procedures provide a valid characterization of the emissions from the emissions units and/or the performance of the control equipment.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) Compliance with the emission limitations in b)(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation(s):

Nitrogen oxide (NOx) 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 distillate fuel oil.

Applicable Compliance Method(s):

Following the initial performance test, when firing number 2 distillate fuel oil, compliance with the emissions limitations 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 NOx emission data for the preceding 30 steam generating unit operating days.

When firing natural gas, compliance with the emissions limitations 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 NOx emission data for the preceding 30 steam generating unit operating days.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation(s):

Nitrogen oxide (NOx) emissions shall not exceed 59.15 tons per year when firing natural gas and/or number 2 distillate fuel oil.

Applicable Compliance Method(s):

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

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

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

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

c. Emission Limitation(s):

Carbon monoxide (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 distillate fuel oil.

Applicable Compliance Method(s):

Compliance shall 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 distillate fuel oil (Nebraska Boiler Company, 08/28/2002).

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

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

d. Emission Limitation(s):

Carbon monoxide (CO) emissions shall not exceed 52.74 tons per year when firing natural gas and/or number 2 distillate fuel oil.

Applicable Compliance Method(s):

Compliance shall be demonstrated by summing the annual natural gas and number 2 distillate 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 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 distillate fuel oil emissions shall be determined by multiplying annual number 2 distillate 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 CO in number 2 distillate fuel oil combustion (0.08 lb/mmBtu) and dividing by 1,000,000 BTU/mmBtu and again by 2,000 lbs/ton.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

e. Emission Limitation(s):

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 distillate fuel oil.

Applicable Compliance Method(s):

Compliance shall 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 distillate fuel oil (Nebraska Boiler Company, 08/28/2002).

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

f. Emission Limitation(s):

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

Applicable Compliance Method(s):

Compliance shall be demonstrated by summing the annual natural gas and number 2 distillate 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 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 distillate fuel oil emissions shall be determined by multiplying annual number 2 distillate 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 PE in number 2 distillate fuel oil combustion (0.02 lb/mmBtu) and dividing by 1,000,000 BTU/mmBtu and again by 2,000 lbs/ton.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

g. Emission Limitation(s):

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 distillate fuel oil.

Applicable Compliance Method(s):

Compliance shall 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 distillate fuel oil (Nebraska Boiler Company, 08/28/2002).

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.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

h. Emission Limitation(s):

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

Applicable Compliance Method(s):

Compliance shall be demonstrated by summing the annual natural gas and number 2 distillate 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 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 distillate fuel oil emissions shall be determined by multiplying annual number 2 distillate 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 VOC in number 2 distillate fuel oil combustion (0.004 lb/mmBtu) and dividing by 1,000,000 BTU/mmBtu and again by 2,000 lbs/ton.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

i. Emission Limitation(s):

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 distillate fuel oil.

Applicable Compliance Method(s):

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 distillate fuel oil.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

j. Emission Limitation(s):

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

Applicable Compliance Method(s):

Compliance shall be demonstrated by summing the annual natural gas and number 2 distillate 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.

The annual number 2 distillate fuel oil emissions shall be determined by multiplying annual number 2 distillate 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 distillate fuel oil combustion (0.052 lb/mmBtu) and dividing by 1,000,000 BTU/mmBtu and again by 2,000 lbs/ton.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

k. Emission Limitation(s):

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(s):

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).

[Authority for term: OAC rule 3745-17-07(A), OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

l. Emission Limitation(s):

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 distillate fuel oil.

Applicable Compliance Method(s):

Compliance may be determined by data collected and recorded for the COM and, if required, by visible emissions observations.

[Authority for term: OAC rule 3745-31-05(A)(3), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

4. Emissions Unit Group -C.A.R. Lab: B138,B139

EU ID	Operations, Property and/or Equipment Description
B138	300 HP Engine Dynamometer Lab 1
B139	190 HP Engine Dynamometer Lab 2

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) [Established by PTI 01-08695, issued final 03/25/03]	Volatile organic compound (VOC) emissions shall not exceed 10.66 pounds per day (lbs/day) and 0.69 tons per year (tpy). Carbon monoxide (CO) emissions shall not exceed 101.52 lbs/day and 6.60 tpy. Nitrogen oxide (NOx) emissions shall not exceed 7.34 lbs/day and 0.48 tpy. Sulfur dioxide (SO2) emissions shall not exceed 0.38 lb/day and 0.02 tpy. Particulate emissions (PE) shall not exceed 0.47 lb/day and 0.03 tpy. 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(D).
b.	OAC rule 3745-31-05(D)	CO emissions shall not exceed 6.60 tons per year, based on a rolling 12-month summation of the monthly CO emissions.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		See c)(1) – (2)
c.	OAC rule 3745-17-07(A)	See b)(2)a.
d.	OAC rule 3745-17-11(B)(1)	See b)(2)b.
e.	OAC rule 3745-18-06	See b)(2)c.

(2) Additional Terms and Conditions

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.

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.

c. The emissions unit is exempt from the requirements of OAC rule 3745-18-06 pursuant to OAC rule 3745-18-06(B).

c) Operational Restrictions

(1) The maximum daily fuel usage for this emissions unit shall not exceed 72 gallons of gasoline per day.

[Authority for term: OAC rule 3745-31-05(A)(3), OAC rule 3745-31-05(D) and OAC rule 3745-77-07(A)(1)]

(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.

[Authority for term: OAC rule 3745-31-05(A)(3), OAC rule 3745-31-05(D) and OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping 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.

[Authority for term: OAC rule 3745-31-05(A)(3), OAC rule 3745-31-05(D) and OAC rule 3745-77-07(C)]

(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 an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of 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.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)]

e) Reporting Requirements

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

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

(2) The permittee shall submit quarterly deviation (excursion) reports that include the following information:

a. exceedances of the daily and rolling, 12-month fuel usage;

b. exceedances of the rolling, 12-month summation of carbon monoxide emission limitation;

c. identify all days during which any visible particulate emissions were observed from the vent serving this emissions unit; and

d. any corrective actions taken to eliminate the visible particulate emissions.

