



Environmental
Protection Agency

Ted Strickland, Governor
Lee Fisher, Lt. Governor
Chris Korleski, Director

11/10/2010

Certified Mail

Robert Counselman
Campbell Soup Company
Campbell Soup Supply Company LLC
12-773 State Route 110
Napoleon, OH 43545

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0335010105
Permit Number: P0106678
Permit Type: Initial Installation
County: Henry

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

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the permit. A public notice will appear in the Ohio EPA Weekly Review and the local newspaper, Northwest-Signal. A copy of the public notice 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 by clicking the "Issued Air Pollution Control Permits" link. 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 and Ohio EPA DAPC, Northwest District Office
Permit Review/Development Section 347 North Dunbridge Road
Ohio EPA, DAPC Bowling Green, OH 43402
122 South Front Street
Columbus, Ohio 43215

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 in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Ohio EPA DAPC, Northwest District Office at (419)352-8461.

Sincerely,

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

Cc: U.S. EPA Region 5 - *Via E-Mail Notification*
Ohio EPA-NWDO; Michigan; Indiana; Canada

PUBLIC NOTICE
Issuance of Draft Air Pollution Permit-To-Install
Campbell Soup Company

Issue Date: 11/10/2010
Permit Number: P0106678
Permit Type: Initial Installation
Permit Description: Installation of three 180 mmBtu/hr, natural gas fired steam boilers, equipped with #2 fuel oil backup and continuous emissions monitors (CEM).
Facility ID: 0335010105
Facility Location: Campbell Soup Company
Campbell Soup Company LLC, 12-773 State Route 110
Napoleon, OH 43545
Facility Description: Specialty Canning

Chris Korleski, Director of the Ohio Environmental Protection Agency, 50 West Town Street, Columbus Ohio, has issued a draft action of an air pollution control permit-to-install (PTI) for an air contaminant source at the location identified above on the date indicated. Installation of the air contaminant source may proceed upon final issuance of the PTI. Comments concerning this draft action, or a request for a public meeting, must be sent in writing no later than thirty (30) days from the date this notice is published. All comments, questions, requests for permit applications or other pertinent documentation, and correspondence concerning this action must be directed to Donald Waltermeyer at Ohio EPA DAPC, Northwest District Office, 347 North Dunbridge Road, Bowling Green, OH 43402 or (419)352-8461. The permit can be downloaded from the Web page: www.epa.ohio.gov/dapc



Permit Strategy Write-Up

**STAFF DETERMINATION FOR THE APPLICATION TO CONSTRUCT
UNDER THE PREVENTION OF SIGNIFICANT DETERIORATION REGULATIONS
FOR CAMPBELL SOUP COMPANY
HENRY COUNTY, OHIO
PTI NUMBER P0106678**

The Clean Air Act and regulations promulgated thereunder require that major air pollution sources undergoing construction or modification comply with all applicable Prevention of Significant Deterioration (PSD) provisions and nonattainment area New Source Review requirements. The federal PSD rules govern emission increases in attainment areas for major sources, which are sources with the potential to emit 250 tons per year or more of any pollutant regulated under the Clean Air Act, or 100 tons per year or more if the source is included in one of 28 source categories. In nonattainment areas, the definition of a major source is one having at least 100 tons per year potential emissions. A major modification is one resulting in a contemporaneous increase in emissions which exceeds the significance level of one or more pollutants. Any changes in actual emissions within a five-year period are considered to be contemporaneous. In addition, Ohio now has incorporated the PSD and NSR requirements by rule under OAC 3745-31.

Both PSD and nonattainment rules require that certain analyses be performed before a facility can obtain a permit authorizing construction of a new source or major modification to a major source. The principal requirements of the PSD regulations are as follows:

- 1) Best Available Control Technology (BACT) review - A detailed engineering review must be performed to ensure that BACT is being installed for the pollutants for which the new source is a major source.
- 2) Ambient Air Quality Review - An analysis must be completed to ensure the continued maintenance of the National Ambient Air Quality Standards (NAAQS) and that any increases in ambient air pollutant concentrations do not exceed the incremental values set pursuant to the Clean Air Act.

For nonattainment areas, the requirements are:

- 1) Lowest Achievable Emissions Rate (LAER) - New major sources must install controls that represent the lowest emission levels (highest control efficiency) that have been achieved in practice.
- 2) The emissions from the new major source must be offset by a reduction of existing emissions of the same pollutant by at least the same amount, and a demonstration must be made that the resulting air quality shows a net air quality benefit. This is more completely described in the Emission Offset Interpretative Ruling as found in Appendix S of 40 CFR Part 51.
- 3) The facility must certify that all major sources owned or operated in the state by the same entity are either in compliance with the existing State Implementation Plan (SIP) or are on an approved schedule resulting in full compliance with the SIP.

For rural ozone nonattainment areas, the requirements are:

- 1) LAER - New major sources must install controls that represent the lowest emissions levels (highest control efficiency) that have been achieved in practice.



- 2) The facility must certify that all major sources owned or operated in the state by the same entity are either in compliance with the existing SIP or are on an approved schedule resulting in full compliance with the SIP.

Finally, New Source Performance Standards (NSPS), SIP emission standards and public participation requirements must be followed in all cases.

Site/Facility Description

Campbell Soup Company is a food manufacturing facility located in Henry County. Campbell is a Major PSD facility for SO₂, NO_x, PE, and CO. Henry County is classified as attainment for all pollutants.

Project Description

Campbell applied for and was issued PTI P0105688 on 4/22/2010 for the installation of a 180 mmBtu/hr natural gas boiler (B012). At the time the company requested that permit, they had not anticipated the current request for an additional two 180 mmBtu/hour natural gas boilers (B013 and B014). The three boilers will replace five (5) existing natural gas boilers (B003 – B007), which will be decommissioned. The existing boilers had become unreliable. For PSD and netting purposes, the installation of the three boilers is considered one project.

Process Description

The three (3) new boilers will serve a common steam header. As a result, the steam produced by each boiler is not dedicated to a specific process line. Although the primary use for the new boilers is for process steam, they also provide steam for comfort heating of work spaces. In the event that the main boilers were to go out of service due to scheduled or unscheduled maintenance, Campbell Soup Company will still have the ability to run their operation with the installation of the new boilers. Multiple process lines at the plant will use the steam generated from the new boilers, including the Stork cookers, AB rotary cookers, and Lubeca batch cookers. Steam production for the process lines averages 225,000 pounds/hour. In the winter months the steam demand increases, an average of, 100,000 pounds/hour for building heat.

Applicable Regulations

Federal Rules

- 40 CFR Part 60, Subpart Db:** Emissions units B012, B013, and B014 are subject to the requirements of this rule.
- 40 CFR Part 63, Subpart DDDDD:** Emissions units B012, B013, and B014 are subject to the requirements of this proposed rule.

PSD Applicability

Campbell Soup Company is currently classified as a PSD “major” stationary source for SO₂, NO_x, PE, and CO. The installation of the three (3) new 180 mmBtu/hour boilers, emissions unit B012, B013, and B014, have the potential to generate emissions, prior to operational restrictions and netting, that exceed the PSD significance



levels for NOx, CO, PM₁₀, and PM_{2.5}. The company requested a #2 fuel oil restriction to reduce emissions, and the netting analysis demonstrated that Campbell Soup Company has sufficient creditable net emissions to offset increases of NOx, PM₁₀, and PM_{2.5}. However, the net emission increase of CO exceeded the annual significance level of 40 tons. Therefore, this project is considered a major modification for CO and a PSD review was required for that pollutant.

Netting Analysis Summary				
Pollutant	Contemporaneous Increase	Creditable Net Emissions	Net Emissions Change	PSD Significance Level
NOx	116.27	-127.73	-11.46	40
CO	177.39	-14.65	162.74*	100
PE	29.95	-36.61	-6.66	25
PM10	29.95	-31.50	-1.55	15
PM2.5	29.95	-20.60	9.35	10
SO2	1.71	-493.51	-491.80	40
VOC	12.75	-2.89	9.86	40

*Net Emissions Change Exceeds PSD Significance Level.

Best Available Control Technology (BACT) Analysis

BACT Review

The Campbell Soup Company is subject to PSD regulations which mandate a case-by-case BACT analysis be performed for each proposed new or modified emissions unit at which a net increase of CO will occur. Emissions units B012, B013, and B014 require CO BACT analyses. The application used a "top-down" approach to determine an appropriate level of control. As part of the application for any emissions unit regulated under the PSD requirements, an analysis must be conducted that demonstrates that Best Available Control Technology (BACT) will be employed for every affected pollutant.

