



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

10/9/2013

Certified Mail

Michael StClair  
The Ohio State University  
Environmental Health & Safety  
1314 Kinnear Road  
COLUMBUS, OH 43212-1168

Facility ID: 0125042608  
Permit Number: P0083317  
County: Franklin

RE: DRAFT AIR POLLUTION TITLE V PERMIT  
Permit Type: Renewal

Dear Permit Holder:

A draft of the OAC Chapter 3745-77 Title V permit for the referenced facility has been issued. The purpose of this draft is to solicit public comments. A public notice will appear in the Ohio Environmental Protection Agency (EPA) Weekly Review and the local newspaper, The Columbus Dispatch. A copy of the public notice, the Statement of Basis, and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc) by clicking the "Search for Permits" link under the Permitting topic on the Programs tab. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall  
Permit Review/Development Section  
Ohio EPA, DAPC  
50 West Town Street, Suite 700  
P.O. Box 1049  
Columbus, Ohio 43216-1049

and Ohio EPA DAPC, Central District Office  
50 West Town Street, 6th Floor  
P.O. Box 1049  
Columbus, OH 43216-1049

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified if a public hearing is scheduled. A decision on processing the Title V permit will be made after consideration of comments received and oral testimony if a public hearing is conducted. You will then be provided with a Preliminary Proposed Title V permit and another opportunity to comment prior to the 45-day Proposed Title V permit submittal to U.S. EPA Region 5. The permit will be issued final after U.S. EPA review is completed and no objections to the final issuance have been received. If you have any questions, please contact Ohio EPA DAPC, Central District Office at (614)728-3778.

Sincerely,

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

Cc: U.S. EPA Region 5 - Via E-Mail Notification  
Ohio EPA-CDO



PUBLIC NOTICE  
10/9/2013 Issuance of Draft Air Pollution Title V Permit

The Ohio State University

2003 MILLIKIN ROAD,  
COLUMBUS, OH 43210-1268

Franklin County

FACILITY DESC.: Colleges, Universities, and Professional Schools

PERMIT #: P0083317

PERMIT TYPE: Renewal

PERMIT DESC: Title V renewal for boilers, associated emission sources and coating lines.

The Director of the Ohio Environmental Protection Agency issued the draft permit above. The permit and complete instructions for requesting information or submitting comments may be obtained at: <http://epa.ohio.gov/dapc/permitsonline.aspx> by entering the permit # or: John Walker, Ohio EPA DAPC, Central District Office, 50 West Town Street, 6th Floor P.O. Box 1049, Columbus, OH 43216-1049. Ph: (614)728-3778





## Statement of Basis For Air Pollution Title V Permit

|   |  |
|---|--|
| Facility ID:  | 0125042608                                       |
| Facility Name:  | The Ohio State University                        |
| Facility Description:   | Colleges, universities and professional schools. |
| Facility Address:   | 2003 MILLIKIN ROAD, COLUMBUS, OH 43210-1268      |
| Permit #:   | P0083317, Renewal                                |
| <p>This facility is subject to Title V because it is major for:</p> <p> <input type="checkbox"/> Lead            <input checked="" type="checkbox"/> Sulfur Dioxide            <input checked="" type="checkbox"/> Carbon Monoxide            <input checked="" type="checkbox"/> Volatile Organic Compounds            <input checked="" type="checkbox"/> Nitrogen Oxides<br/> <input checked="" type="checkbox"/> Particulate Matter ≤ 10 microns            <input checked="" type="checkbox"/> Single Hazardous Air Pollutant            <input checked="" type="checkbox"/> Combined Hazardous Air Pollutants<br/> <input checked="" type="checkbox"/> Maximum Available Control Technology Standard(s)    <input type="checkbox"/> GHG    <input type="checkbox"/> Title IV       </p> |  |

### A. Standard Terms and Conditions

|  |  |
|--|--|
| Has each insignificant emissions unit been reviewed to confirm it meets the definition in OAC rule 3745-77-01(U)?  | Yes  |
| Were there any "common control" issues associated with this facility? If yes, provide a summary of those issues and explain how the DAPC decided to resolve them.  | No   |
| Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a minor permit modification per OAC rule 3745-77-08(C)(1)       | B132, B140, B141, B142 and B143 received an administrative modification to allow for the use of parametric monitoring equipment to continuously predict and record NOx emissions (PEMS) in lieu of CEMS. No changes to emissions limits or emissions rates were requested. The administrative modification was issued under PTI P0105626, issued final on 5/26/10. |
| Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a significant permit modification per OAC rule 3745-77-08(C)(3) | N/A  |



|   |   |
|---|---|
| Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a reopening per OAC rule 3745-77-08(D) | N/A   |
| Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document resulting from a renewal per OAC rule 3745-77-08(E)    | <p>K001 and K002 were issued an administrative modification via PTI P0115060, issued final 8/28/2013. The BAT language was modified to remove references to OAC rule 3745-21-07(G), which was rescinded 9/19/11.</p> <p>B132, B140, B141, B142 and B143 received an administrative modification to PTI P0105626 to remove rescinded rules OAC rules 3745-23-06(C)(1)-(2), 3745-21-07(B), and 3745-21-08(B). The administrative modification was issued under P0115528, issued final 10/3/2013.</p> <p>B138 and B139 received an administrative modification to PTI 01-08695 to remove rescinded rules OAC rules 3745-21-07(B) and 3745-21-08(B). The administrative modification was issued under P0115528, issued final 10/3/2013.</p> <p>B137 received updated OAC rule 3745-17-11(B)(5)(a) language because the particulate emission limitation was approved as a revision of the SIP.</p> |
| Please identify the affected unit(s) and pollutant(s) for which a Compliance Assurance Monitoring (CAM) Plan is required per 40 CFR 64. Provide more emissions unit specific detail in Section C.   | N/A   |