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

[Authority for term: OAC rule 3745-31-05(A)(3), OAC rule 3745-31-05(D) and OAC rule 3745-77-07(A)(3)(c)]

(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 15th of each year. The reporting requirement may be satisfied by including and identifying the specific emission data from this emissions unit in the annual Fee Emission Report.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(3)(c)]

f) Testing Requirements

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

a. Emission Limitation(s):

VOC emissions shall not exceed 10.66 lbs/day and 0.69 tpy

Applicable Compliance Method(s):

Compliance with the short term limitation shall be demonstrated by multiplying the emission factor of 148.00 pounds of VOC 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 VOC 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.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation(s):

CO emissions shall not exceed 101.52 lbs/day and 6.60 tpy

Applicable Compliance Method(s):

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 conducted 06/05/02) by the maximum daily gasoline usage of 72 gallons per day. Compliance with the long term limitation shall be demonstrated by multiplying he emission factor of 1,410 pounds of CO per 1,000 gallons of gasoline burned (emissions test conducted 06/05/02) by the maximum annual gasoline usage of 9,360 gallons per year and dividing by 2,000 pounds per ton.

[Authority for term: OAC rule 3745-31-05(A)(3), OAC rule 3745-31-05(D) and OAC rule 3745-77-07(C)(1)]

c. Emission Limitation(s);

NOx emission shall not exceed 7.34 lbs/day and 0.48 tpy

Applicable Compliance Method(s):

Compliance with the short term limitation shall be demonstrated by multiplying the emission factor of 102.00 pounds of NOx 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 NOx 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.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

d. Emission Limitation(s):

SO2 emissions shall not exceed 0.38 lb/day and 0.02 tpy

Applicable Compliance Method(s):

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.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

e. Emission Limitation(s):

PE shall not exceed 0.47 lb/day and 0.03 tpy

Applicable Compliance Method(s):

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.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

f. Emission Limitation(s):

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

Applicable Compliance Method(s):

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

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

5. B270, New Boiler 8

Operations, Property and/or Equipment Description:

206 MMBtu/hr natural gas/#2 oil fired boiler with low-NOx burner and flue gas recirculation.

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

(1) b)(1)l., d)(9) through d)(12), and e)(5)

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	The requirements of this rule are equivalent to the requirements of 40 CFR Part 63, Subpart JJJJJJ for particulate emissions (PE) As established by OAC rule 3745-31-05(D), VOC emissions shall not exceed 3.09 tons per rolling, 12-month period. See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)(a)(iii), as effective 12/01/06	See b)(2)b.i.
c.	ORC 3704.03(T) and OAC rule 3745-31-05(A)(3)	Carbon monoxide (CO) emissions shall not exceed 0.0824 lb per million British thermal units (lb/MMBtu). Sulfur dioxide (SO_2) emissions shall not exceed 0.0510 lb/MMBtu. The nitrogen oxides (NO_X) emissions limitation established by this rule is equivalent to the NO_X emissions limitation established pursuant to 40 CFR Part 60, Subpart Db. See b)(2)c.
d.	OAC rule 3745-31-05(D) [Synthetic minor to avoid Non-	NO_X emissions shall not exceed 20.0 tons per rolling, 12-month period;

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	Attainment New Source Review (NANSR)]	CO emissions shall not exceed 47.09 tons per rolling, 12-month period; VOC emissions shall not exceed 3.09 tons per rolling, 12-month period; PE shall not exceed 2.86 tons per rolling, 12-month period; PM_{10} emissions shall not exceed 4.29 tons per rolling, 12-month period; $PM_{2.5}$ emissions shall not exceed 4.29 tons per rolling, 12-month period; and SO_2 emissions shall not exceed 10.20 tons per rolling, 12-month period. See c)(1) through c)(5)
e.	OAC rule 3745-17-10(B)(1)	The PE limitations established by this rule are less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3), as effective 11/30/01. See b)(2)b.ii.
f.	OAC rule 3745-17-07(A)	Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
g.	OAC rule 3745-18-06(A)	Fuel burning equipment is exempt from paragraphs (D), of OAC rule 3745-18-06, during any calendar day in which natural gas is the only fuel burned.
h.	OAC rule 3745-18-31(A)(2)	The SO_2 emissions limitation established by this rule is less stringent than the SO_2 emissions limitation established pursuant to ORC 3704.03(T). See b)(2)d.
i.	OAC rule 3745-110-03	This emissions unit is exempt from the NO_X emissions limitations established in this rule pursuant to OAC rule 3745-110-02(A)(2)(b).
j.	40 CFR Part 60, Subpart Db	Visible PE shall not exceed 20% opacity when firing number 2 distillate fuel oil, as a 6-minute average, except for one 6-

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		minute period per hour of not more than 27% opacity. NO_X emissions shall not exceed 0.10 lb/MMBtu, as averaged per rolling, 30-day period. This emissions unit is exempt from the applicable PM emissions limitation (0.030 lb/MMBtu) established by this rule pursuant to 40 CFR 60.43b(h)(5). This emissions unit is exempt from the applicable SO_2 emissions limitation (0.20 lb/MMBtu) established by this rule pursuant to 40 CFR 60.42b(k)(2). This emissions unit is exempt from the requirements to install and operate a continuous opacity monitor (COM) pursuant to 40 CFR 60.48b(j)(2). See b)(2)e.
k.	40 CFR Part 60, Subpart A	See b)(2)f.
l.	OAC 3704.03(F)	See d)(9) through d)(12) and e)(5)

(2) Additional Terms and Conditions

a. The permittee has satisfied the BAT requirements pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for emissions units that have the potential to emit less than ten tons per year for pollutants to which National Ambient Air Quality Standards (NAAQS) apply. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the SIP revision occurs and U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. When U.S. EPA approves the December 1, 2006, version of OAC rule 3745-31-05, these emissions limitations/control measures will no longer apply.

