



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

11/20/2015

Certified Mail

Mr. Christopher Tumbusch
 Wright-Patterson Air Force Base
 1450 Littrell Road
 WPAFB, OH 45433-5209

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL

Facility ID: 0829700441
 Permit Number: P0119472
 Permit Type: OAC Chapter 3745-31 Modification
 County: Greene

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

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 Environmental Protection Agency (EPA) Weekly Review and the local newspaper, Xenia Daily Gazette. 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 "Search for Permits" link under the Permitting topic on the Programs tab. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

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

and Regional Air Pollution Control Agency
 117 South Main Street
 Dayton, OH 45422-1280

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 Regional Air Pollution Control Agency at (937)225-4435.

Sincerely,

Michael E. Hopkins, P.E.
 Assistant Chief, Permitting Section, DAPC

Cc: U.S. EPA Region 5 -Via E-Mail Notification
 RAPCA; Indiana; Kentucky

Permit Strategy Write-Up

1. Check all that apply:

Synthetic Minor Determination

Netting Determination

2. Source Description:

On July 17, 2013 a final Permit To Install (PTI) (No. P0113525) was issued to WPAFB allowing for the modification of seven boilers located at two central heating plants. The PTI allowed for the conversion of four boilers from coal to natural gas fuel and installation of new combustion controls on three other natural gas fired boilers. The PTI was issued as a synthetic minor permit to avoid Prevention of Significant Deterioration (PSD) permitting as a major modification for greenhouse gases (GHG) as required by the U.S. EPA "Tailoring Rule". PTI P0113525 included a rolling 12-month GHG emissions limitation to keep GHG emissions to less than the 75,000 tons per year major modification threshold. On June 23, 2014 the U.S. Supreme Court vacated the portion of the "Tailoring Rule" that required consideration of GHG emissions increases in PSD applicability determinations. This PTI modification is being completed to remove the GHG emissions limitations from the PTI (P0113525) in accordance with Ohio EPA Engineering Guide 85.

Wright Patterson Air Force Base (WPAFB) is a Department of the Air Force (USAF) Installation located partially in Greene and Montgomery Counties. WPAFB is the largest single site employer in the State of Ohio with over 6,200 Active Duty Air Force personnel and over 12,000 civilian employees and contractors. The base is separated into two areas by State Route 444 that are referred to as "Area A" and "Area B". The majority of the heating and hot water needs of the base are supplied by two central heating plants. The central heating plant at building 20770 includes three coal-fired boilers and two natural gas-fired boilers. Building 20770 supplies steam and hot water to over 150 buildings located in "Area B". The central heating plant at building 31240 includes three coal-fired boilers and one gas-fired boiler. Building 31240 supplies high temperature hot water to over 200 buildings located in "Area A". The emissions units at each heating plant in July, 2013 are identified in the following table.

"Area A" Central Heating Plant, Building 31240	
Emissions Unit	Equipment Description
B606	Coal fired spreader stoker boiler, with baghouse, 177 MMBtu per hour nominal heat input
B607	Coal fired spreader stoker boiler, with baghouse, 177 MMBtu per hour nominal heat input
B608	Coal fired spreader stoker boiler, with baghouse, 177 MMBtu per hour nominal heat input
B609	Natural gas fired boiler, 99.8 MMBtu per hour nominal heat input
"Area B" Central Heating Plant, Building 20770	
B307	Natural gas fired boiler, 96.9 MMBtu per hour nominal heat input
B308	Natural gas fired boiler, 96.9 MMBtu per hour nominal heat input
B309	Coal fired spreader stoker boiler, with baghouse, 183 MMBtu per hour nominal heat input
B310	Coal fired spreader stoker boiler, with baghouse, 183 MMBtu per hour nominal heat input
B311	Coal fired spreader stoker boiler, with baghouse, 183 MMBtu per hour nominal heat input

On July 17, 2013 a final Permit To Install (PTI) (No. P0113525) was issued to WPAFB to allow for the modification the boilers at both central heating plants by converting four boilers from coal to natural gas fuel; and permanently shutting down two coal fired boilers for the purpose of complying with the Boiler MACT standards (40 CFR Part 63, Subpart DDDDD). PTI P0113525 also modified the terms and

conditions of the PTI 08-04162 (issued July 1, 2001) and the Title V operating permit for the modified boilers at each plant in order to increase the operational flexibility through the use of the single natural gas fuel and rolling 12-month natural gas usage limitations. The modifications for each boiler are described in the following tables:

“Area A” Central Heating Plant, Building 31240	
Emissions Unit	Proposed Modifications
B606	<ul style="list-style-type: none"> • Permanently shutdown on or before January 31, 2017*
B607 B608	<ul style="list-style-type: none"> • Remove coal fired burners and install natural gas fired burners • New electronic boiler controls with continuous oxygen trim system • New forced draft and induced draft fans • Remove existing baghouses • New high temperature hot water circulating pumps • Replace heat input restrictions with natural gas use restrictions • Remove seasonal operating restrictions
B609	<ul style="list-style-type: none"> • New electronic boiler controls with continuous oxygen trim system • New high temperature hot water circulating pumps • Replace hours of operation restriction with natural gas use restriction

*WPAFB also investigated the complete shutdown of the “Area A” central heating plant and decentralization of the “Area A” steam and hot water system. A determination was made in March 2015 that decentralization was not feasible. On July 30, 2015 WPAFB submitted a request to Ohio EPA for and extension of the Boiler MACT compliance deadline until July 31, 2017. Ohio EPA approved the compliance extension request on September 9, 2015. The projects identified in the table above must now be completed by January 31, 2017.

