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

1/11/2013

Certified Mail

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

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

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0125042608
Permit Number: P0110884
Permit Type: Initial Installation
County: Franklin

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA)Air Pollution Permit-to-Install (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it carefully. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

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

Environmental Review Appeals Commission
77 South High Street, 17th Floor
Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/dapc/permitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Ohio EPA DAPC, Central District Office at (614)728-3778 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,

Michael W. Ahern

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

Cc: U.S. EPA
Ohio EPA-CDO

FINAL

Division of Air Pollution Control
Permit-to-Install
for
The Ohio State University

Facility ID:	0125042608
Permit Number:	P0110884
Permit Type:	Initial Installation
Issued:	1/11/2013
Effective:	1/11/2013

Division of Air Pollution Control
Permit-to-Install
for
The Ohio State University

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Authorization

Facility ID:	0125042608
Facility Description:	Colleges, universities and professional schools.
Application Number(s):	A0044229
Permit Number:	P0110884
Permit Description:	Installation of a natural gas and #2 fuel oil-fired boiler replacing coal-fired boiler (B131).
Permit Type:	Initial Installation
Permit Fee:	$1,000.00
Issue Date:	1/11/2013
Effective Date:	1/11/2013

This document constitutes issuance to:

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

of a Permit-to-Install for the emissions unit(s) identified on the following page.

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally
Director

Authorization (continued)

Permit Number: P0110884
Permit Description: Installation of a natural gas and #2 fuel oil-fired boiler replacing coal-fired boiler (B131).

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

Emissions Unit ID:	**B270**
Company Equipment ID:	New Boiler 8
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

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

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

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

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

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

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

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

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

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

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

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

2. Severability Clause

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

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

3. General Requirements

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

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

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

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

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

4. Monitoring and Related Record Keeping and Reporting Requirements

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

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

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

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

(4) The analytical techniques or methods used.

(5) The results of such analyses.

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

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

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

(1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Central District Office.

(2) Quarterly written reports of (i) any deviations from federally enforceable emissionlimitations, operationalrestrictions, andcontroldeviceoperatingparameterlimitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Ohio EPA DAPC, Central District Office. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.

(3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, andreportingrequirements contained in this permit shall be submitted (i.e., postmarked) to the Ohio EPA DAPC, Central District Office every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.

(4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Ohio EPA DAPC, Central District Office in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

6. Compliance Requirements

a) The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

b) Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

c) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:

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

(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.

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

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

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

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

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

7. Best Available Technology

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

8. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Central District Office.

b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have

been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA DAPC, Central District Office. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

10. Applicability

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

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

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

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

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

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

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

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

12. Permit-To-Operate Application

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

13. Construction Compliance Certification

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

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

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

14. Public Disclosure

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

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

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

16. Fees

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

17. Permit Transfers

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

18. Risk Management Plans

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

19. Title IV Provisions

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

B. Facility-Wide Terms and Conditions

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

   a) None.

2. The following emissions units contained in this permit are subject to 40 CFR Part 60, Subpart Db: B270. 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, Subpart DDDDD: B270. 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.

C. Emissions Unit Terms and Conditions

1. B270, New Boiler 8

Operations, Property and/or Equipment Description:

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

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

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

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Particulate emissions (PE) shall not exceed 2.95 pounds per hour (lbs/hr). Emissions of particulate matter less than 10 microns in aerodynamic diameter (PM_{10}) shall not exceed 3.50 lbs/hr. Emissions of particulate matter less than 2.5 microns in aerodynamic diameter ($PM_{2.5}$) shall not exceed 3.13 lbs/hr. Volatile organic compound (VOC) emissions shall not exceed 1.11 lb/hr. See b)(2)a. and b)(2)c.
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)b.i.
c.	ORC 3704.03(T)	Carbon monoxide (CO) emissions shall not exceed 0.0824 lb per million British thermal units (lb/MMBtu). Sulfur dioxide (SO_2) emissions shall not exceed 0.0510 lb/MMBtu. The nitrogen oxides (NO_X) emissions limitation established by this rule is equivalent to the NO_X emissions limitation