b. The following rule paragraphs will apply when U.S. EPA approves the December 1, 2006, version of OAC rule 3745-31-05 as part of the SIP:

i. The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE, PM_{10}, and VOC emissions for this emissions unit because the potential to emit for each pollutant, taking into consideration the federally enforceable limitations established pursuant to OAC rule 3745-31-05(D), is less than ten tons per year;

ii. PE shall not exceed 0.020 lb/MMBtu;

c. The lb/MMBtu emissions limitations for CO and SO_2 were established to reflect the potential to emit for this emissions unit [For SO_2, the limitation was established taking into consideration the sulfur content limitation established pursuant to OAC rule 3745-31-05(D)]. It is not necessary to establish monitoring/recordkeeping or reporting requirements to ensure compliance with the CO limitation. The monitoring and/or recordkeeping requirements of this permit, which are associated with the fuel sulfur analysis requirements for the purpose of demonstrating compliance with the federally enforceable SO_2 emissions limitation, are sufficient to demonstrate compliance with the SO_2 emissions limitation established pursuant to ORC 3704.03(T).

d. Pursuant to OAC rule 3745-18-06(A), this emissions unit is exempt from the SO_2 emissions limitations established by this rule during any calendar day in which natural gas is the only fuel burned.

e. The exemptions identified in 40 CFR 60.42b(k)(2), 60.43b(h)(5), and 60.48b(j)(2) require that the emissions unit use only 'very low sulfur oil' as defined in the subpart and provides several options to demonstrate compliance with the exemptions, including the option to maintain fuel records in accordance with 40 CFR 60.49b(r). The monitoring and/or recordkeeping requirements of this permit, which are associated with the fuel sulfur analysis requirements for the purpose of demonstrating compliance with the federally enforceable SO_2 emissions limitation, are sufficient to demonstrate compliance with the 40 CFR 60.49b(r) exemption requirements.

f. The permittee shall comply with the applicable requirements identified in 40 CFR Part 60, Subpart Db in accordance with the applicable provisions of 40 CFR Part 60, Subpart A.

c) Operational Restrictions

(1) The permittee shall install and operate low NO_X burners and employ flue gas recirculation at all times when this emissions unit is in operation.

[Authority for term: OAC rule 3745-31-05(D), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(A)(1)]

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

[Authority for term:OAC rule 3745-31-05(D) and OAC rule 3745-77-07(A)(1)]

(3) The permittee shall operate and maintain predictive emissions monitoring (PEM) equipment to continuously predict and record the NO_X emissions from this emissions unit.

[Authority for term: OAC rule 3745-31-05(D), 40 CFR Part 60, Subpart Dband OAC rule 3745-77-07(A)(1)]

(4) The quality of the number 2 distillate fuel oil burned in this emissions unit shall meet a sulfur content which is equal to or less than 0.05 weight percent sulfur and is sufficient to comply with the allowable SO_2 emissions limitations established in accordance with OAC rule 3745-31-05(A)(3) and 3745-31-05(D).

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(A)(1)]

(5) The maximum natural gas and number 2 distillate fuel oil usage shall be limited by the following formulas for each rolling 12-month period:

20.0 tons NO_X emissions $\geq$ Total NO_X emissions from natural gas usage + Total NO_X emissions from number 2 distillate fuel oil usage;

47.09 tons CO emissions $\geq$ Total CO emissions from natural gas usage + Total CO emissions from number 2 distillate fuel oil usage;

3.09 tons VOC emissions $\geq$ Total VOC emissions from natural gas usage + Total VOC emissions from number 2 distillate fuel oil usage;

2.86 tons PE emissions $\geq$ Total PE emissions from natural gas usage + Total PE emissions from number 2 distillate fuel oil usage;

4.29 tons PM_{10} emissions$\geq$ Total PM_{10} emissions from natural gas usage + Total PM_{10} emissions from number 2 distillate fuel oil usage;

4.29 tons $PM_{2.5}$ emissions $\geq$ Total $PM_{2.5}$ emissions from natural gas usage + Total $PM_{2.5}$ emissions from number 2 distillate fuel oil usage; and

10.20 tons SO_2 emissions $\geq$ Total SO_2 emissions from natural gas usage + Total SO_2 from number 2 distillate fuel oil usage.

The total emissions of each pollutant from natural gas usage and from number 2 distillate fuel oil usage shall be determined in accordance with d(1).

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(A)(1)]

(6) The permittee shall comply with the applicable operational restrictions necessary to demonstrate compliance with 40 CFR Part 60, Subpart Db and Subpart A.

[Authority for term: 40 CFR Part 63, Subpart Db and OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall collect and record the following information each month for this emissions unit:

a. the total natural gas usage, in million cubic feet;

b. the total number 2 distillate fuel oil usage, in gallons;

c. the total NO_X emissions, in tons [determined in accordance with f)(1)d.];

d. the rolling, 12-month NO_X emissions, in tons;

e. the total CO emissions, in tons [determined in accordance with f)(1)d.];

f. the rolling, 12-month CO emissions, in tons;

g. the total VOC emissions, in tons [determined in accordance with f)(1)d.];

h. the rolling, 12-month VOC emissions, in tons;

i. the total PE, in tons [determined in accordance with f)(1)d.];

j. the rolling, 12-month PE, in tons;

k. the total PM_{10} emissions, in tons [determined in accordance with f)(1)d.];

l. the rolling, 12-month PM_{10} emissions, in tons;

m. the total $PM_{2.5}$ emissions, in tons [determined in accordance with f)(1)d.];

n. the rolling, 12-month $PM_{2.5}$ emissions, in tons;

o. the total SO_2 emissions, in tons[determined in accordance with f)(1)d.]; and

p. the rolling, 12-month SO_2 emissions, in tons.

The rolling, 12-month emissions of each pollutant are determined by adding the total emissions of each pollutant for each month to the total emissions of each pollutant from the preceding 11 months.

[Authority for term: 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(C)]

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

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(C)]

(3) For each shipment of oil received for burning in these emissions units, 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).) 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.

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(C)]

(4) 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.

The permittee shall maintain records of the oil burned in each 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 these emissions units, 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:

For each emissions unit, the permittee shall collect a representative grab sample of oil that is burned in the emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving the 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 the emissions unit. A representative grab sample of oil does not need to be collected on days when the 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).