“Area B” Central Heating Plant, Building 20770	
Emissions Unit	Proposed Modifications*
B307 B308	<ul style="list-style-type: none"> • New electronic boiler controls with continuous oxygen trim system • Replace hours of operation restriction with natural gas use restriction
B309 B310	<ul style="list-style-type: none"> • Remove coal burning equipment and install natural gas burning equipment • New electronic boiler controls with continuous oxygen trim system • Reconfigure and replace boiler tubes as needed • New forced draft and induced draft fans • Remove existing baghouses • Remove seasonal operating restrictions • Replace heat input restrictions with natural gas use restrictions
B311	<ul style="list-style-type: none"> • Permanently shutdown before January 31, 2016, actual shutdown, February 26, 2015.

*WPAFB has completed the modifications identified in the table above and final emissions testing to demonstrate compliance with the nitrogen oxides (NOx) and carbon monoxide (CO) emissions limitations of PTI P0113525 has been scheduled for November 2015.

3. Facility Emissions and Attainment Status:

Both Greene and Montgomery Counties have achieved attainment with all of the current National Ambient Air Quality Standards (NAAQS). WPAFB is a major stationary source as defined by Ohio Administrative Code (OAC) rule 3745-31-01(LLL)(2)(a)(xxii) because the combined capacity of fossil fuel boilers total more than 250 MMBtu per hour heat input and these boilers have the potential to emit (PTE) for criteria pollutants sulfur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO) and particulate matter greater than 100 tons per year each.

4. Source Emissions:

The air emissions calculations for the project were completed in three steps and are summarized in the tables attached to this write-up. Step 1, is a calculation of the “actual to projected actual” emissions increases associated with this project that if all the new and existing gas fired and retrofitted gas boilers combined are permitted to operate 8,760 hours per year each of the following pollutants will exceed the applicable NNSR/PSD significant emission increase thresholds:

- NO_x emissions increase of 47.3 tons per year (major modification threshold - 40 tons per year);
- CO emissions increase of 284 tons per year (major modification threshold - 100 tons per year); and
- Particulate matter less than 2.5 microns (PM-2.5) emissions increase of 16.3 tons per year (major modification threshold - 10 tons per year).

Step 2, of the calculations show that there will be no contemporaneous emissions decreases that would reduce emissions below major modification thresholds. In order to avoid major modification permitting requirements WPAFB has elected to voluntarily limit natural gas use at each of the central heating plants. By limiting the volume of natural gas use to 2,000 million standard cubic feet (MMscf) at building 20770 and 2,400 MMscf at building 31240 all emissions increases associated with the project will be reduced below major modification thresholds (See Step 3). By imposing these voluntary fuel use restrictions on a rolling 12-month basis the pollutants that previously exceeded significant emissions thresholds will be limited to:

- A NO_x emissions decrease of 167 tons;
- A CO emissions increase of 99.5 tons per year (major modification threshold - 100 tons per year); and
- A PM-2.5 emissions increase of 0.76 ton per year.

5. Conclusion:

By limiting fuel use to natural gas only and the volume of natural gas used to 2,000 MMscf on a rolling 12-month basis at building 20770 and 2,400 MMscf on a rolling 12-month basis at building 31240, WPAFB will avoid prevention of significant deterioration (PSD) review as part of this project.

6. Please provide additional notes or comments as necessary:

40 CFR Part 63, Subpart DDDDD (Boiler MACT) Compliance: WPAFB operates approximately 40 boilers that are subject to the Boiler MACT. Most of those boilers are natural gas fired, subject to work practice standards only and do not require any physical modification to demonstrate compliance with the standards. WPAFB determined that the coal-fired boilers (emissions units B309, B310, and B311 at Building 20770; and B606, B607, and B608 at Building 31240) must be modified to meet the Boiler MACT standards. WPAFB has elected to convert boilers B309, B310, B607, and B608 from coal-fired spreader stokers to natural gas-fired burners equipped with an oxygen trim control system. The two other coal fired boilers (emissions units B311 was shutdown on February 26, 2015 and B606 Ohio EPA has approved a compliance extension unit January 31, 2017) will be permanently shutdown as part of the Boiler MACT initial compliance demonstration. WPAFB also determined that the combustion control systems of existing natural gas fired boilers (emissions units B307 and B308 at Building 20770 and B609 at Building 31240) must be replaced with oxygen trim systems for the purpose of integrating the combustion controls for each boiler into one control panel at each heating plant.