Summary of BACT Requirements

BACT is defined as an emission limitation for new or modified sources to be achievable on a case-by-case basis while considering the following three factors:

- 1) Environmental Impact;
- 2) Energy Impact; and
- 3) Economic Impact.

The BACT analysis includes air pollution control technologies with the potential to be applied to the emission source for the pollutant under consideration. It is pertinent to point out that BACT must be no less stringent than limitations defined by the standard of a State Implementation Plan, a National Emission Standard for Hazardous Air Pollutants, or a New Source Performance Standard.

The BACT analysis requires a "Top-Down" approach (*NSR Workshop Manual*), which evaluates the control technology with highest efficiency first, and arrives at the final controls in a 5-step process:

- 1) Identifying All Applicable Control Technologies;
- 2) Eliminating Technically Infeasible Control Technologies;
- 3) Ranking Remaining Control Technologies by Control Effectiveness;



- 4) Evaluating Cost Effectiveness of Controls and Document Results; and
- 5) Selecting BACT.

As can be seen from the list above, the final stage of the analysis is the actual selection of the most cost effective air pollution control device. The permitting authority generally sets levels for cost effectiveness. Once a cost-effective control device has been identified for a particular source, that device will be selected as BACT and will be implemented as part of the overall project for that source. If no control systems are deemed to be cost effective, BACT will be no abatement.

PROJECT BACT ANALYSIS/ The 5-step BACT process

Step #1 -- Identify All Applicable Control Technologies

CO emissions can be controlled at the combustion source or post-combustion in the flue gas exhaust. The following technologies have been identified for control of CO emissions:

Applicable Control Technologies:

- Catalytic Oxidation
- Thermal Oxidation
- Good Combustion Practices (GCP)

Step #2 – Eliminate Technically Infeasible Options

Catalytic Oxidation

There are a number of manufacturers who offer oxidation catalysts to control CO emissions. The catalysts are a flue gas treatment technology with a typically honeycomb-type of arrangement to allow the maximum surface area exposure to a given gas flow. CO catalysts are generally precious metal based. Oxidation catalysts require a minimum temperature for proper operation, which would necessitate that the catalyst be installed upstream of the condenser (condenser exhaust ~ 100F).

With respect to energy factors, add-on post-combustion controls on boilers of this capacity will noticeably reduce the thermal efficiency of the unit. Catalyst modules increase the back-pressure downstream of the combustion chamber which impacts the operation of the boiler. In addition, spent catalysts module disposal impacts the environment. A review of the RBLC indicates that no catalyst system has been installed on similar natural gas boilers; however, the use of oxidation catalyst modules as add-on emission control is available and technically feasible for the reduction of CO emissions from boilers.

Thermal Oxidation

High temperature oxidation is another method for controlling emissions of CO in the flue gas. Because a natural gas fired boiler is essentially a thermal oxidation device, adding this type of control would seem to be redundant. The application of thermal oxidation would require additional fuel usage, and would result in secondary emissions from that combustion process. A review of the RBLC for natural gas boilers did not reveal any documentation of facilities that have specified thermal oxidation as BACT. Therefore, the use of thermal oxidation system is considered technically infeasible.

Combustion Controls

CO emissions primarily result from incomplete combustion. The oxidation of CO to CO₂ is dependent upon temperature and residence time of the combustion process. The use of good combustion practices (GCP),



such as high combustion temperatures, adequate combustion air, and proper air/fuel mixing can minimize CO emissions. Proper design and operation of a boiler effectively acts like a thermal oxidizer for control of CO emissions. Therefore, GCP is considered feasible control technology for CO.

Step #3 -- Rank Remaining Control Technologies by Control Effectiveness

Catalytic oxidation and good combustion practices are technically feasible for the reduction of CO emissions from boilers. The company proposes to operate the boilers with GCP. The addition of an oxidation catalyst would result, in approximately, a 90% total combined reduction of CO. In top-down order of decreasing efficiency, the feasible CO controls are:

- Oxidation Catalyst and Good Combustion Practices = 90% control
- Good Combustion Practices

Step #4 -- Evaluate Most Effective Controls and Document Results

Campbell Soup Company had an engineering firm complete a cost estimate for the installation and operation of a regenerative catalytic oxidizer for each boiler. At the potential emission level from each boiler of 59.13 TPY, the cost of the catalytic system on an annualized basis was determined to be \$704,765. If the catalytic oxidizer achieved an average of 90% reduction of CO, the annual tonnage of CO that could be reduced is 53.22 tons. The resulting cost/ton of pollutant reduced would be \$13,242. This analysis does not include the increase in emissions caused by the combustion of natural gas by the oxidizer. Based on the cost effectiveness study, catalytic oxidation is considered economically infeasible as BACT.

Step #5 -- Select BACT

Good combustion practices is determined to be BACT for CO at Campbell Soup Company. The RBLC supports this determination for similar-sized natural gas fired boilers.

Modeling

Air dispersion modeling was performed for the CO emissions from the installation of B012, B013, and B014. In addition, air toxic pollutants exceeding one ton per year were also evaluated (n-Hexane). AERMOD was used by Campbell Soup Company for their dispersion modeling analysis. Modeling demonstrated that the CO concentrations were below the full NAAQS for CO allowed by the U.S. EPA. The predicted ambient concentrations of air toxics results also showed concentrations below the applicable pollutant specific MAGLC.

Conclusions

Based upon the analysis of the permit to install application and its supporting documentation provided by the company, the Ohio EPA staff has determined that the proposed increase will comply with all applicable State and federal environmental regulations and that the requirements for BACT are satisfied. Therefore, the Ohio EPA staff recommends that a permit to install be issued to the Campbell Soup Company.



DRAFT

**Division of Air Pollution Control
Permit-to-Install
for
Campbell Soup Company**

Facility ID: 0335010105
Permit Number: P0106678
Permit Type: Initial Installation
Issued: 11/10/2010
Effective: To be entered upon final issuance



Division of Air Pollution Control
Permit-to-Install
for
Campbell Soup Company

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Authorization

Facility ID: 0335010105

Facility Description:

Application Number(s): A0039746, A0040481

Permit Number: P0106678

Permit Description: Installation of three 180 mmBtu/hr, natural gas fired steam boilers, equipped with #2 fuel oil backup and continuous emissions monitors (CEM).

Permit Type: Initial Installation

Permit Fee: \$2,500.00 *DO NOT send payment at this time, subject to change before final issuance*

Issue Date: 11/10/2010

Effective Date: To be entered upon final issuance

This document constitutes issuance to:

Campbell Soup Company
Campbell Soup Company LLC
12-773 State Route 110
Napoleon, OH 43545

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

Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402
(419)352-8461

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

Chris Korleski
Director



Authorization (continued)

Permit Number: P0106678
Permit Description: Installation of three 180 mmBtu/hr, natural gas fired steam boilers, equipped with #2 fuel oil backup and continuous emissions monitors (CEM).

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

Emissions Unit ID: B012
Company Equipment ID: B012
Superseded Permit Number: P0105688
General Permit Category and Type: Not Applicable

Group Name: B013/B014

Emissions Unit ID:	B013
Company Equipment ID:	B013
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B014
Company Equipment ID:	B014
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.

Effective Date: To be entered upon final issuance

- 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, Northwest District Office.

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- (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, 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, Northwest 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, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the Ohio EPA DAPC, Northwest 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, Northwest 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:

Effective Date: To be entered upon final issuance

- (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, Northwest 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, Northwest District Office.

Effective Date: To be entered upon final issuance

- 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, Northwest 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.

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- 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 entered upon completion of construction and prior to start-up.

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- 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

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1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
 - a) None.

C. Emissions Unit Terms and Conditions

Effective Date: To be entered upon final issuance

1. B012

Operations, Property and/or Equipment Description:

180 mmBtu/hr, natural gas fired steam boiler equipped with #2 fuel oil backup and continuous emissions monitor (CEM)

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)c., b)(1)j., d)(8), d)(9), d)(10) and e)(5).