**B. Facility-Wide Terms and Conditions**

| Term and Condition (paragraph) | Basis        |                    | Comments |
|--------------------------------|--------------|--------------------|----------|
|                                | SIP (3745- ) | Other              |          |
| B.2.                           |              | 40 CFR Part 60, Db |          |
| B.3.                           |              | 40 CFR Part 63, A  |          |
| B.4.                           |              | 40 CFR Part 63,    |          |



|           |       |       |                                |
|-----------|-------|-------|--------------------------------|
|           |       | DDDDD |                                |
| B.5. – 6. | 109   |       | CAIR                           |
| B.7.      | 15-05 |       | de minimis emissions units     |
| B.8.      | 31-03 |       | permit-by-rule emissions units |

**C. Emissions Unit Terms and Conditions**

| Key:   |   |             |       |    |    |   |  |   |    |    |    |      |   |
|--|---|-------------|-------|----|----|---|--|---|----|----|----|------|---|
| EU = emissions unit ID   |   |             |       |    |    |   | R = record keeping requirements  |   |    |    |    |      |   |
| ND = negative declaration (i.e., term that indicates that a particular rule(s) is (are) not applicable to a specific emissions unit) |   |             |       |    |    |   | Rp = reporting requirements  |   |    |    |    |      |   |
| OR = operational restriction   |   |             |       |    |    |   | ET = emission testing requirements (not including compliance method terms)   |   |    |    |    |      |   |
| M = monitoring requirements  |   |             |       |    |    |   | St = streamlining term used to replace a PTI monitoring, record keeping, or reporting requirement with an equivalent or more stringent requirement |   |    |    |    |      |   |
| ENF = did noncompliance issues drive the monitoring requirements?  |   |             |       |    |    |   | Misc = miscellaneous requirements  |   |    |    |    |      |   |
| EU(s)  | Limitation  | Basis       |       | ND | OR | M | ENF  | R | Rp | ET | St | Misc | Comments  |
|  |   | SIP (3745-) | Other |    |    |   |  |   |    |    |    |      |   |
| B104, B105   | VE shall not exceed 20% as a 6-minute avg.  | 17-07(A)    |       | N  | N  | Y | N  | Y | Y  | Y  | N  | N    | OR – EU shall only burn natural gas per OAC rule 3745-17-10(B).   |
| B104, B105   | PE shall not exceed 0.020 lb/mmBtu  | 17-10(B)    |       | N  | Y  | Y | N  | Y | Y  | Y  | N  | N    | No explanation required.  |
| B104, B105   | no SO2 emission limitation  | 18-06       |       | Y  | N  | N | N  | N | N  | N  | N  | N    | ND – Provisions not specified in paragraphs (D), (F), and (G) of OAC rule 3745-18-06 do not apply to this emissions unit. |
| B132   | NOx shall not exceed 0.036 lb/mmBtu (ng) and 0.12 lb/mmBtu (No. 2), 103.52 tpy (ng/No.2); CO shall not exceed 0.072 lb/mmBtu (ng) and 0.17 lb/mmBtu (No. 2), 161.04 (ng/No.2); PE | 31-05(A)(3) |       | N  | Y  | Y | N  | Y | Y  | Y  | N  | N    | No explanation required.  |



|      |  |                         |                    |   |   |   |   |   |   |   |   |   |  |
|------|--|-------------------------|--------------------|---|---|---|---|---|---|---|---|---|--|
|      | shall not exceed 0.007 lb/mmBtu (ng) and 0.0196 lb/mmBtu (No. 2), 17.68 tpy (ng/No.2); VOC 0.008 lb/mmBtu (ng) and 0.009 lb/mmBtu (No.2), and 11.40 tpy (ng/No.2); SO2 shall not exceed 0.0006 lb/mmBtu (ng) and 0.056 lb/mmBtu (No.2), and 37.80 (ng/No.2); compliance with OAC rule 3745-17-07(A) and 40 CFR Part 60, Subpart Db |                         |                    |   |   |   |   |   |   |   |   |   |  |
| B132 | emission(s) limitations established pursuant to OAC rule 3745-31-05(A)(3) are more stringent than the emission limitations established by these rules  | 18-06(D)<br>17-10(B)(1) | 40 CFR Part 60.44b | Y | N | N | N | N | N | N | N | N | ND – Emission limitations are less stringent than OAC rule 3745-31-05(A)(3). |
| B132 | when firing No. 2 fuel oil PE shall not exceed 20% opacity as a 6-minute average, except for one 6-minute period per hour of not more than 27%   |                         | 40 CFR Part 60, Db | N | Y | Y | N | Y | Y | Y | N | N | No explanation required.   |