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(C)]

(5) The permittee shall install, operate, and maintain equipment to continuously predict and record NO_X emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

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

a. predicted emissions of NO_X in parts per million on an instantaneous (one-minute) basis;

b. predicted emissions of a diluents (O2 or CO2) in percent on an instantaneous (one-minute) basis;

c. predicted flow rates of the emissions stream, in dry standard cubic feet per minute (this is required only for NO_X predictive emissions monitoring systems that are being used to demonstrate compliance with a NO_X pound-per-hour limit.);

d. emissions of NO_X in all units of the applicable standard(s) in the appropriate averaging period;

e. results of quarterly relative accuracy audits;

f. results of daily sensor checks and a list of adjustments or repairs/replacements that are made;

g. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

h. hours of operation of the emissions unit, NO_X predictive emissions monitoring system, and control equipment;

i. the date, time, and hours of operation of the emissions unit without the control equipment and/or the NO_X predictive emissions monitoring system;

j. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the NO_X predictive emissions monitoring system; as well as,

k. the reason (if known) and the corrective actions taken (if any) for each such event in i. and j.

[Authority for term: OAC rule 3745-31-05(D), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(C)]

(6) Each continuous NO_X predictive emissions monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 16. At least 45 days before commencing certification testing of the NO_X predictive emissions monitoring system(s), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of NO_X predictive emissions continuous monitor(s), in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix B, Performance Specification 16. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_X predictive emissions monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct daily sensor evaluations; to conduct quarterly relative accuracy audits; and to conduct yearly relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60, Appendix B, Performance Specification 16.

The predictive emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes all sensors, algorithms, and data recording/processing hardware and software. Any change to algorithms used to predict NO_X emissions shall require new certification testing of the NO_X predictive emissions monitoring systems.

[Authority for term: 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(C)]

(7) The Ohio EPA, Central Office shall review the initial certification testing protocol and all initial certification testing data. If the initial testing protocol and certification testing data are determined to be sufficient, Ohio EPA shall acknowledge that the NO_X predictive emissions monitoring system meets the requirements of Performance Specification 16 by sending a Certification Letter. Once received, the letter/document of certification shall be maintained on-site and shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

[Authority for term: 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(C)]

(8) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack(s) 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 emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

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

[Authority for term: OAC rule 3745-17-07(A), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(C)]

(9) The PTI application for this/these emissions unit(s), B270, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or

ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "24" hours per day and "7" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

TLV/10 x 8/24 x 5/7 = 4 TLV/168 = MAGLC

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

Toxic Contaminant: Ammonia
TLV (mg/m3): 17.413
Maximum Hourly Emission Rate (lbs/hr): 1.19
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.35
MAGLC (ug/m3): 414.59

Toxic Contaminant: Hexane
TLV (mg/m3): 176.237
Maximum Hourly Emission Rate (lbs/hr): 0.36
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.10
MAGLC (ug/m3): 4196.12

The permittee, has demonstrated that emissions of Ammonia and Hexane, from emissions unit B270, are calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC), each; any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F).

[Authority for term: OAC rule 3745-77-07(C) and ORC 3704.03(F)]

(10) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and

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

If the permittee determines that the “Toxic Air Contaminant Statute” will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a “modification”, the permittee shall apply for and obtain a final PTI prior to the change. The Director may consider any significant departure from the operations of the

emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level

concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[Authority for term: OAC rule 3745-77-07(C) and ORC 3704.03(F)]

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

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

b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);

c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[Authority for term: OAC rule 3745-77-07(C) and ORC 3704.03(F)]

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

[Authority for terms: OAC rule 3745-77-07(C) and ORC 3704.03(F)]

(13) The permittee shall comply with the applicable monitoring and/or recordkeeping requirements necessary to demonstrate compliance with 40 CFR Part 60, Subpart Db and Subpart A.

[Authority for term: OAC rule 3745-77-07(C) and 40 CFR Part 60, Subpart Db]

e) Reporting Requirements

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

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

(2) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. each period of time, (start date and time to end date and time), when the emissions unit burned a fuel other than natural gas and/or number 2 distillate fuel oil;

ii. each period of time, (start date and time to end date and time), when the number 2 distillate fuel oil burned in this emissions unit exceeded a sulfur content of 0.05 weight percent sulfur;

iii. each rolling, 12-month period when NO_X emissions exceeded 20.0 tons;

iv. each rolling, 12-month period when CO emissions exceeded 47.09 tons;

v. each rolling, 12-month period when VOC emissions exceeded 3.09 tons;

vi. each rolling, 12-month period when PE exceeded 2.86 tons;

vii. each rolling, 12-month period when PM_{10} emissions exceeded 4.29 tons;

viii. each rolling, 12-month period when $PM_{2.5}$ emissions exceeded 4.29 tons;

ix. each rolling, 12-month period when SO_2 emissions exceeded 10.20 tons;

b. the probable cause of each deviation (excursion);

c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and

d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

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

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(A)(3)(c)]

(3) Pursuant to OAC rule 3745-15-04 and ORC sections 3704.03(I) and 3704.031, the permittee shall submit Excess Emissions Reports (EER) 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 (lb/MMBtu).

The reports shall also identify any predictive 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 each emissions unit and the total operating time of the analyzer while each emissions unit was on line also shall be included in the quarterly report.

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

[Authority for term: 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(A)(3)(c)]

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

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of NO_X predicted emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Rule 3745-14, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).

b. These quarterly reports shall include the following:

i. the facility name and address;

ii. the manufacturer, model number, and serial number of the NO_X predictive emissions monitoring systems;

iii. a description of any change in the equipment that comprises the predictive emission monitoring system, including any change to the hardware, and/or changes to the software in the predictive algorithms;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified in e)(3);

v. the total NO_X emissions for the calendar quarter (tons);

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

vii. the total operating time of the NO_X predictive emissions monitoring system while the emissions unit was in operation;

viii. results and dates of quarterly relative accuracy audits;

ix. unless previously submitted, the results of any relative accuracy test audit showing the NO_X predictive emissions monitor out-of-control and the compliant results following any corrective actions;

x. the date, time, and duration of any/each malfunction** of the NO_X predictive monitoring system, emissions unit, and/or control equipment;

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

xii. the reason (if known) and the corrective actions taken (if any) for each event in x. and xi.