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D)	Opacity Restrictions [See b)(2)g. and b)(2)h.] See b)(2)a. and b)(2)b. <u>Emissions from Natural Gas Usage:</u> 0.04 pound nitrogen oxides (NO _x)/mmBtu; 31.54 tons NO _x /year 0.015 pounds particulate matter 10 microns or less in size (PM ₁₀)/mmBtu; 11.83 tons PM ₁₀ /year <u>Emissions from #2 Fuel Oil Usage:</u> 0.12 pound NO _x /mmBtu; 18.36 tons NO _x /rolling, 12-month period 0.02 pound PM ₁₀ /hour; 3.06 tons PM ₁₀ /rolling, 12-month period 0.0015 pound SO ₂ /mmBtu; 0.23 ton SO ₂ /rolling 12-month period
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	See b)(2)c. <u>Emissions from Natural Gas Usage:</u> 0.0054 pound volatile organic compounds (VOC)/mmBtu; 4.25 tons VOC/year 0.0006 pound sulfur dioxide

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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		(SO ₂)/mmBtu; 0.48 ton SO ₂ /year <u>Emissions from #2 Fuel Oil Usage:</u> 0.0014 pound VOC/mmBtu; 0.21 ton VOC/year
c.	OAC rule 3745-31-05(A)(3), as effective 12/01/06	See b)(2)d.
d.	OAC rules 3745-31-10 through 3745-31-20	See b)(2)e. <u>Emissions from Natural Gas Usage:</u> 0.075 pound carbon monoxide (CO)/hour; 59.13 tons CO/rolling, 12-month period <u>Emissions from #2 Fuel Oil Usage:</u> 0.037 pound CO/mmBtu; 5.66 tons CO/rolling, 12-month period
e.	ORC 3704.03(T)	See b)(2)f.
f.	OAC rule 3745-17-07(A)	See b)(2)g. and b)(2)h.
g.	OAC rule 3745-17-10(B)(1)	See b)(2)i.
h.	OAC rule 3745-18-06(D)	See b)(2)i.
i.	OAC rule 3745-110-03(C)	See b)(2)i.
j.	OAC rule 3745-114-01 ORC 3704.03(F)	See d)(8) through d)(10)
k.	40 CFR Part 60, Subpart Db (40 CFR 60.40b – 60.49b)	See b)(2)h. and b)(2)j.
l.	40 CFR Part 63, Subpart DDDDD (40 CFR 63.7480 – 7575)	See b)(2)k.

(2) Additional Terms and Conditions

a. This permit establishes the following federally enforceable emission limitations for purposes of limiting potential to emit (PTE) to avoid Prevention of Significant Deterioration (PSD) applicability for NO_x, and PM₁₀. The federally enforceable emission limitations are based on the operational restrictions contained in c)(1) which limits fuel usage type and the following burner design performance specifications for each fuel:

- i. emission limitation for natural gas fuel use:
 - (a) 0.04 pound NO_x per mmBtu; and
 - (b) 0.015 pound PM₁₀ per mmBtu.

All emissions of particulate matter from the use of natural gas are PM₁₀.

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The federally enforceable emission limitations established above for the use of natural gas result in an annual PTE of 31.54 tons NO_x and 11.83 tons PM₁₀. Annual PTE levels were determined by multiplying the federally enforceable pound/mmBtu emission limitations by a maximum heat input of 180 mmBtu/hour and a maximum operating schedule of 8,760 hours/year and dividing by 2,000 pounds/ton. The annual PTE levels have been established in tons per year limitations [see b)(1)a.].

ii. emission limitation for #2 fuel oil use:

- (a) 0.12 pound NO_x per mmBtu;
- (b) 0.0015 pound SO₂/mmBtu; and
- (c) 0.02 pound PM₁₀ per mmBtu.

All emissions of particulate matter from the use #2 fuel oil are PM₁₀.

The annual PTE for emissions from the use of #2 fuel oil are limited further by additional federally enforceable requirements on #2 fuel usage [see b)(2)b., c)(2), and c)(3)]

b. This permit establishes the following additional federally enforceable emission limitations for purposes of limiting the annual PTE for emissions associated with the use of #2 fuel oil. The federally enforceable emission limitations are based on the operational restrictions contained in c)(2) and c)(3) which restrict #2 fuel oil usage:

- i. 18.36 tons NO_x per rolling, 12-month period;
- ii. 5.66 tons CO per rolling, 12-month period;
- iii. 3.06 tons PM₁₀ per rolling, 12-month period;
- iv. 0.23 ton SO₂/rolling 12-month period.

c. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit for VOC. The requirements of this rule are equivalent to the requirements established pursuant to OAC rule 3745-31-05(D) for SO₂; therefore, the permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit for SO₂.

On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by state regulations for NAAQS pollutants less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved

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SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limits/control measures no longer apply.

Until this rule revision is approved by the U.S. EPA, BAT requirements have been determined to be:

- i. compliance with the fuel type and usage restrictions;
 - ii. compliance with the sulfur content restriction in c)(2);
 - iii. compliance with the emission limitations contained in b)(1)b; and
 - iv. compliance with the SO₂ emission limitations established under OAC rule 3745-31-05(D).
- d. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3)(a) do not apply to the VOC and SO₂ emissions from this air contaminant source, taking into account the following restrictions established in this permit which results in emissions for each pollutant of less than 10 tons per year:

- i. fuel type and usage restrictions; and
- ii. sulfur content restriction.

[Note: The worst case operating scenario for VOC emissions has been determined to be when the boiler is operated on natural gas at a rate of 8,760 hours/year. The worst case operating scenario for SO₂ emissions has been determined to be when the boiler is operated at the maximum annual #2 fuel oil usage rate in c)(3) and with natural gas for the remainder of the year.]

- i. The potential to emit for VOC emissions from natural gas combustion is calculated based upon an emission factor of 5.5 pounds/10⁶ scf [AP-42 Chapter 1.4, 7/1998] multiplied by a conversion factor of 10⁶ scf/1020 mmBtu, a maximum heat input of 180 mmBtu/hour, and the maximum operating schedule of 8,760 hours/year, and then divide by 2,000 pounds/ton (4.25 TPY).
- ii. The potential to emit of SO₂ from this emissions unit (0.61 TPY) is calculated by summing the SO₂ emissions from #2 fuel oil combustion at the maximum annual usage rate and the SO₂ emissions from the combustion of natural gas for the remainder of the year (7,060 hours/year), where:
 - (a) The SO₂ emissions from #2 fuel oil combustion are based upon an emission factor of (142*S) pounds/1000 gallons [AP-42 Chapter 1.3, (5/2010)], where S = the fuel sulfur content in percent by weight (0.0015). The annual emissions are estimated by multiplying the emission factor (0.213 lb/1000 gallons) by the

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maximum annual fuel usage restriction of 2,142,833 gallons/year, and then dividing by 2,000 pounds/ton (0.23 TPY).

- (b) The SO₂ emissions from natural gas combustion are calculated based upon an emission factor of 0.6 pound/10⁶ scf [AP-42 Chapter 1.4, 7/1998] multiplied by a conversion factor of 10⁶ scf/1020 mmBtu, the maximum heat input of 180 mmBtu/hour, and the maximum operating schedule of 7,060 hours/year, and then divided by 2,000 pounds/ton (0.38 TPY).
- e. The permittee shall employ best available control technology (BACT) for this emissions unit. BACT has been determined to be the following emission limitations:
 - (i) for natural gas usage: 0.075 pound CO per mmBtu; and 59.13 tons CO per rolling, 12-month period; and
 - (ii) for #2 fuel oil usage: 0.037 pound CO per mmBtu; and 5.66 tons CO per rolling, 12-month period.

The BACT analysis determined that no add-on controls were cost effective for the reduction of CO.

- f. The BAT requirements under ORC 3704.03(T) have been determined to be compliance with the pound per mmBtu requirements established pursuant to OAC rule 3745-31-05(D) for NO_x and PM₁₀ and OAC rules 3745-31-10 through 3745-31-20 for CO.
- g. Visible particulate emissions while burning natural gas shall not exceed 20 percent opacity, as a six-minute average, except as provided by rule. The visible particulate emission limitation established by 40 CFR Subpart Db is more stringent than OAC rule 3745-17-07(A) during #2 fuel oil use [see b)(2)h.]
- h. Visible particulate emissions while burning #2 fuel oil shall not exceed 20 percent opacity, as a six-minute average, except for one 6-minute period per hour of not more than twenty-seven percent (27%) opacity.
- i. The emission limitation established by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).
- j. Within 180 days of the effective date of this permit, the permittee shall develop and maintain a written quality assurance/quality control plan for the continuous NO_x monitoring system, designed to ensure continuous valid and representative readings of NO_x emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative

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accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

- k. This emissions unit is subject to a case-by-case MACT determination pursuant to section 112(j) of the Clean Air Act (CAA) due to the June 8, 2007 D.C. Circuit Court of Appeals decision to vacate the Boiler MACT (40 CFR Part 63, Subpart DDDDD).