|                        |   |             |                    |   |   |   |   |   |   |   |   |   |   |
|------------------------|---|-------------|--------------------|---|---|---|---|---|---|---|---|---|---|
|                        | opacity, and because this emissions unit employs a high heat release rate, the NOx emissions heat input limitation shall not exceed 0.2 lb/mmBtu  |             |                    |   |   |   |   |   |   |   |   |   |   |
| B132                   | Visible PE shall not exceed 20% opacity, as a 6-minute average  | 17-07(A)    |                    | N | N | Y | Y | N | Y | Y | N | N | OR – continuously monitor and record opacity of PE emissions when combusting No. 2 fuel oil.  |
| B132                   | discretionary PSD exemption from the Director on March 14, 2003   | 31-13(D)(1) |                    | Y | N | N | N | N | N | N | N | N | ND – as a non-profit education institution the permittee requested and received a discretionary exemption from the Director on March 14, 2003, to exempt the emissions unit from the PSD requirements contained in OAC rules 3745-31-10 through 3745-31-20. |
| B132                   | case-by-case MACT determination   |             | 40 CFR 63.52(a)(2) | N | Y | Y | N | Y | Y | Y | N | N | No explanation required.  |
| B140, B141, B142, B143 | NOx shall not exceed 0.035 lb/mmBtu (ng) and 0.10 lb/mmBtu (No. 2), 59.15 tpy (ng/No.2); CO shall not exceed 0.04 lb/mmBtu (ng) and 0.08 lb/mmBtu (No. 2), 52.74 (ng/No.2); PE shall not exceed 0.005 lb/mmBtu (ng) and 0.02 lb/mmBtu (No. 2), 10.93 tpy (ng/No.2); VOC | 31-05(A)(3) |                    | N | Y | Y | N | Y | Y | Y | N | N | No explanation required.  |



|                        |  |                      |                    |   |   |   |   |   |   |   |   |   |  |
|------------------------|--|----------------------|--------------------|---|---|---|---|---|---|---|---|---|--|
|                        | 0.004 lb/mmBtu (ng) and 0.004 lb/mmBtu (No.2), and 3.54 tpy (ng/No.2); SO2 shall not exceed 0.0006 lb/mmBtu (ng) and 0.052 lb/mmBtu (No.2), and 22.82 (ng/No.2); compliance with OAC rule 3745-17-07(A) and 40 CFR Part 60, Subpart Db |                      |                    |   |   |   |   |   |   |   |   |   |  |
| B140, B141, B142, B143 | emission(s) limitations established pursuant to OAC rule 3745-31-05(A)(3) are more stringent than the emission limitations established by these rules  | 17-10(B)(1) 18-06(D) |                    | Y | N | N | N | N | N | N | N | N | ND – Emission limitations are less stringent than OAC rule 3745-31-05(A)(3). |
| B140, B141, B142, B143 | when firing No. 2 fuel oil 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, and because this emissions unit employs a high heat release rate, the          |                      | 40 CFR Part 60, Db | N | Y | Y | N | Y | Y | Y | N | N | No explanation required.   |



|                        |   |                |                    |   |   |   |   |   |   |   |   |   |  |
|------------------------|---|----------------|--------------------|---|---|---|---|---|---|---|---|---|--|
|                        | NOx emissions heat input limitation shall not exceed 0.2 lb/mmBtu |                |                    |   |   |   |   |   |   |   |   |   |  |
| B140, B141, B142, B143 | Visible PE shall not exceed 20% opacity, as a 6-minute average    | 17-07(A)       |                    | N | N | Y | Y | N | Y | Y | N | N | OR – continuously monitor and record opacity of PE emissions when combusting No. 2 fuel oil.   |
| B140, B141, B142, B143 | discretionary PSD exemption from the Director on March 14, 2003   | 31-13(D)(1)    |                    | Y | N | N | N | N | N | N | N | N | ND – as a non-profit education institution the permittee requested and received a discretionary exemption from the Director on March 14, 2003, to exempt the emissions unit from the PSD requirements contained in OAC rules 3745-31-10 through 3745-31-20.  |
| B140, B141, B142, B143 | case-by-case MACT determination                                   |                | 40 CFR 63.52(a)(2) | N | Y | Y | N | Y | Y | Y | N | N | No explanation required.   |
| B137                   | VE shall not exceed 20% opacity as a 6-minute average             | 17-07(A)       |                    | N | N | Y | N | Y | Y | Y | N | N | OR – permittee shall only burn natural gas in EU.  |
| B137                   | PE shall not exceed 0.25 lb/mmBtu actual heat input               | 17-11(B)(5)(a) |                    | N | N | N | N | N | N | Y | N | N | OR – permittee shall only burn natural gas in EU<br>M – record each day a fuel other than natural gas is burned<br>R – record each day a fuel other than natural gas is burned<br>RP - submit excursion reports that identify a day when a fuel other than natural gas is burned<br>*Limit shall terminate on the date US EPA approves the 0.310 lb/mmBtu actual heat input emissions limitation as a revision of the Ohio SIP.  |
| B137                   | PE shall not exceed 0.310 lb/mmBtu actual heat input              | 17-11(B)(5)(a) |                    |   |   |   |   |   |   |   |   |   | OR – permittee shall only burn natural gas in EU<br>M – record each day a fuel other than natural gas is burned<br>R – record each day a fuel other than natural gas is burned<br>RP - submit excursion reports that identify a day when a fuel other than natural gas is burned<br>*PE limitation shall be effective and federally enforceable on the date the US EPA approves the emission limitation as part of the Ohio SIP. |
| B137                   | emission unit exempt from   | 18-06          |                    | Y | N | N | N | N | N | N | N | N | ND – EU exempt from the requirements of this rule per OAC rules 3745-18-06(A) and 3745-18-06(B).   |



|            | requirements   |             |  |   |   |   |   |   |   |   |   |   |   |
|------------|--|-------------|--|---|---|---|---|---|---|---|---|---|---|
| B138, B139 | VOC shall not exceed 10.66 lbs/day and 0.69 tpy; CO shall not exceed 101.52 lbs/day and 0.48 tpy; NOx shall not exceed 7.34 lbs/day and 0.48 tpy; SO2 shall not exceed 0.38 lb/day and 0.02 tpy; PE shall not exceed 0.47 lb/day and 0.03 tpy ; VE shall not exceed 20% as a 6-minute average; requirements of this rule also include compliance with OAC rule 3745-31-05(D) | 31-05(A)(3) |  | N | Y | Y | N | Y | Y | Y | N | N | No explanation required.  |
| B138, B139 | CO emissions shall not exceed 6.60 tpy based on rolling, 12-month summation  | 31-05(D)    |  | N | Y | Y | N | Y | Y | Y | N | N | No explanation required.  |
| B138, B139 | exempt from the visible particulate emission limitations   | 17-07(A)    |  | Y | N | N | N | N | N | N | N | N | ND – Exempt from rule requirements per OAC rule 3745-17-07(A)(3)(h).  |
| B138, B139 | uncontrolled mass rate of PE is less than 10 lbs/hr  | 17-11(B)(1) |  | Y | N | N | N | N | N | N | N | N | ND – 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. |