Aggregation Determination: The U.S. EPA has always been concerned that sources would circumvent NSR Review when modifying existing stationary sources by dividing a large project into smaller ones that alone would not qualify as a major modification. WPAFB includes 846 facilities, totaling over 15 million square feet and thousands of miles of utility systems. In order to determine if any additional projects should be aggregated in combination with this project, WPAFB reviewed the five-year plan for projects related to the heating utility system that may commence construction in accordance with U.S. EPA aggregation policies. The following projects were identified:

- *Boiler MACT project* – This project is the subject of this PTI.
- *“Area A” Small Boilers Project* - The installation of several small boilers is being considered in response to the failure of a high temperature hot water (HTHW) line from Building 31240 that supplies a portion of “Area A”. The boilers would replace the heating supply from Building 31240 for mission critical tenant operations (Hospital, Air Force Materiel Command (AFMC) Headquarters, and National Aerospace Intelligence Center (NASIC)) and abandon the failed HTHW line. The projects under consideration are listed in the following table, designs have not been finalized, the boiler sizes identified are tentative and funding has yet to be approved.

Facility Complex	Building	Boilers	Permit Need
NASIC	10822	3 x 3 MMBtu/hour	PTI Exempt
	10829	2 x 1 MMBtu/hour	PTI Exempt
	10856	2 x 3 MMBtu/hour	PTI Exempt
	10856	2 x 3 MMBtu/hour	PTI Exempt
	10858	2 x 1 MMBtu/hour	PTI Exempt
AFMC Headquarters	10262, 10266, 10271	5 x 9 MMBtu/hour	PTI Exempt
Visiting Officers Quarters	10824, 10825, 10826	4 x 4 MMBtu/hour 2 x 3 MMBtu/hour	PTI Exempt
NASIC	10280	2 x 3 MMBtu/hour	PTI Exempt

- *Hospital Boilers* - The WPAFB Medical Center (Hospital), Building 10840, is subject to the Unified Facilities Criteria Design for Medical Military Facilities (UFC 4-510-01) that requires hospital heating plants to be designed with dual fuel capability. The Hospital uses a combination of heat from Building 31240 and operates two natural gas fired boilers, (Ohio EPA Emissions Units B113 and B118). UFC 4-510-01 has been satisfied because Building 31240 operation included the use of coal as a dual fuel. The conversion of the central heating plant to natural gas-only requires WPAFB to explore alternatives for dual fuel capability. WPAFB anticipates fulfilling UFC 4-510-01 by modifying boilers B113 and B118 to use fuel oil (as emergency back-up) in addition to installing a new (third) boiler (18 MMBtu/hour nominal heat input) at building 10840 in “Area A”. This project has been included in the air emissions calculations and the synthetic minor potential emissions limitations of this PTI (See the emissions tables attached to this write-up). This project has not been funded to date; however, the project is mandatory and will receive top priority once funding becomes available. This project will be the subject of a separate PTI upon a final decision to proceed.

U.S. EPA guidance regarding aggregation focuses on five criteria:

- Timing – Filing one or more applications for a facility within a short time period.

The Boiler MACT modifications proposed for the boilers located at Buildings 20770 and 31240 commenced in calendar year 2013 and will be completed by January 31, 2017. The construction of these modifications is driven by the initial compliance date for the Boiler MACT.

According to WPAFB, it is “highly likely” that at least some of the small boiler projects identified above will also commence construction between 2013 and 2016. The timing of the small boiler projects, however, is the result of the HTHW line failure and continues to be affected by future funding availability. WPAFB views the timing of the Boiler MACT modifications and installation of the “Area A” small boilers to be coincidental. The modification of the central heating plant boilers is driven by the Boiler MACT compliance date and has no bearing on when the installation of the small boilers will commence.

The need to modify the existing Hospital boilers at 10840 for dual fuel capability is triggered by the proposed Boiler MACT modifications at 31240 (elimination coal as fuel) and must be completed within a reasonable time period of shutting down coal-fired operations. The air emissions increases from this project are included in the synthetic minor calculations for this PTI.

- Budgeting – Applications of funding.

The 88th Civil Engineering Directorate has responsibility to oversee the buildings and infrastructure at WPAFB, funding for specific projects often falls under the responsibility of tenant organizations in addition to the USAF Congressional budget allocation for WPAFB. Funding for individual projects are prioritized and approved separately on their own merits with consideration given to the availability of funds.

The Boiler MACT modifications are being funded through the USAF environmental compliance budget as one project. These small boiler projects may either be funded individually or as one large project. At best, the Hospital boilers have received the highest consideration for funding due to the dual fuel mandate.

The cancellation of any one of these projects has no bearing on the funding of the other projects. They are all independent of one another; as is the potential cancellation of work on a single boiler within a funded project.

- Demand – Consumer demand or projected production levels.