If notified by the Ohio EPA or U.S. EPA, the permittee shall submit an application for a revision to this facility's Title V permit that meets the requirements of 40 CFR 63.52(a)(2) pertaining to case-by-case MACT determinations. The 30-day clock for submittal of a 112(j) application does not begin until such notification is made by Ohio EPA or U.S. EPA.

- l. Prevention of Significant Deterioration (PSD) requirements for particulate matter equal to or less than 2.5 microns in size (PM_{2.5}) are being implemented through the PM₁₀ Surrogate Policy issued by EPA in 1997. For purposes of demonstrating that PM₁₀ is a reasonable surrogate for PM_{2.5}, all emissions of PM₁₀ will be considered PM_{2.5}.

c) Operational Restrictions

- (1) The permittee shall only burn natural gas or #2 fuel oil in this emissions unit.
- (2) The #2 fuel oil combusted in this emissions unit shall only be #2 fuel oil, as defined by the American Society for Testing and Materials in ASTM D396-78, 89, 90, 92, 96, or 98, "Standard Specification for Fuel Oils". The sulfur content of the #2 fuel oil shall not exceed 0.0015 percent, by weight.
- (3) The following operational restrictions are being established for purposes of establishing federally enforceable requirements which limit PTE [see b)(2)b.].
 - a. The maximum #2 fuel oil usage for this emissions unit shall not exceed 2,142,833 gallons per year, based upon a rolling, 12-month summation of the monthly fuel usage.
 - b. To ensure enforceability during the first 12 calendar months of operation, the permittee shall not exceed the fuel usage levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Usage of #2 fuel oil (gallons)
1	937,805
1-2	1,875,610
1-12	2,142,833

The permittee has proposed the use of #2 fuel oil in the event of a natural gas curtailment. The annual fuel usage restriction of 2,142,833 gallons/year only represents 1,700 hours of operation per year based on a maximum hourly fuel usage rate of 1,260.49 gallons/hour. During continuous operation of this emissions unit with #2 fuel oil, the permittee could potentially use 937,805 gallons in one calendar month.

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After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual fuel usage limitation for #2 fuel oil shall be based upon a rolling, 12-month summation of the monthly fuel usage rates.

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than natural gas or #2 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (2) 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 fuel oil type (number 2, 4, or 6), the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in pounds/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.

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 D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the Director.

- (3) In lieu of the requirements of d)(2) for the sulfur content of #2 fuel oil, the permittee may keep records of fuel oil supplier certification, which shall include the following information:
 - a. The name of the oil supplier.
 - b. A statement from the oil supplier that the oil complies with the specifications under the definition of 'distillate oil' in 40 CFR 60.41c.
 - c. The sulfur content of the oil.
- (4) The permittee shall maintain monthly records of the following information:
 - a. the amount of #2 fuel oil burned, in gallons/month; and
 - b. the rolling, 12-month summation of the #2 fuel usage rates, in gallons.

Also, during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative fuel usage for each calendar month.

- (5) Each continuous NO_x monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 2. At least 45 days before commencing certification testing of the continuous NO_x monitoring system(s), the

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permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of NO_x emissions from the continuous monitor(s), in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

- (6) Prior to the installation of the continuous NO_x monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the requirements in 40 CFR Part 60, Appendix B, Performance Specifications 2 for approval by the Ohio EPA, Central Office. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous NO_x monitoring system meets the requirements of Performance Specification 2. 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.

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

- (7) The permittee shall install, operate, and maintain equipment to continuously monitor 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 Parts 60.

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

- a. emissions of NO_x in parts per million on an instantaneous (one-minute) basis;
- b. emissions of NO_x in all units of the applicable standard(s) in the appropriate averaging period;
- c. results of quarterly cylinder gas audits;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
- f. hours of operation of the emissions unit, continuous NO_x monitoring system, and control equipment;

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- g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous NO_x monitoring system;
 - h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous NO_x monitoring system; as well as,
 - i. the reason (if known) and the corrective actions taken (if any) for each such event in d)(7)g. and d)(7)h.
- (8) The permit to install application for emissions units B012, B013, and B014 was evaluated based on the actual materials and the design parameters of the emissions units' 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., "2" hours per day and "" 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):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

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- 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: Hexane

TLV (mg/m³): 176.237

Maximum Hourly Emission Rate (lbs/hr): 0.97

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m³): 4.1

MAGLC (µg/m³): 4,196

The permittee, has demonstrated that emissions of Hexane, from emissions units B012, B013, and B014 are calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); 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).

- (9) 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.

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- (10) 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.

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.

e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas or #2 fuel oil was burned in the emissions unit. These reports shall be submitted to Ohio EPA, Northwest District Office (NWDO) within 30 days after the deviation occurs.
- (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. all exceedances of the rolling, 12-month fuel oil usage limitation for this emissions unit; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative fuel usage;
 - ii. all exceedances of the rolling, 12-month NO_x, CO and PM₁₀ emission limitations; and

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- iii. all exceedances of the #2 fuel oil sulfur restriction.
- 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 reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

- (3) Pursuant to 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. actual start-up date (within 15 days after such date); and
 - c. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio EPA, Northwest District Office
Division of Air Pollution Control
347 N. Dunbridge Rd.
Bowling Green, Ohio 43402

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

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- i. the facility name and address;
- ii. the manufacturer and model number of the continuous NO_x and other associated monitors;
- iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;
- iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;
- v. the total 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 continuous NO_x monitoring system while the emissions unit was in operation;
- viii. results and dates of quarterly cylinder gas audits;
- ix. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));
- x. unless previously submitted, the results of any relative accuracy test audit showing the continuous NO_x monitor out-of-control and the compliant results following any corrective actions;
- xi. the date, time, and duration of any/each malfunction** of the continuous NO_x monitoring system, emissions unit, and/or control equipment;
- xii. the date, time, and duration of any downtime** of the continuous NO_x monitoring system and/or control equipment while the emissions unit was in operation; and
- xiii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (xii).

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

- (5) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air

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Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the quarterly deviation (excursion) reports. If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

f) Testing Requirements

- (1) 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 such emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the following limitations involving the use of natural gas:
 - i. 0.04 pound NO_x per mmBtu; and
 - ii. 0.075 pound CO per mmBtu.
 - c. When the emission unit is first fired with #2 fuel oil for purposes other than routine "maintenance" procedures (i.e. monthly checks to verify the operating condition of the boiler), the permittee shall conduct testing within 60 days after the initial firing with #2 fuel oil to demonstrate compliance with the following when firing #2 fuel oil:
 - i. 0.12 pound NO_x per mmBtu; and
 - ii. 0.037 pound CO per mmBtu.
 - d. The following test methods shall be employed to demonstrate compliance with the above emission limitations:
 - i. for NO_x, Methods 1-4 and 7E of 40 CFR Part 60, Appendix A; and
 - ii. for CO, Methods 1-4 and 10 of 40 CFR Part 60, Appendix A.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO.
 - e. The test(s) shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Ohio EPA, NWDO.
 - f. 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, NWDO. 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, NWDO's refusal to accept the results of the emission test(s).

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

[Note: In accordance with the General Provisions of 40 CFR Part 60, a written report of the results of the emission test(s) must be provided within the deadline specified in f)(1)a.]

- (2) Within 60 days of the effective date of this permit, the permittee shall conduct certification tests of the continuous NO_x monitoring system in units of the applicable standard(s) to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specifications 2; 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 continuous NO_x 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 Specifications 2; and ORC section 3704.03(I).

- (3) Compliance with the emission limitations in Section b)(1) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitations: Natural Gas Combustion

0.04 pound NO_x/mmBtu

31.54 tons NO_x/rolling, 12-month period

Applicable Compliance Method

The pound/mmBtu limitation is based on the burner manufacturer's guarantee. Compliance with the pound/mmBtu limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 7E of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO.

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The annual emission limitation was established by multiplying the pound/mmBtu limitation by a maximum heat input of 180 mmBtu/hour and a maximum operating schedule of 8,760 hours/year and dividing by 2,000 pounds/ton. Therefore, provided compliance is demonstrated with the pound/mmBtu limitation, compliance with the annual limitation shall also be demonstrated.

b. Emission Limitations: Natural Gas Combustion

0.075 pound CO/mmBtu

59.13 tons CO/rolling, 12-month period

Applicable Compliance Method

The pound/mmBtu limitation is based on the burner manufacturer's guarantee. Compliance with the pound/mmBtu limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO.