**Statement of Basis**  
 The Ohio State University  
**Permit Number:** P0083317  
**Facility ID:** 0125042608

|               |  |             |  |   |   |   |   |   |   |   |   |   |                          |  |
|---------------|--|-------------|--|---|---|---|---|---|---|---|---|---|--------------------------|--|
| B138,<br>B139 | exempt from rule                                       | 18-06       |  | Y | N | N | N | N | N | N | N | N | N                        | ND – Emissions unit is exempt from the requirements of OAC rule 3745-18-06 pursuant to OAC rule 3745-18-06(B). |
| K001,<br>K002 | VOC emissions shall not exceed 40 lbs/day and 7.31 tpy | 31-05(A)(3) |  | N | Y | Y | N | Y | Y | Y | N | N | No explanation required. |  |





**DRAFT**

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

|                |                                   |
|----------------|-----------------------------------|
| Facility ID:   | 0125042608                        |
| Permit Number: | P0083317                          |
| Permit Type:   | Renewal                           |
| Issued:        | 10/9/2013                         |
| 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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**Draft Title V Permit**  
The Ohio State University  
**Permit Number:** P0083317  
**Facility ID:** 0125042608

**Effective Date:** To be entered upon final issuance

## Authorization

Facility ID: 0125042608  
Facility Description: Colleges, universities and professional schools.  
Application Number(s): A0013684, A0013685, A0013686, A0038270  
Permit Number: P0083317  
Permit Description: Title V renewal for boilers, associated emission sources and coating lines.  
Permit Type: Renewal  
Issue Date: 10/9/2013  
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 (540 days) and no later than 6 months (180 days) prior to the expiration date.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally  
Director



**Draft Title V Permit**  
The Ohio State University  
**Permit Number:** P0083317  
**Facility ID:** 0125042608  
**Effective Date:** To be entered upon final issuance

## **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
  - (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

*(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 recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

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



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

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

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

- (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 promptly made to the appropriate Ohio EPA District Office or local air agency. Except as provided below, the written reports shall be submitted (i.e., postmarked) 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 (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency by January 31 and July 31 of each year; and each report shall cover the previous six calendar months. 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."

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

- (5) Reports of any required monitoring and/or record keeping information shall be submitted to Ohio EPA DAPC, Central District Office.

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

### **3. 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) The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c) This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with Standard Term and Condition 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 official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
  - (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 appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
- (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 appropriate Ohio EPA District Office or local air agency) and the Administrator of the U.S. EPA in the following manner and with the following content:
- (1) Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted (i.e., postmarked) on or before April 30th of each year during the permit term.
  - (2) Compliance certifications shall include the following:
    - a. An identification of each term or condition of this permit that is the basis of the certification.
    - b. The permittee's current compliance status.
    - c. Whether compliance was continuous or intermittent.
    - d. The method(s) used for determining the compliance status of the source currently and over the required reporting period.
    - e. Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.
  - (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 appropriate Ohio EPA District Office or local air agency with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the appropriate District Office of the Ohio EPA or local air agency as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).

*(Authority for term: OAC rules 3745-77-07(H)(1) and (2))*

#### **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 Fed. Reg. 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 has 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.

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

*(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 opening 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 Requirements Under 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 the appropriate Ohio EPA District Office or local air agency.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

**25. Records Retention Requirements Under 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**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

**28. Permit Transfers**

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

*(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 (i.e., postmarked) 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 potentials to emit; or
- c) where the company's responsible official has certified that an emissions unit has been permanently shut down.



**Draft Title V Permit**  
The Ohio State University  
**Permit Number:** P0083317  
**Facility ID:** 0125042608  
**Effective Date:** To be entered upon final issuance

## **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. 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.
3. The following emissions units contained in this permit are subject to 40 CFR Part 63, Subparts A and DDDDD, National Emission Standards for Hazardous Air Pollutants (NESHAP) Industrial, Commercial and Institutional Boilers and Process Heaters: B104, B105, B132, B140, B141, B142 and B143. The complete NESHAP requirements, including the NESHAP 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 appropriate Ohio EPA District office or local air agency.
4. The following emissions units contained in this permit are subject to 40 CFR Part 63, Subpart DDDDD: B104, B105, B132, B140, B141, B142, and B143. The complete MACT requirements, including the MACT 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 permittee shall ensure that any CAIR NO<sub>x</sub>, SO<sub>2</sub>, or NO<sub>x</sub> 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.
6. Clean Air Interstate Rule – OAC Chapter 3745-109  
  
B132 – Boiler #5 gas/oil fired water tube boiler with low NO<sub>x</sub> 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.
7. 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