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		established pursuant to 40 CFR Part 60, Subpart Db. See b)(2)d.
d.	OAC rule 3745-31-05(D) [Synthetic minor to avoid Non-Attainment New Source Review (NANSR)]	NO_X emissions shall not exceed 20.0 tons per rolling, 12-month period; CO emissions shall not exceed 47.09 tons per rolling, 12-month period; VOC emissions shall not exceed 3.09 tons per rolling, 12-month period; PE shall not exceed 2.86 tons per rolling, 12-month period; PM_{10} emissions shall not exceed 4.29 tons per rolling, 12-month period; $PM_{2.5}$ emissions shall not exceed 4.29 tons per rolling, 12-month period; and SO_2 emissions shall not exceed 10.20 tons per rolling, 12-month period. See c)(1) through c)(5)
e.	OAC rule 3745-17-10(B)(1)	The PE limitations established by this rule are less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3), as effective 11/30/01. See b)(2)b.ii.
f.	OAC rule 3745-17-07(A)	Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
g.	OAC rule 3745-18-31(A)(2)	The SO_2 emissions limitation established by this rule is less stringent than the SO_2 emissions limitation established pursuant to ORC 3704.03(T). See b)(2)e.
h.	OAC rule 3745-110-03	This emissions unit is exempt from the NO_X emissions limitations established in this rule pursuant to OAC rule 3745-110-02(A)(2)(b).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
i.	40 CFR Part 60, Subpart Db	Visible PE shall not exceed 20% opacity when firing number 2 distillate fuel oil, as a 6-minute average, except for one 6-minute period per hour of not more than 27% opacity. NO_X emissions shall not exceed 0.10 lb/MMBtu, as averaged per rolling, 30-day period. This emissions unit is exempt from the applicable PM emissions limitation (0.030 lb/MMBtu) established by this rule pursuant to 40 CFR 60.43b(h)(5). This emissions unit is exempt from the applicable SO_2 emissions limitation (0.20 lb/MMBtu) established by this rule pursuant to 40 CFR 60.42b(k)(2). This emissions unit is exempt from the requirements to install and operate a continuous opacity monitor (COM) pursuant to 40 CFR 60.48b(j)(2). See b)(2)f.
j.	40 CFR Part 60, Subpart A	See b)(2)g.
k.	40 CFR Part 63, Subpart DDDDD	Applicable Emission Limits in Tables 1 and 2; Work Practice Standards in Table 3 and Operating Limits in Table 4 to Subpart DDDDD of 40 CFR Part 63 (subject to change based on the issuance of the Final Action on Reconsideration of 40 CFR Part 63, Subpart DDDDD by U.S. EPA). See b)(2)h.
l.	40 CFR Part 63, Subpart A	See b)(2)i.
m.	OAC 3704.03(F)	See d)(9) through d)(12) and e)(5)

(2) Additional Terms and Conditions

a. The permittee has satisfied the BAT requirements pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for emissions units that have the potential to emit less than ten tons per year for pollutants to which National Ambient Air

Quality Standards (NAAQS) apply. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the SIP revision occurs and U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. When U.S. EPA approves the December 1, 2006, version of OAC rule 3745-31-05, these emissions limitations/control measures will no longer apply.

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

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

   ii. PE shall not exceed 0.020 lb/MMBtu;

c. The hourly PE, PM_{10}, and VOC emissions limitations were established to reflect the potential to emit for this emissions unit. It is not necessary to establish monitoring/recordkeeping or reporting requirements to ensure compliance with these limitations.

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

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

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

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

h. The requirements of 40 CFR Part 63, Subpart DDDDD are currently effective due to the January 9, 2012 decision by the United States District Court for the District of Columbia to vacate the administrative stay that U.S. EPA put in place during the reconsideration of the March, 2011 final rules. On February 7, 2012, U.S. EPA issued a "No Action Assurance" letter to facilities and indicated that U.S. EPA will exercise its enforcement discretion to not pursue enforcement action of violations of the Initial Notification deadlines established in the rule. This letter further notes that U.S. EPA has proposed revisions to the compliance dates for all units (the date by which a unit must be in compliance with the substantive requirements in the Boiler MACT rule) and to the subcategories for some units.