WPAFB is not projecting a substantial increase in the heating needs of the base over the next decade. In fact, WPAFB has initiated a USAF program to reduce infrastructure life-cycle funding requirements 20% by 2020 through efficiencies and management strategies. Reducing the base-wide building footprint is one program identified to capitalize on maintenance and energy savings by eliminating underutilized infrastructure.

The Boiler MACT modifications are required for compliance with U.S. EPA regulations. The installation of the “Area A” small boilers is in response to a need to replace heating supply for USAF mission critical operations due to failure of the HTHW line and not through an expansion of those operations. The Hospital boiler project is the result of a Department of Defense mandate. None of the projects identified above or the Hospital dual fuel project is required to meet an anticipated increase in demand.

- Utilization – plans for future operations.

The Boiler MACT modifications at the central heating plants (20770 and 31240) will increase the operational flexibility and reliability of each plant, however, overall utilization of each plant is not anticipated to increase as a result of the modifications. By increasing the permitted operational flexibility of the central heating plant under a year round gas-fired only scenario, WPAFB has determined that only two of three coal-fired boilers are needed in combination with the existing gas-fired boiler.

If installed, the “Area A” small boilers will operate as a primary heating source at each building and reduce the utilization of the central heating plant (31240) on a one-for-one basis. The purpose of the “Area A” small boilers projects are to replace the heating supply for USAF mission critical operations due to maintenance issues, not to free up capacity at Building 31240 central heating plant for other purposes.

WPAFB anticipates operating the Hospital boilers year round independent of the central heating plant once the dual-fuel fired burners and new boiler are installed.

- Project Coordination and Scope – Analysis of the projects considered together.

The Boiler MACT conversion project and the “Area A” small boiler projects are independent of one another. The installation of the “Area A” small boilers is not dependent on the completion of each project nor on the modification work at the Building 31240 central heating plant. Each project will be bid out separately. Replacing capacity from the installation of the “Area A” small boilers or Hospital boilers is not required to ensure reliable heating capacity at the “Area A” sites during construction at the central heating plants.

The Hospital boiler project must be completed as a result of the Boiler MACT modifications. Therefore, the air emissions from that project were considered in this PTI application.

Aggregation Conclusion: - The air emissions from the Boiler MACT compliance project and subsequent modifications of the Hospital boilers were aggregated in this PTI. The Hospital boiler modifications will be the subject of a separate PTI.

A final decision has not been made regarding the “Area A” small boiler projects. It is likely that, some, if not all of the projects may proceed prior to completion of the Boiler MACT project and Hospital modifications. The timing of the “Area A” small boiler projects is coincidental, to the Boiler MACT project and Hospital boiler modifications. Furthermore, the funding of the projects are not coming from the same source, they are not accommodating an increase in demand, they would likely lead to a decrease in utilization of the boilers at Building 31240 and would replace an failed HTHW line. Therefore the “Area A” small boilers projects were not considered in aggregate with this PTI.



7. Total Permit Allowable Emissions Summary (for informational purposes only):

<u>Pollutant</u>	<u>Tons Per Year</u>
<u>SO₂</u>	<u>1.48</u>
<u>NOx</u>	<u>233</u>
<u>CO</u>	<u>239</u>
<u>VOC</u>	<u>13.4</u>
<u>Particulate</u>	<u>18.8</u>

PUBLIC NOTICE

The following matters are the subject of this public notice by the Ohio Environmental Protection Agency. The complete public notice, including any additional instructions for submitting comments, requesting information, a public hearing, or filing an appeal may be obtained at: <http://epa.ohio.gov/actions.aspx> or Hearing Clerk, Ohio EPA, 50 W. Town St., Columbus, Ohio 43215. Ph: 614-644-2129 email: HClerk@epa.ohio.gov

Draft Air Pollution Permit-to-Install OAC Chapter 3745-31 Modification

Wright-Patterson Air Force Base

88 ABW/CEVY, 1450 Littrell Road - Bldg 22, Wright-Patterson AFB, OH 45433-5209

ID#: P0119472

Date of Action: 11/20/2015

Permit Desc: Chapter 31 modification permit resulting in emissions increases due to the removal of greenhouse gas synthetic minor emissions limitations as a result of "tailoring rule" rescission..

The permit and complete instructions for requesting information or submitting comments may be obtained at: <http://epa.ohio.gov/dapc/permitsonline.aspx> by entering the ID # or: Andrew Weisman, Regional Air Pollution Control Agency, 117 South Main Street, Dayton, OH 45422-1280. Ph: (937)225-4435



DRAFT

**Division of Air Pollution Control
Permit-to-Install
for
Wright-Patterson Air Force Base**

Facility ID:	0829700441
Permit Number:	P0119472
Permit Type:	OAC Chapter 3745-31 Modification
Issued:	11/20/2015
Effective:	To be entered upon final issuance



Division of Air Pollution Control
Permit-to-Install
for
Wright-Patterson Air Force Base