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

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

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

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

[Authority for term: 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(A)(3)(c)]

(5) The permittee shall submit annual reports that include any changes to any parameter or value used in the dispersion model used to demonstrate compliance with the "Toxic Air Contaminate Statute", ORC 3704.03(F), through the predicted 1 hour maximum concentration. The report should include:

a. the original model input;

b. the updated model input;

c. the reason for the change(s) to the input parameter(s); and

d. a summary of the results of the updated modeling, including the input changes; and

e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

The annual report shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 of each year and shall cover the previous 12-month period. This reporting requirement may be satisfied by including the required information in a semiannual report (due by January 31 of each year) or by including the required information in a Title V Annual Compliance Certification, if applicable.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and ORC 3704.03(F)]

(6) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

[Authority for term: OAC rule 3745-17-07(A), 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(A)(3)(c)]

(7) The permittee shall comply with the applicable reporting requirements necessary to demonstrate compliance with 40 CFR Part 60, Subpart Db and Subpart A.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and 40 CFR Part 60, Subpart Db]

f) Testing Requirements

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

a. <u>Emissions Limitation:</u>

PE shall not exceed 0.020 lb/MMBtu (as applicable after U.S. EPA approving the December 1, 2006, version of OAC rule 3745-31-05 as part of the SIP).

Applicable Compliance Method:

Compliance with the PE limitation is demonstrated through the use of emissions factors published in AP-42, Volume I, Fifth Edition, Section 1.4, "Natural Gas Combustion", Table 1.4-2 (0.00186 lb/MMBtu) and Section 1.3, "Fuel Oil Combustion", Table 1.3-1 (0.0143 lb/MMBtu), respectively.

If required, compliance with these PE limitations shall be demonstrated through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

[Authority for term: OAC rule 3745-31-05(A)(3)(ii), as effective 12/01/06 and OAC rule 3745-77-07(C)(1)]

b. Emissions Limitations:

CO emissions shall not exceed 0.0824 lb/MMBtu; and
SO_2 emissions shall not exceed 0.0510 lb/MMBtu.

Applicable Compliance Method:

Compliance with these limitations is demonstrated through the use of emissions factors published in AP-42, Volume I, Fifth Edition, Section 1.4, "Natural Gas Combustion", Table 1.4-1 (0.0824 lb CO/MMBtu) and Section 1.3, "Fuel Oil Combustion", Table 1.3-1 (0.0510 lb SO_2/MMBtu). For CO emissions, natural gas is considered the worst-case fuel. For SO_2 emissions, number 2 distillate fuel oil is considered the worst-case fuel. The SO_2 emissions factor was calculated using a sulfur content of 0.05 weight percent sulfur for number 2 distillate fuel oil.

If required, compliance with these limitations shall be demonstrated through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4, Method 10 (CO) and Method 6(SO_2).

[Authority for term: ORC 3704.03(T), OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

c. Emissions Limitation:

NO_X emissions shall not exceed 0.10 lb/MMBtu, as averaged per rolling, 30-day period.

Applicable Compliance Method:

Compliance shall be determined in accordance with the applicable requirements identified in 40 CFR Part 60, Subpart Db and Subpart A. Compliance shall be demonstrated on a continuous basis through the use of a 30-day, rolling average emissions rate. A new 30-day average emissions rate is calculated each steam generating unit operating day as the average of all hourly NO_X emissions data for the preceding 30 steam generating unit operating days.

[Authority for term: 40 CFR Part 60, Subpart Db and OAC rule 3745-77-07(C)(1)]

d. Emissions Limitations:

NO_X emissions shall not exceed 20.0 tons per rolling, 12-month period;
CO emissions shall not exceed 47.09 tons per rolling, 12-month period;
VOC emissions shall not exceed 3.09 tons per rolling, 12-month period;
PE shall not exceed 2.86 tons per rolling, 12-month period;
PM_{10} emissions shall not exceed 4.29 tons per rolling, 12-month period;
$PM_{2.5}$ emissions shall not exceed 4.29 tons per rolling, 12-month period; and
SO_2 emissions shall not exceed 10.20 tons per rolling, 12-month period.

Applicable Compliance Method(s):

The following calculation shall be used to demonstrate compliance with the rolling, 12-month emissions limitations:

Total $MI = MI_g + MI_o$

where,
MI = monthly heat input for each month in MMBtu;
MI_g = monthly heat input from pipeline natural gas in MMBtu; and
MI_o = monthly heat input from number 2 distillate fuel oil inn MMBtu.

Monthly heat input from natural gas is calculated as follows:

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

where,
MI_g = monthly heat input from pipeline natural gas in MMBtu;
Q_g = metered flow rate of gaseous fuel combusted during unit operation in thousand standard cubic feet per month;
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; and
10^3 = conversion of thousand Btu to MMBtu.

Monthly heat input from number 2 distillate fuel oil is calculated as follows:

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

where,
MI_o = monthly heat input from number 2 distillate fuel oil inn MMBtu;
$V_{oil\text{-}rate}$ = volume rate of number 2 distillate fuel oil consumed per month in gallons
D_{oil} = density of number 2 distillate fuel oil 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; and
10^3 = conversion of thousand Btu to MMBtu.

Compliance with the rolling, 12-month NO_X emissions limitation shall be demonstrated through the use of the PEMs data and in accordance with the monitoring and/or recordkeeping requirements identified in d)(1). Pursuant to 40 CFR Part 60, Subpart Db, the permittee is required to continuously monitor and record the predicted NO_X emissions from this emissions unit as a 30-day, rolling average. The PEMs data that is required to demonstrate compliance with Subpart Db is sufficient to demonstrate compliance with the rolling, 12-month NO_X emissions limitation provided it can be collected and recorded on a calendar month basis.

For NO_X emissions, the total monthly heat input (Total MI) is multiplied by the actual predicted average NO_X emissions rate (in lb/MMBtu) for each calendar month and then converted to tons by dividing by 2,000.

For CO emissions, the total monthly heat input for each fuel (MI_g and MI_o) is multiplied by the respective emissions factor for each fuel (0.0824 lb/MMBtu for natural gas and 0.0357 lb/MMBtu for number 2 distillate fuel oil) and then converted to tons by dividing by 2,000.