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  
B158 – Child Care 8  
B159 – Child Care 9  
B160 – Child Care 10  
G002 – 8G-GDF  
G003 – 9-G GDF  
G007 – 18-G GDF  
G008 – 19-G GDF  
G009 – 20-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/Ryan Martin Hall  
T043 – 2500 gal diesel storage tank, Dodd/Ryan Martin 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  
Z050 – Raney Commons, EG, 40 kw  
Z051 – North Commons, EG, 40 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  
Z141 – 183/maintenance shop, Royer Center maintenance facility  
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  
Z191 – Celeste, EG, 33 kw  
Z192 – 372/1128, drug development, hood #14  
Z194 – 386/61, Wexner Center, Painting Room  
Z198 – 951/1314, Biology Collections Museum, storage  
Z199 – 951/1686, Biology Collections Museum, fish  
Z202 – 16-G GDF  
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]

8. 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  
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/Wolfman Lab, Caterpillar EG, 130 kw  
B220 – Hagery 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 – McCracken 2, Cat EG, 21.5 mmBtu/hr
- B248 – McCracken 3, Cat EG, 21.5 mmBtu/hr
- B249 – McCracken 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
- 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
- B276 – Raney Commons 269, 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



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The Ohio State University  
**Permit Number:** P0083317  
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## **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<sub>2</sub> 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 3745-77-07(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 3745-77-07(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 3745-77-07(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 3745-77-07(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 rule 3745-77-07(C)(1)]



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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)<br><br>[Established by PTI P0105626,<br>issued final 05/26/10] | Nitrogen oxides (NOx) emissions shall not exceed 0.036 lb/mmBtu when firing natural gas and 0.12lb/mmBtu when firing number 2 distillate fuel oil.<br><br>NOx emissions shall not exceed 103.52 tons per year when firing natural gas and/or number 2 distillate fuel oil.<br><br>Carbon monoxide (CO) emissions shall not exceed 0.072 lb/mmBtu when firing natural gas and 0.17lb/mmBtu when firing number 2 distillate fuel oil.<br><br>CO emissions shall not exceed 161.04 tons per year when firing natural gas and/or number 2 distillate fuel oil.<br><br>Particulate emissions (PE) shall not exceed 0.007 lb/mmBtu when firing natural gas and 0.0196 lb/mmBtu when firing number 2 distillate fuel oil.<br><br>PE shall not exceed 17.68 tons per year when firing natural gas and/or number 2 distillate fuel oil. |



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|    | Applicable Rules/Requirements   | Applicable Emissions Limitations/Control Measures  |
|----|---|--|
|    |   | <p>Volatile organic compound (VOC) emissions shall not exceed 0.008 lb/mmBtu when firing natural gas and 0.009 lb/mmBtu when firing number 2 distillate fuel oil.</p> <p>VOC emissions shall not exceed 11.40 tons per year when firing natural gas and/or number 2 distillate fuel oil.</p> <p>Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0006 lb/mmBtu when firing natural gas and 0.056 lb/mmBtu when firing number 2 distillate fuel oil.</p> <p>SO<sub>2</sub> emissions shall not exceed 37.80 tons per year when firing natural gas and/or number 2 distillate fuel oil.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A) and 40 CFR Part 60, Subpart Db.</p> <p>See c)(3) below.</p> |
| b. | OAC rule 3745-18-06(D)<br>OAC rule 3745-17-10(B)(1)<br>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.   |
| c. | 40 CFR Part 60, Subpart Db  | When firing number 2 distillate fuel oil, 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, and because this emissions unit employs a high heat release rate as defined in 40 CFR Part 60.41b, the NO <sub>x</sub> emissions heat input limitation shall not exceed 0.2 lb/mmBtu expressed as NO <sub>2</sub> .  |
| d. | 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.  |
| e. | OAC rule 3745-31-13(D)(1)   | See b)(2)a.  |
| f. | 40 CFR 63.52(a)(2)  | See b)(2)e.  |

(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 provisions of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, as promulgated by the United States Environmental Protection Agency under 40 CFR Part 63, Subpart DDDDD. The final rules found in 40 CFR Part 63, Subpart DDDDD establish national emission standards for hazardous air pollutants (NESHAP), operational limits, work practice standards, and compliance requirements for industrial, commercial, and institutional boilers and process heaters located at a major source of hazardous air pollutants (HAP). The permittee shall comply with the requirements and limits of this NESHAP for the facility's new (commenced



construction after 6/4/10) process heaters by the compliance date identified in 40 CFR 63.7495(a) or upon startup; and the facility's existing process heaters shall be in compliance with 40 CFR Part 63, Subpart DDDDD no later than the compliance date identified in 40 CFR 63.7495(b).

[Authority for term: 40 CFR 63.52(a)(2)]

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 3745-77-07(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 3745-77-07(A)(1)]

- (3) The permittee shall operate low NO<sub>x</sub> burners and employ flue gas recirculation at all times this emissions unit is in operation.

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

- (4) The permittee shall operate and maintain equipment to continuously monitor and record the opacity of the particulate emissions from this emissions unit when combusting number 2 distillate fuel oil.

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

- (5) The permittee shall operate and maintain predictive monitoring equipment to continuously predict and record the NO<sub>x</sub> emissions from this emissions unit when combusting natural gas and/or number 2 distillate fuel oil.

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



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

$$DI = DI_g + DI_o$$

DI = Total heat input for each day, mmBtu  
DI<sub>g</sub> = Daily heat input rate from Gas  
DI<sub>o</sub> = 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<sub>g</sub> = Daily heat input rate from pipeline natural gas, mmBtu/day.  
Q<sub>g</sub> = Metered flow rate of gaseous fuel combusted during unit operation, thousand standard cubic feet per day.  
GCV<sub>g</sub> = 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<sup>3</sup> = Conversion of thousand Btu to mmBtu.