Table of Contents

Authorization	1
A. Standard Terms and Conditions	3
1. Federally Enforceable Standard Terms and Conditions	4
2. Severability Clause	4
3. General Requirements	4
4. Monitoring and Related Record Keeping and Reporting Requirements.....	5
5. Scheduled Maintenance/Malfunction Reporting	6
6. Compliance Requirements	6
7. Best Available Technology	7
8. Air Pollution Nuisance	8
9. Reporting Requirements	8
10. Applicability	8
11. Construction of New Sources(s) and Authorization to Install	8
12. Permit-To-Operate Application	9
13. Construction Compliance Certification	10
14. Public Disclosure	10
15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations	10
16. Fees.....	10
17. Permit Transfers	10
18. Risk Management Plans	10
19. Title IV Provisions	10
B. Facility-Wide Terms and Conditions.....	11
C. Emissions Unit Terms and Conditions	13
1. Emissions Unit Group -20770 - Area B: B307,B308,B309,B310.....	14
2. Emissions Unit Group -Area A: B606,B607,B608,B609,.....	27



Draft Permit-to-Install
Wright-Patterson Air Force Base
Permit Number: P0119472
Facility ID: 0829700441
Effective Date: To be entered upon final issuance

Authorization

Facility ID: 0829700441
Facility Description: national security
Application Number(s): A0053715
Permit Number: P0119472
Permit Description: Chapter 31 modification permit resulting in emissions increases due to the removal of greenhouse gas synthetic minor emissions limitations as a result of "tailoring rule" rescission.
Permit Type: OAC Chapter 3745-31 Modification
Permit Fee: \$0.00 *DO NOT send payment at this time, subject to change before final issuance*
Issue Date: 11/20/2015
Effective Date: To be entered upon final issuance

This document constitutes issuance to:

Wright-Patterson Air Force Base
88 ABW/CEVY
1450 Littrell Road - Bldg 22
Wright-Patterson AFB, OH 45433-5209

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

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

Regional Air Pollution Control Agency
117 South Main Street
Dayton, OH 45422-1280
(937)225-4435

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

Craig W. Butler
Director



Authorization (continued)

Permit Number: P0119472

Permit Description: Chapter 31 modification permit resulting in emissions increases due to the removal of greenhouse gas synthetic minor emissions limitations as a result of "tailoring rule" rescission.

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

Group Name: 20770 - Area B

Emissions Unit ID:	B307
Company Equipment ID:	2759
Superseded Permit Number:	P0113525
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B308
Company Equipment ID:	2758
Superseded Permit Number:	P0113525
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B309
Company Equipment ID:	2030
Superseded Permit Number:	P0113525
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B310
Company Equipment ID:	2028
Superseded Permit Number:	P0113525
General Permit Category and Type:	Not Applicable

Group Name: Area A

Emissions Unit ID:	B606
Company Equipment ID:	2008
Superseded Permit Number:	P0113525
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B607
Company Equipment ID:	2012
Superseded Permit Number:	P0113525
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B608
Company Equipment ID:	2016
Superseded Permit Number:	P0113525
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B609
Company Equipment ID:	2772
Superseded Permit Number:	P0113525
General Permit Category and Type:	Not Applicable



Draft Permit-to-Install
Wright-Patterson Air Force Base
Permit Number: P0119472
Facility ID: 0829700441
Effective Date: To be entered upon final issuance

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
 - (1) Standard Term and Condition A.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) Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification.

- b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d) This permit does not convey any property rights of any sort, or any exclusive privilege.
- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

4. Monitoring and Related Record Keeping and Reporting Requirements

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - (1) The date, place (as defined in the permit), and time of sampling or measurements.
 - (2) The date(s) analyses were performed.
 - (3) The company or entity that performed the analyses.
 - (4) The analytical techniques or methods used.
 - (5) The results of such analyses.
 - (6) The operating conditions existing at the time of sampling or measurement.
- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Regional Air Pollution Control Agency.

- (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 Regional Air Pollution Control Agency. The written reports shall be submitted quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. 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 to the Regional Air Pollution Control Agency 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 Regional Air Pollution Control Agency 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) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the appropriate Ohio EPA District Office or contracted

local air agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the electronic signature date shall constitute the date that the required application, notification or report is considered to be "submitted". Any document requiring signature may be represented by entry of the personal identification number (PIN) by responsible official as part of the electronic submission process or by the scanned attestation document signed by the Authorized Representative that is attached to the electronically submitted written report.

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

- b) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
- (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with 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.
- c) The permittee shall submit progress reports to the Regional Air Pollution Control Agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
- (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

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 Regional Air Pollution Control Agency.
- 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 Regional Air Pollution Control Agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

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) not exempt from the requirement to obtain a Permit-to-Install.

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 permittee shows good cause for any such extension.

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

Unless otherwise exempted, no emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31 and OAC Chapter 3745-77 if the restarted operation is subject to one or more applicable requirements.

- 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 operation of the proposed new or modified source(s) as authorized by this permit would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d) must be obtained before operating the source in a manner that would violate the existing Title V permit requirements.