For VOC emissions, the total monthly heat input for each fuel (MI_g and MI_o) is multiplied by the respective emissions factor for each fuel (0.0054 lb/MMBtu for natural gas and 0.0024 lb/MMBtu for number 2 distillate fuel oil) and then converted to tons by dividing by 2,000.

For PE, the total monthly heat input for each fuel (MI_g and MI_o) is multiplied by the respective emissions factor for each fuel (0.00186 lb/MMBtu for natural gas and 0.0143 lb/MMBtu for number 2 distillate fuel oil) and then converted to tons by dividing by 2,000.

For PM_{10} emissions, the total monthly heat input for each fuel (MI_g and MI_o) is multiplied by the respective emissions factor for each fuel (0.0075 lb/MMBtu for natural gas and 0.0170 lb/MMBtu for number 2 distillate fuel oil) and then converted to tons by dividing by 2,000.

For $PM_{2.5}$ emissions, the total monthly heat input for each fuel (MI_g and MI_o) is multiplied by the respective emissions factor for each fuel (0.0075 lb/MMBtu for natural gas and 0.0152 lb/MMBtu for number 2 distillate fuel oil) and then converted to tons by dividing by 2,000.

The rolling, 12-month emissions of each pollutant are determined by adding the total emissions of each pollutant for each month to the total emissions of each pollutant from the preceding 11 months.

For SO_2 emissions, the total monthly heat input for each fuel (MI_g and MI_o) is multiplied by the respective emissions factor for each fuel (0.0006 lb/MMBtu for

natural gas and 0.0510 lb/MMBtu for number 2 distillate fuel oil) and then converted to tons by dividing by 2,000. (Note that the SO_2 emissions factor for number 2 distillate fuel oil is dependent upon the sulfur content of the number 2 distillate fuel oil. The permittee may use the permit allowable sulfur content of 0.05 weight percent to calculate a conservative value of SO_2 emissions from number 2 distillate fuel oil provided the sulfur analysis records indicate that the permit allowable sulfur content has not been exceeded. Alternatively, the permittee may determine the monthly SO_2 emissions from number 2 distillate fuel oil by calculating the SO_2 emissions factor using the actual average monthly sulfur content of the number 2 distillate fuel oil received.)

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(C)(1)]

e. Emissions Limitation:

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

Applicable Compliance Method:

If required, compliance with the visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.

[Authority for term: OAC rule 3745-17-07(A) and OAC rule 3745-77-07(C)(1)]

f. Emissions Limitation:

Visible PE shall not exceed 20% opacity when firing number 2 distillate fuel oil, as a 6-minute average, except for one 6-minute period per hour of not more than 27% opacity.

Applicable Compliance Method:

Compliance shall be determined in accordance with the applicable requirements identified in 40 CFR Part 60, Subpart Db and Subpart A.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 40 CFR Part 60, Subpart Db]

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

a. The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of the emissions unit.

b. The emission testing shall be conducted to demonstrate compliance with the following applicable limitations established pursuant to 40 CFR Part 60, Subpart Db:

i. 0.10 lb NO_X/MMBTU; and

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

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

i. compliance with the NO_X emissions limitation shall be demonstrated in accordance with the applicable test methods and procedures identified in 40 CFR Part 60.44b, 60.46b, 60.48b, 60.49b, and 60.8; and

ii. compliance with the opacity limitation shall be demonstrated in accordance with Method 9 of 40 CFR Part 60, Appendix A and the applicable test methods and procedures identified in 40 CFR Part 60.43b, 60.46b and 60.11.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

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

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

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

[Authority for term: OAC rule 3745-77-07(C)(1)]

(3) The permittee shall conduct, or have conducted, an initial certification test for each PEM system in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 16. Annual recertification testing shall be performed in accordance with and at the frequencies required by 40 CFR Part 60, Appendix B, Performance Specification 16 and ORC 3704.03(I).

[Authority for term: OAC rule 3745-77-07(C)(1)]

(4) Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Pursuant to OAC rule 3745-15-04, two copies of the test results shall be submitted to Ohio EPA (one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office) within 30 days after the test is completed.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(5) Certification of the NO_X predictive emissions monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specification 16 and ORC section 3704.03(I).

[Authority for term: OAC rule 3745-77-07(C)(1)]

(6) The permittee shall comply with the applicable testing requirements necessary to demonstrate compliance with 40 CFR Part 60, Subpart Db and Subpart A.

[Authority for term: OAC rule 3745-77-077(C)(1) and 40 CFR Part 60, Subpart Db]

g) Miscellaneous Requirements

(1) None.

6. Emissions Unit Group -Printing Presses: K001,K002

EU ID	Operations, Property and/or Equipment Description
K001	5-color Heidelberg Speedmaster press (lithographic printer)
K002	6-color Heidelberg Speedmaster press (lithographic)

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) [Established by PTI P0115060, issued final 08/28/13]	Volatile organic compound (VOC) emissions shall not exceed 40 pounds per day (lbs/day) and 7.31 tons per year (tpy).

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

(1) The VOC content of the ink shall not exceed 5%, by weight.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(1)]

(2) The VOC content of the fountain solution shall not exceed 2.8 pounds per gallon (lbs/gal).

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(1)]

(3) The VOC content of the blanket wash components shall not exceed 6.96 lbs/gal.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(1)]

(4) The VOC content of the isopropyl alcohol (IPA) shall not exceed 6.6 lbs/gal.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain the following information on a daily basis for K001 and K002:

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 VOC content of each coating, ink and cleanup material, in pound per gallon;

d. the total VOC 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; and

e. the total number of hours the emissions unit was in operation.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)]

(2) The permittee shall maintain records of the annual VOC emissions rate, for K001 and K002, calculated as the sum of the daily VOC emission rates from Section d)(1)d. for the calendar year.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)]

e) Reporting Requirements

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

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

(2) The permittee shall submit quarterly deviation (excursion) reports that include the following information:

a. an identification for each day during which the VOC emissions from the coatings, inks and cleanup materials exceeded 40 pounds per day; and

b. an identification of any exceedance of the VOC content limitations specified in Sections c)(1) – (4).