i. The permittee shall comply with the applicable requirements identified in 40 CFR Part 63, Subpart DDDDD in accordance with the applicable provisions of 40 CFR Part 63, Subpart A.

c) Operational Restrictions

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(7) The permittee shall comply with the applicable operational restrictions necessary to demonstrate compliance with 40 CFR Part 63, Subpart DDDDD and Subpart A.

d) Monitoring and/or Recordkeeping Requirements

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

a. Alternative 1:

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

b. Alternative 2:

For each emissions unit, the permittee shall collect a representative grab sample of oil that is burned in the emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving the emissions unit on a day when the emissions unit is in operation, the permittee shall collect a

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

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

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

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

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

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

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

e. results of quarterly relative accuracy audits;

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

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

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

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

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

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

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

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

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

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

(8) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack(s) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

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

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended.

The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

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

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

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

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

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

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

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

(14) The permittee shall comply with the applicable monitoring and/or recordkeeping requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart DDDDD and Subpart A.

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.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(3) Pursuant to OAC rule 3745-15-04 and ORC sections 3704.03(I) and 3704.031, the permittee shall submit Excess Emissions Reports (EER) within 30 days following the end of each calendar quarter to the Ohio EPA, Central District Office documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective action(s) taken (if any), of all 30-day average NO_X values in excess of the applicable NO_X emission rate (lb/MMBtu).

The reports shall also identify any predictive NO_X monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time

period of emissions until and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report.

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

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

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

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

b. These quarterly reports shall include the following:

i. the facility name and address;

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

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

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

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

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

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

viii. results and dates of quarterly relative accuracy audits;

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

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

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

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

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

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

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

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

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

a. the original model input;

b. the updated model input;

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

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

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

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

The annual report shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 of each year and shall cover the previous 12-month period. This reporting requirement may be satisfied by including the required

information in a semiannual report (due by January 31 of each year) or by including the required information in a Title V Annual Compliance Certification, if applicable.

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

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

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

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

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

(8) The permittee shall comply with the applicable reporting requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart DDDDD and Subpart A.

f) Testing Requirements

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

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

PE shall not exceed 2.95 lbs/hr (as applicable prior to U.S. EPA approving the December 1, 2006, version of OAC rule 3745-31-05 as part of the SIP).

<u>Applicable Compliance Method:</u>

The hourly PE limitation was established by multiplying the maximum heat input capacity (206 MMBtu) by the worst-case-fuel emissions factor* (0.0143 lb/MMBtu). For PE, number 2 distillate fuel oil is considered the worst-case fuel.

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

* AP-42, Volume I, Fifth Edition, Section 1.3, "Fuel Oil Combustion", Table 1.3-7, May 2010.

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

PM_{10} emissions shall not exceed 3.50 lbs/hr (as applicable prior to U.S. EPA approving the December 1, 2006, version of OAC rule 3745-31-05 as part of the SIP).

Applicable Compliance Method:

The hourly PM_{10} emissions limitation was established by multiplying the maximum heat input capacity (206 MMBtu) by the worst-case-fuel emissions factor* (0.017 lb/MMBtu). For PM_{10} emissions, number 2 distillate fuel oil is considered the worst-case fuel.

If required, compliance with the hourly PM_{10} emissions limitation shall be demonstrated through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 40 CFR Part 51, Appendix M, Method 201.

* AP-42, Volume I, Fifth Edition, Section 1.3, "Fuel Oil Combustion", Tables 1.3-2 and 1.3-7, May 2010.

c. Emissions Limitation:

$PM_{2.5}$ emissions shall not exceed 3.13 lbs/hr (as applicable prior to U.S. EPA approving the December 1, 2006, version of OAC rule 3745-31-05 as part of the SIP).

Applicable Compliance Method:

The hourly $PM_{2.5}$ emissions limitation was established by multiplying the maximum heat input capacity (206 MMBtu) by the worst-case-fuel emissions factor* (0.0152 lb/MMBtu). For $PM_{2.5}$ emissions, number 2 distillate fuel oil is considered the worst-case fuel.