13. Construction Compliance Certification

The applicant shall identify the following dates in the "Air Services" 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.
- 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 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.



Draft Permit-to-Install
Wright-Patterson Air Force Base
Permit Number: P0119472
Facility ID: 0829700441
Effective Date: To be entered upon final issuance

B. Facility-Wide Terms and Conditions



1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
 - a) None.
2. This facility is subject to 40 CFR Part 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.

As defined in 40 CFR Part 63.7575 the “Unit designed to burn gas 1 subcategory” includes any boiler or process heater that burns only natural gas, refinery gas, and/or other gas 1 fuels; with the exception of liquid fuels used for periodic testing not to exceed a combined total of 48 hours during any calendar year, or during periods of gas curtailment and gas supply emergencies.

Emissions units B307, B308, B309, and B310 only use natural gas fuel and must comply with the Boiler MACT requirements in the table below before January 31, 2016.

Emissions units B607, B608, and B609 only use natural gas fuel or will be converted from coal to natural gas fuel only before January 31, 2017* and must comply with the Boiler MACT requirements in the table below before January 31, 2017*.

The requirements for the “unit designed to burn gas 1 subcategory” as identified in the following table:

40 CFR 63.7521(f) through (i)	Fuel analyses and specifications for fuels other than natural gas
40 CFR 63.7530 (d) through (g)	Initial compliance demonstration
40 CFR 63.7540(a) and (c)	Continuous compliance with emissions limitations, fuel specifications and work practice standards
40 CFR 63.7545(a) through (c), (e) and (f)	Notification requirements
40 CFR 63.7550	Reporting requirements
40 CFR 63.7560	Records form and retention
40 CFR 63.7565	General provisions
40 CFR 63.7575	Definitions

* Wright Patterson Air Force Base (WPAFB) was granted a compliance deadline extension by Ohio EPA on September 9, 2015 for emissions units B606, B607 and B608. This extension allows emissions unit B606 to continue to burn coal until January 31, 2017 and extends the deadline for conversion of emissions units B607 and B608 from coal to natural gas fuel until January 31, 2017.

3. This facility is subject to 40 CFR Part 63, Subpart A, NESHAP: General Provisions. The applicable provisions of 40 CFR Part 63, Subpart A (required for compliance with 40 CFR Part 63, Subpart DDDDD) are identified in Table 10. of 40 CFR Part 63, Subpart DDDDD



Draft Permit-to-Install
Wright-Patterson Air Force Base
Permit Number: P0119472
Facility ID: 0829700441
Effective Date: To be entered upon final issuance

C. Emissions Unit Terms and Conditions

1. Emissions Unit Group -20770 - Area B: B307,B308,B309,B310

EU ID	Operations, Property and/or Equipment Description
B307	Facility 20770, boiler No. 2; natural gas-fired; 96.9 million BTU per hour nominal heat input
B308	Facility 20770, boiler No 1, natural gas fired; 96.9 million BTU per hour nominal heat input
B309	Facility 20770, boiler No 4, natural gas fired; 169 million BTU per hour nominal heat input
B310	Facility 20770, boiler No 3, natural gas fired; 169 million BTU per hour nominal heat input

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)g., d)(5) through d)(8) and e)(3).

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) June 30, 2008	<u>Emissions Units B307, B308, B309 and B310:</u> See b)(2)a. The nitrogen oxides (NOx) emissions from each emissions unit shall not exceed 0.10 pound per million Btu actual heat input. The carbon monoxide (CO) emissions from each emissions unit shall not exceed 0.10 pound per million Btu of actual heat input.
b.	OAC rule 3745-31-05(A)(3) June 30, 2008	<u>Emissions Units B307 and B308:</u> The particulate emissions from each emissions unit shall not exceed 3.25 tons on a rolling 12-month basis. (the particulate emissions consist of the particulate matter less than 10 microns (PM-10), particulate matter less than 2.5 microns (PM-2.5) and condensable particulate matter fractions).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>The sulfur dioxide (SO₂) emissions from each emissions unit shall not exceed 0.26 ton on a rolling 12-month basis.</p> <p>The volatile organic compound (VOC) emissions from each emissions unit shall not exceed 2.33 tons on a rolling 12-month basis.</p> <p><u>Emissions Units B309 and B310:</u></p> <p>The particulate emissions from each emissions unit shall not exceed 5.63 tons on a rolling 12-month basis (the particulate emissions consist of the PM-10, PM-2.5 and condensable particulate matter fractions).</p> <p>The SO₂ emissions from each emissions unit shall not exceed 0.44 ton on a rolling 12-month basis.</p> <p>The VOC emissions from each emissions unit shall not exceed 4.07 tons on a rolling 12-month basis.</p> <p>See b)(2)b., through b)(2)d.</p> <p>Compliance with this rule also includes compliance with OAC rules 3745 -17-07(A) and 3745-17-10(B), 40 CFR Part 60, Subpart Dc and 40 CFR Part 63, Subpart DDDDD.</p>
c.	OAC rule 3745 -31-05(A)(3)(a)(ii) June 30, 2008	See b)(2)d.
d.	OAC rule 3745-31-05(D) Synthetic Minor to avoid major new source review	<p>The combined NOx emissions from these emissions units shall not exceed 100.0 tons on a rolling 12-month basis.</p> <p>The combined CO emissions from these emissions units shall not exceed 100.0 tons on a rolling 12-month basis.</p> <p>The combined particulate emissions from these emissions units shall not exceed 7.60 tons on a rolling 12-month basis (the particulate emissions consist of the PM-</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		10, PM-2.5 and condensable particulate matter fractions). See b)(2)a. and b)(2)e.
e.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack serving each emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
f.	OAC rule 3745-17-10(B)(1)	The particulate emissions from each emissions unit shall not exceed 0.02 pound per million Btu of actual heat input.
g.	OAC rule 3745-114-01 and ORC 3704.03(F)	See d)(5) through d)(8) and e)(3)
h.	40 CFR Part 60, Subpart Dc	See b)(2)f.
i.	40 CFR Part 63, Subpart DDDDD	See Section B.2.