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

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(3)(c)]

(3) The permittee shall also submit annual reports that specify the total VOC emissions for this emissions unit for the previous calendar year. These reports shall be submitted by January 30 of each year.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(3)(c)]

f) Testing Requirements

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

a. Emission Limitation(s):

VOC emissions shall not exceed 40 lbs/day

Applicable Compliance Method(s):

The recordkeeping requirements in Section d)(1)d. of this permit may be used to determine compliance with the emission limitation.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation(s):

VOC emissions shall not exceed 7.31 tpy

Applicable Compliance Method(s):

The recordkeeping requirements in Section d)(2) of this permit may be used to determine compliance with the emission limitation.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

c. Emission Limitation(s):

VOC content of the ink shall not exceed 5%, by weight

VOC content of the fountain solution shall not exceed 2.8 lbs/gal

VOC content of the blanket wash components shall not exceed 6.96 lbs/gal

VOC content of the IPA shall not exceed 6.6 lbs/gal

Applicable Compliance Method(s):

Formulation data or USEPA Method 24 shall be used to determine the VOC contents of the above listed materials.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

7. K004, RIO District 3 Paint Spray Booth

Operations, Property and/or Equipment Description:

Cross flow paint spray booth, air gun, intake filters, exhaust filters, exhaust fan, exhaust stack

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

(1) g)(1)

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
b.	OAC rule 3745-17-11(C)	See c)(1)-(2), d)(1)-(5), and e)(1)
c.	OAC rule 3745-21-09(H)(1)(a)	See b(2)a.
d.	OAC rule 3745-21-09(I)(3)(a)	See b)(2)b.
e.	OAC rule 3745-21-09(U)(2)(h)	See b)(2)c.
f.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	The permittee shall employ a dry particulate filter with a control efficiency of 90%. Volatile organic compound (VOC) emissions from coatings and cleanup shall not exceed 160 pounds per month averaged over a 12-month rolling period. See b)(2)d.
g.	OAC rule 3745-31-05(A)(3)(ii)	See b)(2)e.

(2) Additional Terms and Conditions

a. Coatings applied in the coating operations shall not exceed 4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents for any coating that is applied to vinyl.

b. The total VOC emissions from all the prime coat, topcoat, and/or single coating applications from all the facility's metal furniture coating lines shall not equal or exceed 15 pounds per day.

c. VOC emissions from all miscellaneous metal parts and products coating lines at the facility shall not exceed 15 pounds per day, before add-on controls. Pounds of VOC attributed to metal parts or products coating lines in which non-metal parts or products are being coated shall not count towards this daily limit.

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

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

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

c) Operational Restrictions

(1) The permittee shall install and operate a dry filtration system for the control of particulate emissions whenever this emissions unit is in operation and shall maintain the dry particulate filter in accordance with the manufacturer's recommendations, instructions, and/or operating manual(s), with any modifications deemed necessary by the permittee.

[Authority for term: OAC rule 3745-17-11(C) and OAC rule 3745-77-07(A)(1)]

(2) The permittee shall expeditiously repair the dry particulate filter or otherwise return it to normal operations, as recommended by the manufacturer with any modifications deemed necessary by the permittee, whenever it is determined that the control device is not operating in accordance with these requirements.

[Authority for term: OAC rule 3745-17-11(C) and OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain documentation of the manufacturer's recommendations, instructions, or operating manuals for the dry particulate filter, along with documentation

of any modifications deemed necessary by the permittee. These documents shall be maintained at the facility and shall be made available to the appropriate Ohio EPA District Office or local air agency upon request.

[Authority for term: OAC rule 3745-17-11(C) and OAC rule 3745-77-07(C)]

(2) The permittee shall conduct periodic inspections of the dry particulate filter to determine whether it is operating in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee or operator. These inspections shall be performed at a frequency that shall be based upon the recommendation of the manufacturer and the permittee shall maintain a copy of the manufacturer's recommended inspection frequency and it shall be made available to the Ohio EPA upon request.

[Authority for term: OAC rule 3745-17-11(C) and OAC rule 3745-77-07(C)]

(3) In addition to the recommended periodic inspections, not less than once each calendar year the permittee shall conduct a comprehensive inspection of the dry particulate filter while the emissions unit is shut down and perform any needed maintenance and repair to ensure that it is operated in accordance with the manufacturer's recommendations.

[Authority for term: OAC rule 3745-17-11(C) and OAC rule 3745-77-07(C)]

(4) The permittee shall document each inspection (periodic and annual) of the dry particulate filter system and shall maintain the following information:

a. the date of the inspection;

b. a description of each/any problem identified and the date it was corrected;

c. a description of any maintenance and repairs performed; and

d. the name of person who performed the inspection.

These records shall be maintained at the facility for not less than five years from the date the inspection and any necessary maintenance or repairs were completed and shall be made available to the appropriate Ohio EPA District Office or local air agency upon request.

[Authority for term: OAC rule 3745-17-11(C) and OAC rule 3745-77-07(C)]

(5) The permittee shall maintain records that document any time periods when the dry particulate filter was not in service when the emissions unit(s) was/were in operation, as well as, a record of all operations during which the dry particulate filter was not operated according to the manufacturer's recommendations with any documented modifications made by the permittee. These records shall be maintained for a period of not less than five years and shall be made available to the Ohio EPA upon request.

[Authority for term: OAC rule 3745-17-11(C) and OAC rule 3745-77-07(C)]

(6) The permittee, having chosen to demonstrate compliance through the use of compliant coatings when coating vinyl, shall collect and record the following information each month for the coating line and shall maintain this information at the facility for a period of three years:

a. the name and identification number of each coating, as applied; and

b. the mass of VOC per volume (pounds/gallon) of each coating, excluding water and exempt solvents, as applied, calculated as follows for $C_{VOC,2}$:

$C_{VOC,2} = (D_C)(W_{VOC}) / V_S + V_{VOC}$

where:

D_C = the density of coating, in pounds of coating per gallon of coating.

$W_{VOC} = W_{VM} - W_W - W_{ES}$

V_S = volume fraction of solids in coating, in gallons of solids per gallon of coating.

$V_{VOC} = V_{VM} - V_W - V_{ES}$

W_{VM} = weight fraction of volatile matter in coating, in pound of volatile matter per pound of coating.

W_W = weight fraction of water in coating, in pound of water per pound of coating.