If required, compliance with the hourly PM_{10} emissions limitation shall be demonstrated through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 40 CFR Part 51, Appendix M, Method 201A and Method 202.

* AP-42, Volume I, Fifth Edition, Section 1.3, "Fuel Oil Combustion", Tables 1.3-2 and 1.3-7, May 2010.

d. Emissions Limitation:

VOC emissions shall not exceed 1.11 lb/hr. (as applicable prior to U.S. EPA approving the December 1, 2006, version of OAC rule 3745-31-05 as part of the SIP).

Applicable Compliance Method:

The hourly VOC emissions limitation was established by multiplying the maximum heat input capacity (206 MMBtu) by the worst-case-fuel emissions factor* (0.0054 lb/MMBtu). For VOC emissions, natural gas is considered the worst-case fuel.

If required, compliance with the hourly VOC emissions limitation shall be demonstrated through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and Methods 18, 25 or 25A.

* AP-42, Volume I, Fifth Edition, Section 1.4, "Natural Gas Combustion", Table 1.4-2, July 1998.

e. Emissions Limitation:

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

Applicable Compliance Method:

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

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

f. Emissions Limitations:

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

Applicable Compliance Method:

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

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

g. Emissions Limitation:

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

Applicable Compliance Method:

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

h. Emissions Limitations:

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

Applicable Compliance Method:

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

Total MI = $MI_g + MI_o$

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

Monthly heat input from natural gas is calculated as follows:

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

where,
MI_g = monthly heat input from pipeline natural gas in MMBtu;
Q_g = metered flow rate of gaseous fuel combusted during unit operation in thousand standard cubic feet per month;
GCV_g = gross calorific value of natural gas, as determined by sampling (for each monthly sample of pipeline natural gas, or as verified by the contractual supplier at least once every month pipeline natural gas is combusted) using ASTM D1826-88, ASTM D3588-91, ASTM D4891-89, GPA Standard 2172-86 "Calculation of Gross Heating Value, Relative Density and Compressibility Factor for Natural Gas Mixtures from Compositional Analysis," or GPA Standard 2261-90 "Analysis for Natural Gas and Similar Gaseous Mixtures by Gas Chromatography," Btu/scf; and
10^3 = conversion of thousand Btu to MMBtu.

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

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

where,
MI_o = monthly heat input from number 2 distillate fuel oil inn MMBtu;
$V_{oil\text{-}rate}$ = volume rate of number 2 distillate fuel oil consumed per month in gallons
D_{oil} = density of number 2 distillate fuel oil in lb/gal;
GCV_o = gross calorific value of oil, as measured by ASTM D240-87, ASTM D2015-91, or ASTM D2382-88 for each batch of oil burned, Btu/unit mass, in lbs; and
10^3 = conversion of thousand Btu to MMBtu.

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

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

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

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

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

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

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

For SO_2 emissions, the total monthly heat input for each fuel (MI_g and MI_o) is multiplied by the respective emissions factor for each fuel (0.0006 lb/MMBtu for natural gas and 0.0510 lb/MMBtu for number 2 distillate fuel oil) and then converted to tons by dividing by 2,000. (Note that the SO_2 emissions factor for number 2 distillate fuel oil is dependent upon the sulfur content of the number 2 distillate fuel oil. The permittee may use the permit allowable sulfur content of 0.05 weight percent to calculate a conservative value of SO_2 emissions from number 2 distillate fuel oil provided the sulfur analysis records indicate that the permit allowable sulfur content has not been exceeded. Alternatively, the permittee may determine the monthly SO_2 emissions from number 2 distillate fuel oil by calculating the SO_2 emissions factor using the actual average monthly sulfur content of the number 2 distillate fuel oil received.)

i. Emissions Limitation:

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

Applicable Compliance Method:

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

j. Emissions Limitation:

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

Applicable Compliance Method:

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

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

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

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

i. 0.10 lb NO_X/MMBTU; and

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

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

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

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

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

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

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

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

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

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

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

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

(7) The permittee shall comply with the applicable testing requirements necessary to demonstrate compliance with 40 CFR Part 63, Subpart DDDDD and Subpart A.

g) Miscellaneous Requirements

(1) None.