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

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

Where:

DI<sub>o</sub> = Daily heat input rate from oil, mmBtu/day.  
V<sub>oil-rate</sub> = Volume rate of oil consumed per day, measured in gal/day  
D<sub>oil</sub> = Density of oil, measured in lb/gal  
GCV<sub>o</sub> = 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<sup>6</sup> = Conversion of Btu to mmBtu.

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



- e. the rolling, 30-day average NO<sub>x</sub> emission rate, in pounds per mmBtu, when firing number 2 distillate fuel oil.

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

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

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

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

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

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

- (8) The permittee shall maintain and implement a written quality assurance/quality control plan for the continuous opacity monitoring system designed to ensure continuous valid and representative readings of opacity and compliance with 40 CFR Part 60, Appendix B, Performance Specification 1. The plan shall include, as a minimum, conducting and recording daily automatic zero/span checks, provisions for conducting a quarterly audit of the continuous opacity monitoring system, and a description of preventive maintenance activities. The plan shall describe step by step procedures for ensuring that Performance Specification 1 is maintained on a continuous basis. The quality assurance/quality control plan and a logbook dedicated to the continuous opacity monitoring system must be kept on site and available for inspection during regular office hours.

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

- (9) The permittee shall calculate the annual capacity factor each calendar year as defined in 40 CFR Part 60.41b individually for each fuel burned pursuant to 40 CFR Part



60.49b.(d). The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

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

- (10) 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 NO<sub>x</sub> 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 the B132 PEMs 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 3745-77-07(C) and 40 CFR 60.13 and 40 CFR Part 60, Appendix B]

- (11) The permittee shall install, operate, and maintain equipment to continuously predict and record NO<sub>x</sub> 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<sub>x</sub> monitoring system including, but not limited to:

- a. predicted emissions of NO<sub>x</sub> in parts per million on an instantaneous (one-minute) basis;
- b. predicted emissions of a diluents (O<sub>2</sub> or CO<sub>2</sub>) 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<sub>x</sub> predictive emissions monitoring systems that are being used to demonstrate compliance with a NO<sub>x</sub> pound-per-hour limit.);
- d. emissions of NO<sub>x</sub> 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 3745-77-07(C) and 40 CFR 60.13 and 40 CFR Part 60, Appendix B]

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 3745-77-07(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 3745-77-07(A)(3)(c)]

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



The reports shall also identify any continuous opacity monitoring system downtime while the emissions unit was on line (date, time, duration and reason) when firing number 2 distillate fuel oil, along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions until and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report.

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

These quarterly excess emission reports shall be submitted by January 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 3745-77-07(A)(3)(c)]

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

The reports shall also identify any 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 3745-77-07(A)(3)(c)]



- (6) 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 3745-77-07(A)(3)(c)]

- (7) The permittee shall submit annual reports that specify the total particulate, SO<sub>2</sub>, VOC, NO<sub>x</sub>, CO emissions and natural gas and fuel oil usages 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 3745-77-07(A)(3)(c)]

- (8) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its NO<sub>x</sub> 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<sub>x</sub> 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 3745-77-07(A)(3)(c) and 40 CFR 60.7]



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 NO<sub>x</sub> 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 NO<sub>x</sub> 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 NO<sub>x</sub> performance test shall be conducted using the NO<sub>x</sub> 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):

NO<sub>x</sub> 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 NO<sub>x</sub> 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 NO<sub>x</sub> 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 3745-77-07(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 3745-77-07(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 3745-77-07(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/mmcf) 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 3745-77-07(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/mmcf) 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 3745-77-07(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 3745-77-07(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 3745-77-07(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/mmcf), 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 3745-77-07(C)(1)]

i. Emission Limitation(s):

SO<sub>2</sub> 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 3745-77-07(C)(1)]

j. Emission Limitation(s):

SO<sub>2</sub> 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 SO<sub>2</sub> in natural gas combustion (0.6 lb SO<sub>2</sub>/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 SO<sub>2</sub>/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 3745-77-07(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 3745-77-07(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 3745-77-07(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 NO<sub>x</sub> 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**

| <b>EU ID</b> | <b>Operations, Property and/or Equipment Description</b>                        |
|--------------|---|
| 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)<br>[Established by P0105626, issued final 05/26/10] | <p>Nitrogen oxides (NOx) emissions shall not exceed 0.035 lb/mmBtu when firing natural gas and 0.10 lb/mmBtu when firing number 2 distillate fuel oil.</p> <p>NOx emissions shall not exceed 59.15 tons per year when firing natural gas and/or number 2 distillate fuel oil.</p> <p>Carbon monoxide (CO) emissions shall not exceed 0.04 lb/mmBtu when firing natural gas and 0.08 lb/mmBtu when firing number 2 distillate fuel oil.</p> <p>CO emissions shall not exceed 52.74 tons per year when firing natural gas and/or number 2 distillate fuel oil.</p> <p>Particulate emissions (PE) shall not exceed 0.005 lb/mmBtu when firing natural gas and 0.02 lb/mmBtu when firing number 2 distillate fuel oil.</p> <p>PE shall not exceed 10.93 tons per year when firing natural gas and/or number 2</p> |