W_{ES} = weight fraction of exempt solvent in coating, in pound of exempt solvent per pound of coating.

V_{VM} = volume fraction of volatile matter in coating, in gallon of volatile matter per gallon of coating.

V_W = volume fraction of water in coating, in gallon of water per gallon of coating.

V_{ES} = volume fraction of exempt solvent in coating, in gallon of exempt solvent per gallon of coating.

This information does not have to be kept on a line-by-line basis, unless one or more of the lines or emissions units is subject to specific gallons/year and/or tons/year limitation in a Permit-to-install, where the above-mentioned information shall be maintained separately for each such line. Also, if the permittee mixes complying coatings at a line, it is not necessary to record the VOC content of the resulting mixture.

[Authority for term: OAC rule 3745-21-09(H)(1)(a) and OAC rule 3745-77-07(C)]

(7) The permittee shall collect and record the following information each day for all metal furniture and miscellaneous metal parts coating lines at the facility:

a. the name and identification number of each coating, as applied;

b. the mass of VOC per volume (excluding water and exempt solvents) and the volume of each coating (excluding water and exempt solvents), as applied; and

c. the total VOC emissions from the coatings employed, as calculated using the following equation:

$T = A_1B_1 + A_2B_2 + ... + A_nB_n$

where:

T = total VOC emissions from the combined coating lines before the application of capture systems and control devices, in units of pounds per day;

n = number of different coatings applied in the coating lines at the facility;

i = subscript denoting an individual coating;

Ai = mass of VOC per volume of coating (i) (excluding water and exempt solvents), as applied, in units of pounds VOC per gallon; and

Bi = volume of coating (i) (excluding water and exempt solvents), as applied, in units of gallons per day.

[Authority for term: OAC rule 3745-21-09(I)(3)(a), OAC rule 3745-21-09(U)(2)(h), and OAC rule 3745-77-07(C)]

(8) The permittee shall collect and record the following information on a monthly basis for the coating and cleanup materials applied in this emissions unit:

a. the number of gallons of each coating applied <u>or</u> the number of gallons of all coatings applied during the month;

b. the maximum VOC content (excluding water and exempt solvents) of each coating applied; <u>or</u> the maximum VOC content (excluding water and exempt solvents) for any coating applied, in pounds per gallon, as calculated for $C_{VOC,2}$above;

c. the total VOC emissions from all coatings applied, i.e., the summation of the products of “a” times “b” for all the individual coatings applied during the month;<u>or</u> the product of the maximum VOC content of any coating applied times the total gallons of coating employed during the month, i.e.,“a” times “b” for worst case coating;

d. the name and identification of each cleanup material employed;

e. the VOC content of each cleanup material, in pounds per gallon;

f. the number of gallons of each cleanup material employed;

g. the total VOC emission rate from all cleanup materials, in pounds or tons, i.e., the summation of the products of “e” times “f” for all cleanup materials employed; and

h. the total VOC emissions from all coatings and cleanup materials employed, in pounds or tons, the sum of "c" and "g".

These monthly records shall be maintained for the purpose of determining the monthly VOC emissions averaged over a 12-month, rolling period for the emissions unit.

[Authority for term: OAC rule 3745-31-05(A)(3), as effective 11/30/01 and OAC rule 3745-77-07(C)]

e) Reporting Requirements

(1) The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of any daily record showing that the dry particulate filter system was not in service or not operated according to the manufacturer's recommendations 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 Ohio EPA District Office or local air agency) within 30 days following the end of the calendar month.

[Authority for term: OAC rule 3745-17-11(C) and OAC rule 3745-77-07(A)(3)(c)]

(2) The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of any monthly record showing the use of noncomplying coatings when coating vinyl. The notification shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 30 days following the end of the calendar month.

[Authority for term: OAC rule 3745-21-09(H)(1)(a) and OAC rule 3745-77-07(A)(3)(c)]

(3) The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of any daily record showing that the combined VOC emissions (excluding emissions from cleanup materials) from all the coatings used for metal furniture and miscellaneous metal parts at the facility are equal to or greater than 15 pounds of VOC per day (before add-on controls). The notification shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 45 days after the exceedance occurs.

[Authority for term: OAC rule 3745-21-09(I)(3)(a), OAC rule 3745-21-09(U)(2)(h), and OAC rule 3745-77-07(A)(3)(c)]

(4) The permittee shall also submit annual reports that specify the total VOC emissions 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 for this emissions unit in the annual Fee Emission Report.

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

f) Testing Requirements

(1) Emission Limitation:
Visible particulate emissions from any/the stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Method 9.

[Authority for term: OAC rule 3745-17-11(C) and OAC rule 3745-77-07(C)(1)]

(2) Emission Limitation:
4.8 lbs VOC/gal for coatings applied to vinyl

Applicable Compliance Method:
Compliance shall be based upon the recordkeeping and reporting specified in Sections d)(6) and e)(2).

[Authority for term: OAC rule 3745-21-09(H)(1)(a) and OAC rule 3745-77-07(C)(1)]

(3) Emissions Limitation:

Total VOC emissions from all the prime coat, topcoat, and/or single coating applications from all the facility's metal furniture and all miscellaneous metal parts and products coating lines shall not equal or exceed 15 pounds per day.

Applicable Compliance Method:

Compliance shall be based upon the recordkeeping and reporting specified in Sections d)(7) and e)(3).

[Authority for term: OAC rule 3745-21-09(I)(3)(a), OAC rule 3745-21-09(U)(2)(h), and OAC rule 3745-77-07(C)(1)

(4) Emission Limitation:

VOC emissions from coatings and cleanup shall not exceed 160 pounds per month averaged over a 12-month rolling period.

Applicable Compliance Method:

The monthly limit is based on the calculated the following equation:

VOC emissions = (VOC content) * (monthly usage)

where,

VOC content = 3.20 lbs/gal (MSDS, PTI application A0039061, submitted 2/17/10)

monthly usage = as determined in Section d)(8)a. and d)(8)f.

[Authority for term: OAC rule 3745-31-05(A)(3), as effective 11/30/01 and OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) Modeling to demonstrate compliance with, the Toxic Air Contaminant Statute, ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit-to-install (PTI) prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials,or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.