The annual emission limitation was established by multiplying the pound/mmBtu limitation by a maximum heat input of 180 mmBtu/hour and a maximum operating schedule of 8,760 hours/year and dividing by 2,000 pounds/ton. Therefore, provided compliance is demonstrated with the pound/mmBtu limitation, compliance with the annual limitation shall also be demonstrated.

c. Emission Limitations: Natural Gas Combustion

0.015 pound PM₁₀/mmBtu

11.83 tons PM₁₀/rolling, 12-month period

Applicable Compliance Method

The pound/mmBtu limitation is based on the burner manufacturer's guarantee. If required, compliance with the pound/mmBtu limitation shall be demonstrated in accordance with Methods 201/201A and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office (NWDO).

The annual emission limitation was established by multiplying the pound/mmBtu limitation by a maximum heat input of 180 mmBtu/hour and a maximum operating schedule of 8,760 hours/year and dividing by 2,000 pounds/ton. Therefore, provided compliance is demonstrated with the pound/mmBtu limitation, compliance with the annual limitation shall also be demonstrated.

d. Emission Limitations: #2 Fuel Oil Combustion

0.12 pound NO_x/mmBtu

18.36 tons NO_x/rolling, 12-month period

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Applicable Compliance Method

The pound/mmBtu limitation is based on the burner manufacturer's guarantee. Compliance with the pound/mmBtu limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 7E of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO.

The annual emission limitation was established by multiplying the pound/mmBtu limitation by the maximum #2 fuel oil restriction of 2,142,833 gallons/year, a heat content of 0.1428 mmBtu/gallon for #2 fuel oil and dividing by 2,000 pounds/ton. Therefore, provided compliance with the pound/mmBtu limitation and the annual #2 fuel oil restriction are demonstrated [recordkeeping requirement d)(4)], compliance with the annual emission limitation shall also be demonstrated.

e. Emission Limitations: #2 Fuel Oil Combustion

0.037 pound CO/mmBtu

5.66 tons CO/rolling, 12-month period

Applicable Compliance Method

The pound/mmBtu limitation is based on the burner manufacturer's guarantee. Compliance with the pound/mmBtu limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO.

The annual emission limitation was established by multiplying the pound/mmBtu limitation by the maximum #2 fuel oil restriction of 2,142,833 gallons/year, a heat content of 0.1428 mmBtu/gallon for #2 fuel oil and dividing by 2,000 pounds/ton. Therefore, provided compliance with the pound/mmBtu limitation and the annual #2 fuel oil restriction are demonstrated [recordkeeping requirement d)(4)], compliance with the annual emission limitation shall also be demonstrated.

f. Emission Limitations: #2 Fuel Oil Combustion

0.02 pound PM₁₀/mmBtu

3.06 tons PM₁₀/rolling, 12-month period

Applicable Compliance Method

The pound/mmBtu limitation is based on the burner manufacturer's guarantee. If required, compliance with the pound/mmBtu limitation shall be demonstrated in accordance with Methods 201/201A and 202 of 40 CFR Part 51, Appendix M Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office (NWDO).

The annual emission limitation was established by multiplying the pound/mmBtu limitation by the maximum #2 fuel oil restriction of 2,142,833 gallons/year, a heat

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content of 0.1428 mmBtu/gallon for #2 fuel oil and dividing by 2,000 pounds/ton. Therefore, provided compliance with the pound/mmBtu limitation and the annual #2 fuel oil restriction are demonstrated [recordkeeping requirement d)(4)], compliance with the annual emission limitation shall also be demonstrated.

g. Emission Limitations: Natural Gas Combustion

0.0054 pound VOC/mmBtu

4.25 tons VOC/year

Applicable Compliance Method

The pound/mmBtu limitation was derived by dividing the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.4 (7/98) of 5.5 pounds VOC/mmscf by 1,020 Btu/scf. If required, compliance with the pound/mmBtu limitation shall be demonstrated based on the results of emissions testing conducted in accordance with Methods 1-4 and 18 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO.

The annual emission limitation was established by multiplying the pound/mmBtu limitation by a maximum heat input of 180 mmBtu/hour and a maximum operating schedule of 8,760 hours/year and dividing by 2,000 pounds/ton. Therefore, provided compliance is demonstrated with the pound/mmBtu limitation, compliance with the annual limitation shall also be demonstrated.

h. Emission Limitations: Natural Gas Combustion

0.0006 pound SO₂/mmBtu

0.48 ton SO₂/year

Applicable Compliance Method

The pound/mmBtu limitation was derived by dividing the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.4 (7/98) of 0.6 pound SO₂/mmscf by 1,020 Btu/scf. If required, compliance with the pound/mmBtu limitation shall be demonstrated based on the results of emissions testing conducted in accordance with Methods 1-4 and 6C of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO.

The annual emission limitation was established by multiplying the pound/mmBtu limitation by a maximum heat input of 180 mmBtu/hour and a maximum operating schedule of 8,760 hours/year and dividing by 2,000 pounds/ton. Therefore, provided compliance is demonstrated with the pound/mmBtu limitation, compliance with the annual limitation shall also be demonstrated.

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i. Emission Limitations: #2 Fuel Oil Combustion

0.0014 pound VOC/mmBtu

0.21 ton VOC/year

Applicable Compliance Method

The pound/mmBtu limitation was derived by dividing the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.3 (5/10) of 0.2 pound VOC/10³ gallons by 140 mmBtu/10³ gallons. If required, compliance with the pound/mmBtu limitation shall be demonstrated based on the results of emissions testing conducted in accordance with Methods 1-4 and 18 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO.

The annual emission limitation was established by multiplying the AP-42 emission factor by the maximum #2 fuel oil restriction of 2,142,833 gallons/year, and dividing by 2,000 pounds/ton. Therefore, provided compliance with the pound/mmBtu limitation and the annual #2 fuel oil restriction are demonstrated [recordkeeping requirement d)(4)], compliance with the annual emission limitation shall also be demonstrated.

j. Emission Limitations: #2 Fuel Oil Combustion

0.0015 pound SO₂/mmBtu

0.23 ton SO₂/rolling 12-month period

Applicable Compliance Method

The pound/mmBtu limitation was derived by dividing the emission factor of 0.213 pound SO₂/10³ gallons from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.3 (5/10), based on a sulfur content restriction of 0.0015%, by 140 mmBtu/10³ gallons. If required, compliance with the pound/mmBtu limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 6C of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO.

The annual emission limitation was established by multiplying the AP-42 emission factor by the maximum #2 fuel oil restriction of 2,142,833 gallons/year, and dividing by 2,000 pounds/ton. Therefore, provided compliance with the pound/mmBtu limitation and the annual #2 fuel oil restriction are demonstrated [recordkeeping requirement d)(4)], compliance with the annual emission limitation shall also be demonstrated.

k. Emission Limitation:

Visible particulate emissions, while burning natural gas, shall not exceed 20 percent (20%) opacity, as a six-minute average, except as provided by rule.

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Applicable Compliance Method

If required, compliance with the visible emission limitation shall be determined in accordance with OAC rule 3745-17-03(B).

I. Emission Limitation:

Visible particulate emissions, while burning #2 fuel oil, shall not exceed 20 percent (20%) opacity, as a six-minute average, except for one 6-minute period per hour of not more than 27 percent (27%) opacity.

Applicable Compliance Method

If required, compliance with the visible emission limitation shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources").

g) Miscellaneous Requirements

(1) None.