(2) Additional Terms and Conditions

- a. The BAT determination for these emissions units includes:
 - i. Use of only natural gas as fuel;
 - ii. The use of low NOx burners and a continuous oxygen trim system to control air-to-fuel ratio; and
 - iii. Employment of good combustion practices and a continuous oxygen trim system to control air-to-fuel ratio to reduce CO emissions.
- b. These Best Available Technology (BAT) emissions limitations apply until U.S. EPA approves the Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- c. The particulate, SO₂, and VOC emissions limitations for each emissions unit were established to reflect the potential to emit for each emissions unit. Therefore, it is not necessary to establish monitoring or record keeping for these emissions limitations.
- d. The requirements of this rule apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP. The BAT requirements of OAC rule 3745-31-05(A)(3) do not apply to the particulate, VOC and SO₂ emissions from these emissions units because the uncontrolled potential emissions are less than 10 tons per year.

- e. The combined volume of natural gas used in emissions units B307, B308, B309 and B310 shall not exceed 2,000 MMscf on a rolling 12-month basis. To ensure enforceability during the first 12 months of operation, the permittee shall not exceed the fuel use volume specified in the following table:

<u>Month</u>	<u>Cumulative natural gas use (MMscf)</u>
1	400
1-2	800
1-3	1,200
1-4	1,600
1-5	2,000
1-6	2,000
1-7	2,000
1-8	2,000
1-9	2,000
1-10	2,000
1-11	2,000
1-12	2,000

After the first 12 months of operation compliance with the rolling 12-month natural gas use limitation shall be based on a rolling 12-month sum of the actual natural gas use rates for the previous 12 months.

- f. New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units - Emissions units B307 and B308 are steam generating units as defined in 40 CFR 60.41, however, there are no standards for units that only burn natural gas.
- c) Operational Restrictions
- (1) The permittee shall burn only natural gas in these emissions units.
- d) Monitoring and/or Record Keeping Requirements
- (1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel used in these emissions units.
- (2) The permittee shall install, operate, and maintain equipment to monitor and record the natural gas flow rates to these emissions units, in standard cubic feet per hour (scfh). The monitoring device and any recorder shall be installed, calibrated, operated, and maintained in accordance with manufacturer recommendations, instructions, and operating manuals and/or the permittee's established protocols for proper operation. The flow monitoring equipment shall have an accuracy of within plus or minus five percent (5%). The monitoring device and any recorder shall be maintained in continuous operation when these emissions units are in operation, except during periods of calibration, adjustment, or repair conducted in accordance with the maintenance and calibration schedules provided by the permittee, unless otherwise specified in the applicable monitoring requirements of 40 CFR Part 60 for these emissions units.

- (3) The permittee shall maintain monthly records of the following information for each emissions unit*:
- a. the total quantity of natural gas used in each emissions unit, each month, in MMscf, in accordance with d)(2);
 - b. the average heat content, in Btu per cubic foot, of the natural gas combusted in each emissions unit;
 - c. the actual heat input, in MMBtu, for each emissions unit [(d)(3)a. multiplied by d)(3)b. divided by one million];
 - d. the total NO_x emissions for each month, in tons (determined by multiplying the total heat input for each month (as determined in d)(3)c.) by the emission rate, in pound NO_x/MMBtu heat input determined in the last stack test that showed each emissions unit was in compliance divided by 2,000 pounds per ton);
 - e. the total CO emissions for each month, in tons (determined by multiplying the total heat input for each month (as determined in d)(3)c.) by the emission rate, in pound CO/MMBtu heat input determined in the last stack test that showed each emissions unit was in compliance divided by 2,000 pounds per ton);
 - f. the total particulate emissions for each month, in tons, determined by multiplying the total natural gas use for each month (as determined in d)(3)a.) by the emission rate, in pounds particulate/MMScf for each fraction (PM-10 and condensable) divided by 2,000 pound per ton.