**Effective Date:** To be entered upon final issuance

|    | Applicable Rules/Requirements                       | Applicable Emissions Limitations/Control Measures  |
|----|---|--|
|    |   | <p>distillate fuel oil.</p> <p>Volatile organic compound (VOC) emissions shall not exceed 0.004 lb/mmBtu when firing natural gas and 0.004 lb/mmBtu when firing number 2 distillate fuel oil.</p> <p>VOC emissions shall not exceed 3.54 tons per year when firing natural gas and/or number 2 distillate fuel oil.</p> <p>Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0006 lb/mmBtu when firing natural gas and 0.052 lb/mmBtu when firing number 2 distillate fuel oil.</p> <p>SO<sub>2</sub> emissions shall not exceed 22.82 tons per year when firing natural gas and/or number 2 distillate fuel oil.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A) and 40 CFR Part 60, Subpart Db.</p> <p>See c)(3)</p> |
| 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. | 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.  |
| d. | OAC rule 3745-31-13(D)(1)                           | See b)(2)a.  |
| e. | OAC rule 3745-17-10(B)(1)<br>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.  |
| f. | 40 CFR 63.52(a)(2)                                  | See b)(2)e.  |

(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 provisions of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, as promulgated by the United States Environmental Protection Agency under 40 CFR Part 63, Subpart DDDDD. The final rules found in 40 CFR Part 63, Subpart DDDDD establish national emission standards for hazardous air pollutants (NESHAP), operational limits, work practice standards, and compliance requirements for industrial, commercial, and institutional boilers and process heaters located at a major source of hazardous air pollutants (HAP). The permittee shall comply with the requirements and limits of this NESHAP for the facility's new (commenced construction after 6/4/10) process heaters by the compliance date identified in 40 CFR 63.7495(a) or upon startup; and the facility's existing process heaters shall



be in compliance with 40 CFR Part 63, Subpart DDDDD no later than the compliance date identified in 40 CFR 63.7495(b).

[Authority for term: 40 CFR 63.52(a)(2)]

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 3745-77-07(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 3745-77-07(A)(1)]

- (3) The permittee shall operate low NO<sub>x</sub> burners and employ flue gas recirculation at all times these emissions units are in operation.

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

- (4) The permittee shall operate and maintain equipment to continuously monitor and record the opacity of the particulate emissions from these emissions units when combusting number 2 distillate fuel oil.

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

- (5) The permittee shall operate and maintain predictive monitoring equipment to continuously predict and record the NO<sub>x</sub> emissions from this emissions unit when combusting natural gas and/or number 2 distillate fuel oil.

[Authority for term: 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 3745-77-07(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 3745-77-07(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 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 3745-77-07(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 for each emissions unit:



- 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<sub>g</sub> = Daily heat input rate from Gas

DI<sub>o</sub> = 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<sub>g</sub> = Daily heat input rate from pipeline natural gas, mmBtu/day.

Q<sub>g</sub> = Metered flow rate of gaseous fuel combusted during unit operation, thousand standard cubic feet per day.

GCV<sub>g</sub> = 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<sup>3</sup> = Conversion of thousand Btu to mmBtu.

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

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

Where:

DI<sub>o</sub> = Daily heat input rate from oil, mmBtu/day.

V<sub>oil-rate</sub> = Volume rate of oil consumed per day, measured in gal/day

D<sub>oil</sub> = Density of oil, measured in lb/gal

GCV<sub>o</sub> = 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<sup>6</sup> = Conversion of Btu to mmBtu.

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



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

[Authority for term: 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 the emissions unit, in pounds or tons.

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

- (6) The permittee shall properly install, operate and maintain equipment to continuously monitor and record the opacity of the particulate emissions from each emissions unit when combusting number 2 distillate fuel oil. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

Prior to the installation of the continuous opacity monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirement in 40 CFR Part 60, Appendix B, Performance Specification 1 for approval by the Ohio EPA, Central Office.

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

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

- (7) 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 certification tests on the continuous opacity monitoring system equipment pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 1. Personnel from the Ohio EPA, Central District Office 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 the Ohio EPA, Central District Office pursuant to OAC rule 3745-15-04 within 30 days after the test is completed. Certification of the continuous opacity monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 1.

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

- (8) The permittee shall maintain and implement a written quality assurance/quality control plan for the continuous opacity monitoring system designed to ensure continuous valid and representative readings of opacity and compliance with 40 CFR Part 60, Appendix B,



Performance Specification 1. The plan shall include, as a minimum, conducting and recording daily automatic zero/span checks, provisions for conducting a quarterly audit of the continuous opacity monitoring system, and a description of preventive maintenance activities. The plan shall describe step by step procedures for ensuring that Performance Specification 1 is maintained on a continuous basis. The quality assurance/quality control plan and a logbook dedicated to the continuous opacity monitoring system must be kept on site and available for inspection during regular office hours.

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

- (9) The permittee shall calculate the annual capacity factor each calendar year as defined in 40 CFR Part 60.41b individually for each fuel burned pursuant to 40 CFR Part 60.49b.(d). The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

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

- (10) 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 NO<sub>x</sub> 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 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.

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 3745-77-07(C) and 40 CFR 60.13 and 40 CFR Part 60, Appendix B]

- (11) The permittee shall install, operate, and maintain equipment to continuously predict and record NO<sub>x</sub> 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<sub>x</sub> monitoring system including, but not limited to:

- a. predicted emissions of NO<sub>x</sub> in parts per million on an instantaneous (one-minute) basis;
- b. predicted emissions of a diluents (O<sub>2</sub> or CO<sub>2</sub>) 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<sub>x</sub> predictive emissions monitoring systems that are being used to demonstrate compliance with a NO<sub>x</sub> pound-per-hour limit.);
- d. emissions of NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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 3745-77-07(C) and 40 CFR 60.13 and 40 CFR Part 60, Appendix B]

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) Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:
  - a. construction date (no later than 30 days after such date);
  - b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
  - c. actual start-up date (within 15 days after such date); and
  - d. date of performance testing (If required, at least 30 days prior to testing).