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2. Emissions Unit Group - B013/B014

EU ID	Operations, Property and/or Equipment Description
B013	180 mmBtu/hr, natural gas fired steam boiler, equipped with #2 fuel oil backup and continuous emissions monitor (CEM)
B014	180 mmBtu/hr, natural gas fired steam boiler, equipped with #2 fuel oil backup and continuous emissions monitor (CEM)

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)c., b)(1)j., d)(8), d)(9), d)(10) 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(D)	Opacity Restrictions [See b)(2)g. and b)(2)h.] See b)(2)a. and b)(2)b. <u>Emissions from Natural Gas Usage:</u> 0.04 pound nitrogen oxides (NOx)/mmBtu; 31.54 tons NOx/year 0.01 pounds particulate matter 10 microns or less in size (PM ₁₀)/mmBtu; 7.88 tons PM ₁₀ /year <u>Emissions from #2 Fuel Oil Usage:</u> 0.10 pound NOx/mmBtu; 7.88 tons NOx/rolling, 12-month period 0.02 pound PM ₁₀ /mmBtu; 1.58 tons PM ₁₀ /rolling, 12-month period 0.0015 pound SO ₂ /mmBtu; 0.12 ton SO ₂ /rolling 12-month period

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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	See b)(2)c. <u>Emissions from Natural Gas Usage:</u> 0.0054 pound volatile organic compounds (VOC)/mmBtu; 4.25 tons VOC/year 0.0006 pound sulfur dioxide (SO ₂)/mmBtu; 0.48 ton SO ₂ /year <u>Emissions from #2 Fuel Oil Usage:</u> 0.0014 pound VOC/mmBtu; 0.11 ton VOC/year
c.	OAC rule 3745-31-05(A)(3), as effective 12/01/06	See b)(2)d.
d.	OAC rules 3745-31-10 through 3745-31-20	See b)(2)e. <u>Emissions from Natural Gas Usage:</u> 0.075 pound carbon monoxide (CO)/hour; 59.13 tons CO/rolling, 12-month period <u>Emissions from #2 Fuel Oil Usage:</u> 0.037 pound CO/mmBtu; 2.92 tons CO/rolling, 12-month period
e.	ORC 3704.03(T)	See b)(2)f.
f.	OAC rule 3745-17-07(A)	See b)(2)g. and b)(2)h.
g.	OAC rule 3745-17-10(B)(1)	See b)(2)i.
h.	OAC rule 3745-18-06(D)	See b)(2)i.
i.	OAC rule 3745-110-03(C)	See b)(2)i.
j.	OAC rule 3745-114-01 ORC 3704.03(F)	See d)(8) through d)(10)
k.	40 CFR Part 60, Subpart Db (40 CFR 60.40b – 60.49b)	See b)(2)h. and b)(2)j.
l.	40 CFR 63, Subpart DDDDD (40 CFR 63.7480 – 7575)	See b)(2)k.

(2) Additional Terms and Conditions

- a. This permit establishes the following federally enforceable emission limitations for purposes of limiting potential to emit (PTE) to avoid Prevention of Significant Deterioration (PSD). The federally enforceable emission limitations are based on the operational restrictions contained in c)(1) which limits fuel usage type and the burner design performance specifications for each fuel:

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i. emission limitation for natural gas fuel use:

(a) 0.04 pound NO_x per mmBtu; and

(b) 0.01 pound PM₁₀ per mmBtu.

All emissions of particulate matter from the use of natural gas are PM₁₀.

The federally enforceable emission limitations established above for the use of natural gas result in an annual PTE of 31.54 tons NO_x and 7.88 tons PM₁₀. Annual PTE levels were determined by multiplying the federally enforceable pound/mmBtu emission limitations by a maximum heat input of 180 mmBtu/hour and a maximum operating schedule of 8,760 hours/year and dividing by 2,000 pounds/ton. The annual PTE levels have been established in tons per year limitations [see b)(1)a.].

ii. emission limitation for #2 fuel oil use:

(a) 0.10 pound NO_x per mmBtu;

(b) 0.0015 pound SO₂ per mmBtu; and

(c) 0.02 pound PM₁₀ per mmBtu.

All emissions of particulate matter from the use #2 fuel oil are PM₁₀.

The annual PTE for emissions from the use of #2 fuel oil are limited further by additional federally enforceable requirements on #2 fuel usage [see b)(2)b., c)(2), and c)(3)]

b. This permit establishes the following additional federally enforceable emission limitations for purposes of limiting the annual PTE for emissions associated with the use of #2 fuel oil. The federally enforceable emission limitations are based on the operational restrictions contained in c)(3) which restrict #2 fuel oil usage:

i. 7.88 tons NO_x per rolling, 12-month period;

ii. 2.92 tons CO per rolling, 12-month period;

iii. 1.58 tons PM₁₀ per rolling, 12-month period;

iv. 0.12 ton SO₂/rolling, 12-month period.

c. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit for VOC. The requirements of this rule are equivalent to the requirements established pursuant to OAC rule 3745-31-05(D) for PM₁₀ and SO₂; therefore, the permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit for PM₁₀ and SO₂.

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

Until this rule revision is approved by the U.S. EPA, BAT requirements have been determined to be:

- i. compliance with the fuel type and usage restrictions;
 - ii. compliance with the sulfur content restriction in c)(2);
 - iii. compliance with the emission limitations contained in b)(1)b);
 - iv. compliance with the PM₁₀ and SO₂ emission limitations established under OAC rule 3745-31-05(D).
- d. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3)(a) do not apply to the PM₁₀, VOC, and SO₂ emissions from this air contaminant source, taking into account the following restrictions established in this permit which results in emissions for each pollutant of less than 10 tons per year:

- i. fuel type and usage restrictions; and
- ii. sulfur content restriction.

[Note: The worst case operating scenario for VOC emissions has been determined to be when the boiler is operated on natural gas at a rate of 8,760 hours/year. The worst case operating scenario for PM₁₀ and SO₂ emissions has been determined to be when the boiler is operated at the maximum annual #2 fuel oil usage rate in c)(3) and with natural gas for the remainder of the year.]

- i. The potential to emit for VOC emissions from natural gas combustion is calculated based upon an emission factor of 5.5 pounds/10⁶ scf [AP-42 Chapter 1.4, 7/1998] multiplied by a conversion factor of 10⁶ scf/1020 mmBtu, a maximum heat input of 180 mmBtu/hour, and the maximum operating schedule of 8,760 hours/year, and then divide by 2,000 pounds/ton (4.25 TPY).
- ii. The potential to emit of SO₂ from this emissions unit (0.55 TPY) is calculated by summing the SO₂ emissions from #2 fuel oil combustion at the maximum annual usage rate and the SO₂ emissions from the

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combustion of natural gas for the remainder of the year [estimated at 90% the maximum operating rate of 8,760 hours/year (7,884 hours/year)], where:

- (a) The SO₂ emissions from #2 fuel oil combustion are based upon an emission factor of (142S) pounds/1000 gallons [AP-42 Chapter 1.3, (5/2010)], where S = the fuel sulfur content in percent by weight (0.0015). The annual emissions are estimated by multiplying the emission factor (0.213 lb/1000 gallons) by the maximum annual fuel usage restriction of 1,103,760 gallons/year, and then dividing by 2,000 pounds/ton (0.12 TPY).
 - (b) The SO₂ emissions from natural gas combustion are calculated based upon an emission factor of 0.6 pound/10⁶ scf [AP-42 Chapter 1.4, 7/1998] multiplied by a conversion factor of 10⁶ scf/1020 mmBtu, the maximum heat input of 180 mmBtu/hour, and the maximum operating schedule of 7,884 hours/year, and then divided by 2,000 pounds/ton (0.42 TPY).
- iii. The potential to emit of PM₁₀ from this emissions unit (8.68 TPY) is calculated by summing the PM₁₀ emissions from #2 fuel oil combustion at the maximum annual usage rate and the PM₁₀ emissions from the combustion of natural gas for the remainder of the year [estimated at 90% the maximum operating rate of 8,760 hours/year (7,884 hours/year)], where:
- (a) The PM₁₀ emissions from #2 fuel oil combustion are based upon an emission factor of 0.02 lb/mmBtu [manufacturer's guarantee] multiplied by the maximum heat input of 180 mmBtu/hour, the maximum annual fuel usage restriction of 1,103,760 gallons/year, and then divided by the maximum hourly fuel usage rate of 1,260 gallons/hour and 2,000 pounds/ton (1.58 TPY).
 - (b) The PM₁₀ emissions from natural gas combustion are calculated based upon an emission factor of 0.01 lb/mmBtu [manufacturer's guarantee] multiplied by the maximum heat input of 180 mmBtu/hour, and the maximum operating schedule of 7,884 hours/year, and then divided by 2,000 pounds/ton (7.10 TPY).
- e. The permittee shall employ best available control technology (BACT) for this emissions unit. BACT has been determined to be the following emission limitations:
- (iii) for natural gas usage: 0.075 pound CO per mmBtu; and 59.13 tons CO per rolling, 12-month period; and
 - (iv) for #2 fuel oil usage: 0.037 pound CO per mmBtu; and 2.92 tons CO per rolling, 12-month period.

The BACT analysis determined that no add-on controls were cost effective for the reduction of CO.

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- f. The BAT requirements under ORC 3704.03(T) have been determined to be compliance with the pound per mmBtu requirements established pursuant to OAC rule 3745-31-05(D) for NO_x and OAC rules 3745-31-10 through 3745-31-20 for CO.
- g. Visible particulate emissions while burning natural gas shall not exceed 20 percent opacity, as a six-minute average, except as provided by rule. The visible particulate emission limitation established by 40 CFR Subpart Db is more stringent than OAC rule 3745-17-07(A) during #2 fuel oil use [see b)(2)h.]
- h. Visible particulate emissions while burning #2 fuel oil shall not exceed 20 percent opacity, as a six-minute average, except for one 6-minute period per hour of not more than 27% opacity.
- i. The emission limitation established by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).
- j. Within 180 days of the effective date of this permit, the permittee shall develop and maintain a written quality assurance/quality control plan for the continuous NO_x monitoring system, designed to ensure continuous valid and representative readings of NO_x emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

- k. This emissions unit is subject to a case-by-case MACT determination pursuant to section 112(j) of the Clean Air Act (CAA) due to the June 8, 2007 D.C. Circuit Court of Appeals decision to vacate the Boiler MACT (40 CFR Part 63, Subpart DDDDD).

If notified by the Ohio EPA or U.S. EPA, the permittee shall submit an application for a revision to this facility's Title V permit that meets the requirements of 40 CFR 63.52(a)(2) pertaining to case-by-case MACT determinations. The 30-day clock for submittal of a 112(j) application does not begin until such notification is made by Ohio EPA or U.S. EPA.

- l. Prevention of Significant Deterioration (PSD) requirements for particulate matter equal to or less than 2.5 microns in size (PM_{2.5}) are being implemented through the PM₁₀ Surrogate Policy issued by EPA in 1997. For purposes of demonstrating that PM₁₀ is a reasonable surrogate for PM_{2.5}, all emissions of PM₁₀ will be considered PM_{2.5}.

c) Operational Restrictions

- (1) The permittee shall only burn natural gas or #2 fuel oil in this emissions unit.

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- (2) The #2 fuel oil combusted in this emissions unit shall only be #2 fuel oil, as defined by the American Society for Testing and Materials in ASTM D396-78, 89, 90, 92, 96, or 98, "Standard Specification for Fuel Oils". The sulfur content of the #2 fuel oil shall not exceed 0.0015 percent, by weight.
- (3) The following operational restrictions are being established for purposes of establishing federally enforceable requirements which limit PTE [see b)(2)b.].
 - a. The maximum #2 fuel oil usage for this emissions unit shall not exceed 1,103,760 gallons per year, based upon a rolling, 12-month summation of the monthly fuel usage.
 - b. To ensure enforceability during the first 12 calendar months of operation, the permittee shall not exceed the fuel usage levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Usage of #2 fuel oil (gallons)
1	937,440
1-12	1,103,760

The permittee has proposed the use of #2 fuel oil in the event of a natural gas curtailment. The annual fuel usage restriction of 1,103,760 gallons/year only represents 876 hours of operation per year based on a maximum hourly fuel usage rate of 1,260 gallons/hour. During continuous operation of this emissions unit with #2 fuel oil, the permittee could potentially use 937,440 gallons in one calendar month.

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual fuel usage limitation for #2 fuel oil shall be based upon a rolling, 12-month summation of the monthly fuel usage rates.

d) **Monitoring and/or Recordkeeping Requirements**

- (1) For each day during which the permittee burns a fuel other than natural gas or #2 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (2) 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 fuel oil type (number 2, 4, or 6), the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in pounds/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.

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 D240 Standard Test Method for Heat of

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Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the Director.

- (3) In lieu of the requirements of d)(2) for the sulfur content of #2 fuel oil, the permittee may keep records of fuel oil supplier certification, which shall include the following information:
- a. The name of the oil supplier.
 - b. A statement from the oil supplier that the oil complies with the specifications under the definition of 'distillate oil' in 40 CFR 60.41c.
 - c. The sulfur content of the oil.
- (4) The permittee shall maintain monthly records of the following information:
- a. the amount of #2 fuel oil burned, in gallons/month; and
 - b. the rolling, 12-month summation of the #2 fuel usage rates, in gallons.

Also, during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative fuel usage for each calendar month.

- (5) Each continuous NO_x monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 2. At least 45 days before commencing certification testing of the continuous NO_x 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 emissions from the continuous monitor(s), in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

- (6) Prior to the installation of the continuous NO_x monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the requirements in 40 CFR Part 60, Appendix B, Performance Specifications 2 for approval by the Ohio EPA, Central Office. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous NO_x monitoring system meets the requirements of Performance Specification 2. 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.

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and

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transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

- (7) The permittee shall install, operate, and maintain equipment to continuously monitor 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 Parts 60.

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

- a. emissions of NO_x in parts per million on an instantaneous (one-minute) basis;
 - b. emissions of NO_x in all units of the applicable standard(s) in the appropriate averaging period;
 - c. results of quarterly cylinder gas audits;
 - d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
 - e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
 - f. hours of operation of the emissions unit, continuous NO_x monitoring system, and control equipment;
 - g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous NO_x monitoring system;
 - h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous NO_x monitoring system; as well as,
 - i. the reason (if known) and the corrective actions taken (if any) for each such event in d)(7)g. and d)(7)h.
- (8) The permit to install application for emissions units B012, B013, and B014 was evaluated based on the actual materials and the design parameters of the emissions units' 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:

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- 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., "2" hours per day and "" 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):

$$\text{TLV}/10 \times 8/X \times 5/Y = 4 \text{ TLV}/XY = \text{MAGLC}$$

- 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: Hexane

TLV (mg/m³): 176.237

Maximum Hourly Emission Rate (lbs/hr): 0.97

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m³): 4.1

MAGLC (µg/m³): 4,196

The permittee, has demonstrated that emissions of Hexane, from emissions units B012, B013, and B014 are calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); 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).

- (9) 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

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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.

- (10) 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.

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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.

e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas or #2 fuel oil was burned in the emissions unit. These reports shall be submitted to Ohio EPA, Northwest District Office (NWDO) within 30 days after the deviation occurs.
- (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. all exceedances of the rolling, 12-month fuel oil usage limitation for this emissions unit; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative fuel usage;
 - ii. all exceedances of the #2 fuel oil sulfur restriction.
 - 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 reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

- (3) Pursuant to 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. actual start-up date (within 15 days after such date); and
 - c. date of performance testing (if required, at least 30 days prior to testing).

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Reports are to be sent to:

Ohio EPA, Northwest District Office
Division of Air Pollution Control
347 N. Dunbridge Rd.
Bowling Green, Ohio 43402

- (4) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NO_x 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 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 and model number of the continuous NO_x and other associated monitors;
 - iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;
 - iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;
 - v. the total 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 continuous NO_x monitoring system while the emissions unit was in operation;
 - viii. results and dates of quarterly cylinder gas audits;
 - ix. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

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- x. unless previously submitted, the results of any relative accuracy test audit showing the continuous NO_x monitor out-of-control and the compliant results following any corrective actions;
- xi. the date, time, and duration of any/each malfunction** of the continuous NO_x monitoring system, emissions unit, and/or control equipment;
- xii. the date, time, and duration of any downtime** of the continuous NO_x monitoring system and/or control equipment while the emissions unit was in operation; and
- xiii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (xii).

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

- (5) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the quarterly deviation (excursion) reports. If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

f) Testing Requirements

- (1) 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 such emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the following limitations involving the use of natural gas:
 - i. 0.04 pound NO_x per mmBtu; and
 - ii. 0.075 pound CO per mmBtu.
 - c. When the emission unit is first fired with #2 fuel oil for purposes other than routine "maintenance" procedures (i.e. monthly checks to verify the operating condition of the boiler), the permittee shall conduct testing within 60 days after the initial firing with #2 fuel oil to demonstrate compliance with the following when firing #2 fuel oil:

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- i. 0.10 pound NO_x per mmBtu; and
 - ii. 0.037 pound CO per mmBtu.
- d. The following test methods shall be employed to demonstrate compliance with the above emission limitations:
- i. for NO_x, Methods 1-4 and 7E of 40 CFR Part 60, Appendix A; and
 - ii. for CO, Methods 1-4 and 10 of 40 CFR Part 60, Appendix A.

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

- e. The test(s) shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Ohio EPA, NWDO.
- f. 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, NWDO. 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, NWDO's refusal to accept the results of the emission test(s).

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

[Note: In accordance with the General Provisions of 40 CFR Part 60, a written report of the results of the emission test(s) must be provided within the deadline specified in f)(1)a.]

- (2) Within 60 days of the effective date of this permit, the permittee shall conduct certification tests of the continuous NO_x monitoring system in units of the applicable standard(s) to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specifications 2; and ORC section 3704.03(l).

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

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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 continuous NO_x 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 Specifications 2; and ORC section 3704.03(I).