Reports are to be sent to:

Ohio Environmental Protection Agency  
DAPC - Permit Management Unit  
P.O. Box 1049  
Columbus, OH 43216-1049

and

Ohio EPA, Central District Office  
Air Pollution Group  
P.O. Box 1049  
Columbus, OH 43216-1049

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

- (3) 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 3745-77-07(A)(3)(c)]

- (4) 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 3745-77-07(A)(3)(c)]

- (5) Pursuant to 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports (hardcopy or electronic format) within 30 days following the end of each calendar quarter to the Ohio EPA, Central District Office documenting all instances of opacity values in excess of the limitations specified above when firing number 2 distillate fuel oil, detailing the date, commencement and completion times, duration, magnitude (percent opacity), reason (if known), and corrective action(s) taken (if any) of each 6-minute block average above the applicable opacity limitation(s).

For each emissions unit, the reports shall also identify any continuous opacity monitoring system downtime while the emissions unit was on line (date, time, duration and reason) when firing number 2 distillate fuel oil, along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line 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 3745-77-07(A)(3)(c)]

- (6) Pursuant to OAC rule 3745-15-04 and ORC sections 3704.03(I) and 3704.031, the permittee shall submit reports (hardcopy or electronic format) within 30 days following the end of each calendar quarter to the Ohio EPA, Central District Office documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective action(s) taken (if any), of all 30-day average NO<sub>x</sub> values in excess of the applicable NO<sub>x</sub> emission rate (pound per mmBtu).

The reports shall also identify any predictive NO<sub>x</sub> 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 3745-77-07(A)(3)(c)]

- (7) 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)(6)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 3745-77-07(A)(3)(c)]

- (8) The permittee shall submit annual reports that specify the total particulate, SO<sub>2</sub>, VOC, NO<sub>x</sub> and CO emissions and natural gas and fuel oil usages for these emissions units for the previous calendar year. These reports shall be submitted by January 30 of each year.

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

- (9) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its NO<sub>x</sub> 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<sub>x</sub> 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 NO<sub>x</sub> 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 3745-77-07(A)(3)(c) and 40 CFR 60.7]

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 NO<sub>x</sub> 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 NO<sub>x</sub> 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 NO<sub>x</sub> performance test shall be conducted using the NO<sub>x</sub> 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 (NO<sub>x</sub>) 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 NO<sub>x</sub> 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 NO<sub>x</sub> emission data for the preceding 30 steam generating unit operating days.

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

b. Emission Limitation(s):

Nitrogen oxide (NO<sub>x</sub>) 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 (lbsNO<sub>x</sub>/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 (lbsNO<sub>x</sub>/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 3745-77-07(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 3745-77-07(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 3745-77-07(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 3745-77-07(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 3745-77-07(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 3745-77-07(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 3745-77-07(C)(1)]

i. Emission Limitation(s):

Sulfur dioxide (SO<sub>2</sub>) 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 3745-77-07(C)(1)]

j. Emission Limitation(s):

Sulfur dioxide (SO<sub>2</sub>) 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 SO<sub>2</sub> 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 SO<sub>2</sub> 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 3745-77-07(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 3745-77-07(C)(1)]



I. 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 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.



4. B137, McCracken Natural Gas Driven Compressor

Operations, Property and/or Equipment Description:

230 HP Caterpillar natural gas driven compressor.

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% opacity as a 6-minute average, except as provided by the rule. |
| b. | OAC rule 3745-17-11(B)(5)(a)  | PE shall not exceed 0.310 lb/mmBtu actual heat input.   |
| c. | OAC rule 3745-18-06           | See b)(2)a.   |

(2) Additional Terms and Conditions

a. The emission unit is exempt from the requirements of this rule per OAC rules 3745-18-06(A) and 3745-18-06(B).

c) Operational Restrictions

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

[Authority for term: 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 this emissions unit.

[Authority for term: 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 this emissions unit. Each Report shall be submitted within 30 days after the deviation occurs.

[Authority for term: 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):

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 3745-77-07(C)(1)]

b. Emission Limitation(s):

PE shall not exceed 0.25 lb/mmBtu actual heat input

Applicable Compliance Method(s):

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

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

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



c. Emission Limitation(s):

PE shall not exceed 0.310 lb/mmBtu of actual heat input

Applicable Compliance Method(s):

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

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

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

g) Miscellaneous Requirements

(1) None.



**5. 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)<br>[Established by PTI 01-08695,<br>issued final 03/25/03] | <p>Volatile organic compound (VOC) emissions shall not exceed 10.66 pounds per day (lbs/day) and 0.69 tons per year (tpy).</p> <p>Carbon monoxide (CO) emissions shall not exceed 101.52 lbs/day and 6.60 tpy.</p> <p>Nitrogen oxide (NOx) emissions shall not exceed 7.34 lbs/day and 0.48 tpy.</p> <p>Sulfur dioxide (SO2) emissions shall not exceed 0.38 lb/day and 0.02 tpy.</p> <p>Particulate emissions (PE) shall not exceed 0.47 lb/day and 0.03 tpy.</p> <p>Visible particulate emissions shall not exceed 20% opacity as a 6-minute average.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).</p> |
| 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 3745-77-07(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 3745-77-07(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 3745-77-07(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 3745-77-07(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 3745-77-07(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 15<sup>th</sup> 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 3745-77-07(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 3745-77-07(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 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 annual gasoline usage of 9,360 gallons per year and dividing by 2,000 pounds per ton.

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

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)<br><br>[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 3745-77-07(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 3745-77-07(A)(1)]

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

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

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

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

g) Miscellaneous Requirements

(1) None.