- (3) Compliance with the emission limitations in Section b)(1) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitations: Natural Gas Combustion

0.04 pound NO_x/mmBtu

31.54 tons NO_x/rolling, 12-month period

Applicable Compliance Method

The pound/mmBtu limitation is based on the burner manufacturer's guarantee. Compliance with the pound/mmBtu limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 7E of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO.

The annual emission limitation was established by multiplying the pound/mmBtu limitation by a maximum heat input of 180 mmBtu/hour and a maximum operating schedule of 8,760 hours/year and dividing by 2,000 pounds/ton. Therefore, provided compliance is demonstrated with the pound/mmBtu limitation, compliance with the annual limitation shall also be demonstrated.

- b. Emission Limitations: Natural Gas Combustion

0.075 pound CO/mmBtu

59.13 tons CO/rolling, 12-month period

Applicable Compliance Method

The pound/mmBtu limitation is based on the burner manufacturer's guarantee. Compliance with the pound/mmBtu limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO.

The annual emission limitation was established by multiplying the pound/mmBtu limitation by a maximum heat input of 180 mmBtu/hour and a maximum operating schedule of 8,760 hours/year and dividing by 2,000 pounds/ton. Therefore, provided compliance is demonstrated with the pound/mmBtu limitation, compliance with the annual limitation shall also be demonstrated.

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c. Emission Limitations: Natural Gas Combustion

0.01 pound PM₁₀/mmBtu

7.88 tons PM₁₀/rolling, 12-month period

Applicable Compliance Method

The pound/mmBtu limitation is based on the burner manufacturer's guarantee. If required, compliance with the pound/mmBtu limitation shall be demonstrated in accordance with Methods 201/201A and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office (NWDO).

The annual emission limitation was established by multiplying the pound/mmBtu limitation by a maximum heat input of 180 mmBtu/hour and a maximum operating schedule of 8,760 hours/year and dividing by 2,000 pounds/ton. Therefore, provided compliance is demonstrated with the pound/mmBtu limitation, compliance with the annual limitation shall also be demonstrated.

d. Emission Limitations: #2 Fuel Oil Combustion

0.10 pound NO_x/mmBtu

7.88 tons NO_x/rolling, 12-month period

Applicable Compliance Method

The pound/mmBtu limitation is based on the burner manufacturer's guarantee. Compliance with the pound/mmBtu limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 7E of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO.

The annual emission limitation was established by multiplying the pound/mmBtu limitation by the maximum #2 fuel oil restriction of 1,103,760 gallons/year, a heat content of 0.1428 mmBtu/gallon for #2 fuel oil and dividing by 2,000 pounds/ton. Therefore, provided compliance with the pound/mmBtu limitation and the annual #2 fuel oil restriction are demonstrated [recordkeeping requirement d)(4)], compliance with the annual emission limitation shall also be demonstrated.

e. Emission Limitations: #2 Fuel Oil Combustion

0.037 pound CO/mmBtu

2.92 tons CO/rolling, 12-month period

Applicable Compliance Method

The pound/mmBtu limitation is based on the burner manufacturer's guarantee. Compliance with the pound/mmBtu limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 10 of

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40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO.

The annual emission limitation was established by multiplying the pound/mmBtu limitation by the maximum #2 fuel oil restriction of 1,103,760 gallons/year, a heat content of 0.1428 mmBtu/gallon for #2 fuel oil and dividing by 2,000 pounds/ton. Therefore, provided compliance with the pound/mmBtu limitation and the annual #2 fuel oil restriction are demonstrated [recordkeeping requirement d)(4)], compliance with the annual emission limitation shall also be demonstrated.

f. Emission Limitations: #2 Fuel Oil Combustion

0.02 pound PM₁₀/mmBtu

1.58 tons PM₁₀/rolling, 12-month period

Applicable Compliance Method

The pound/mmBtu limitation is based on the burner manufacturer's guarantee. If required, compliance with the pound/mmBtu limitation shall be demonstrated in accordance with Methods 201/201A and 202 of 40 CFR Part 51, Appendix M Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office (NWDO). Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO.

The annual emission limitation was established by multiplying the pound/mmBtu limitation by the maximum #2 fuel oil restriction of 1,103,760 gallons/year, a heat content of 0.1428 mmBtu/gallon for #2 fuel oil and dividing by 2,000 pounds/ton. Therefore, provided compliance with the pound/mmBtu limitation and the annual #2 fuel oil restriction are demonstrated [recordkeeping requirement d)(4)], compliance with the annual emission limitation shall also be demonstrated.

g. Emission Limitations: Natural Gas Combustion

0.0054 pound VOC/mmBtu

4.25 tons VOC/year

Applicable Compliance Method

The pound/mmBtu limitation was derived by dividing the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.4 (7/98) of 5.5 pounds VOC/mmscf by 1,020 Btu/scf. If required, compliance with the pound/mmBtu limitation shall be demonstrated based on the results of emissions testing conducted in accordance with Methods 1-4 and 18 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO.

The annual emission limitation was established by multiplying the pound/mmBtu limitation by a maximum heat input of 180 mmBtu/hour and a maximum operating schedule of 8,760 hours/year and dividing by 2,000 pounds/ton.

Effective Date: To be entered upon final issuance

Therefore, provided compliance is demonstrated with the pound/mmBtu limitation, compliance with the annual limitation shall also be demonstrated.

h. Emission Limitations: Natural Gas Combustion

0.0006 pound SO₂/mmBtu

0.48 ton SO₂/year

Applicable Compliance Method

The pound/mmBtu limitation was derived by dividing the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.4 (7/98) of 0.6 pound SO₂/mmscf by 1,020 Btu/scf. If required, compliance with the pound/mmBtu limitation shall be demonstrated based on the results of emissions testing conducted in accordance with Methods 1-4 and 6C of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO.

The annual emission limitation was established by multiplying the pound/mmBtu limitation by a maximum heat input of 180 mmBtu/hour and a maximum operating schedule of 8,760 hours/year and dividing by 2,000 pounds/ton. Therefore, provided compliance is demonstrated with the pound/mmBtu limitation, compliance with the annual limitation shall also be demonstrated.

i. Emission Limitations: #2 Fuel Oil Combustion

0.0014 pound VOC/mmBtu

0.11 ton VOC/year

Applicable Compliance Method

The pound/mmBtu limitation was derived by dividing the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.3 (5/10) of 0.2 pound VOC/10³ gallons by 140 mmBtu/10³ gallons. If required, compliance with the pound/mmBtu limitation shall be demonstrated based on the results of emissions testing conducted in accordance with Methods 1-4 and 18 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO.

The annual emission limitation was established by multiplying the pound/mmBtu limitation by the maximum #2 fuel oil restriction of 1,103,760 gallons/year, a heat content of 0.1428 mmBtu/gallon for #2 fuel oil and dividing by 2,000 pounds/ton. Therefore, provided compliance with the pound/mmBtu limitation and the annual #2 fuel oil restriction are demonstrated [recordkeeping requirement d)(4)], compliance with the annual emission limitation shall also be demonstrated.

Effective Date: To be entered upon final issuance

j. Emission Limitations: #2 Fuel Oil Combustion

0.0015 pound SO₂/mmBtu

0.12 ton SO₂/year

Applicable Compliance Method

The pound/mmBtu limitation was derived by dividing the emission factor of 0.213 pound SO₂/10³ gallons from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.3 (5/10), based on a sulfur content restriction of 0.0015%, by 140 mmBtu/10³ gallons. If required, compliance with the pound/mmBtu limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 6C of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO.

The annual emission limitation was established by multiplying the pound/mmBtu limitation by the maximum #2 fuel oil restriction of 1,103,760 gallons/year, a heat content of 0.1428 mmBtu/gallon for #2 fuel oil and dividing by 2,000 pounds/ton. Therefore, provided compliance with the pound/mmBtu limitation and the annual #2 fuel oil restriction are demonstrated [recordkeeping requirement d)(4)], compliance with the annual emission limitation shall also be demonstrated.

k. Emission Limitation:

Visible particulate emissions, while burning natural gas, shall not exceed 20 percent (20%) opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method

If required, compliance with the visible emission limitation shall be determined in accordance with OAC rule 3745-17-03(B).

l. Emission Limitation:

Visible particulate emissions, while burning #2 fuel oil, shall not exceed 20 percent (20%) opacity, as a six-minute average, except for one 6-minute period per hour of not more than 27 percent (27%) opacity.

Applicable Compliance Method

If required, compliance with the visible emission limitation shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources").

g) Miscellaneous Requirements

(1) None.