*For emissions units B309 and B310 these requirements shall become effective for each emissions unit upon completion of its conversion to natural gas fuel.

- (4) The permittee shall maintain monthly records of the following information as a combined total for emissions units B307, B308, B309 and B310*:
- a. the total quantity of natural gas used, each month, in MMscf on a rolling 12-month basis or during the first 12 calendar months of operation the cumulative natural gas use for each calendar month (i.e., the sum of the monthly natural gas use rates for each emissions unit calculated in d)(3)a. above for the previous 12 months),
 - b. the total NO_x emissions, for each month, in tons, on a rolling 12-month basis or during the first 12 calendar months of operation the cumulative NO_x emissions for each calendar month (i.e., the sum of the monthly emissions rates for each emissions unit calculated in d)(3)d. above for the previous 12-months);
 - c. the total CO emissions, for each month, in tons, on a rolling 12-month basis or during the first 12 calendar months of operation the cumulative CO emissions for each calendar month (i.e., the sum of the monthly emissions rates for each emissions unit calculated in d)(3)e. above for the previous 12-months);

- d. the total particulate emissions, for each month, in tons, on a rolling 12-month basis or during the first 12 calendar months of operation the cumulative particulate emissions for each calendar month (i.e., the sum of the monthly emissions rates for each emissions unit calculated in d)(3)f. above for the previous 12-months).

*For emissions units B309 and B310 these requirements shall become effective for each emissions unit upon completion of its conversion to natural gas fuel.

- (5) The PTI application for emissions units, B309 and B310, was evaluated based on the actual materials and the design parameters of the emissions unit(s)' exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" 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):

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

- 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

Maximum Hourly Emission Rate (pounds/hour): 0.60

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m³): 0.80

MAGLC (µg/m³): 4,200

The permittee, has demonstrated that emissions of hexane, from emissions units B309 and B310, 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).

- (6) 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.

- (7) 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.
 - (8) 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 reports that identify each day when a fuel other than natural gas was used in each emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
 - (2) The permittee shall submit quarterly deviation reports that identify the following:
 - a. all exceedances of the 2,000 MMscf rolling 12-month natural gas use limitation;
 - b. all exceedances of the 100.0 tons NOx rolling 12-month emissions limitation;
 - c. all exceedances of the 100.0 tons CO rolling 12-month emissions limitation;
 - d. all exceedances of the 7.60 tons particulate rolling 12-month emissions limitation;
 - e. the probable cause of each deviation;
 - f. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations; and

- g. the magnitude and duration of each deviation.

If no deviations 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) The permittee shall submit annual reports that include any changes to any parameter or value used in the dispersion model used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1 hour maximum concentration. The report should include:

- a. the original model input;
- b. the updated model input;
- c. the reason for the change(s) to the input parameter(s); and
- d. a summary of the results of the updated modeling, including the input changes; and
- e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

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

f) **Testing Requirements**

- (1) Compliance with the Emissions Limitations specified in b) shall be determined in accordance with the following methods:

- a. Emissions Limitation –

The NO_x emissions from each emissions unit shall not exceed 0.10 pound per million Btu of actual heat input.

- Applicable Compliance Method –

Compliance shall be based on emissions testing conducted according to U.S. EPA Reference Methods 1 through 4 and 7E of 40 CFR Part 60, Appendix A. See f)(2).

- b. Emissions Limitation –

The CO emissions from each emissions unit shall not exceed 0.10 pound per million Btu of actual heat input.



Applicable Compliance Method –

Compliance shall be based on emissions testing conducted according to U.S. EPA Reference Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A. See f)(2).

c. Emissions Limitation –

The particulate emissions from each emissions unit (B307 and B308) shall not exceed 3.25 tons on a rolling 12-month basis.

Applicable Compliance Method –

This emissions limitation is based on the maximum natural gas fuel use in each emissions unit (0.0969 MMscf/hour) multiplied by the emission factor of 7.6 pounds particulate/MMscf (the sum of the 5.7 pounds filterable particulate/MMscf plus 1.9 pounds condensable particulate/MMscf from U.S. EPA, AP-42, Table 1.4-2, 7/98) and multiplying the hourly emissions rate by 8,760 hours per year and dividing by 2,000 pounds per ton.

d. Emissions Limitation –

The SO₂ emissions from each emissions unit (B307 and B308) shall not exceed 0.26 ton on a rolling 12-month basis.

Applicable Compliance Method –

This emissions limitation is based on the maximum natural gas fuel use in each emissions unit (0.0969 MMscf/hour) multiplied by the emission factor of 0.6 pound/MMscf (from U.S. EPA, AP-42, Table 1.4-2, 7/98). and multiplying the hourly emissions rate by 8,760 hours per year and dividing by 2,000 pounds per ton.

e. Emissions Limitation –

The VOC emissions from each emissions unit (B307 and B308) shall not exceed 2.33 tons on a rolling 12-month basis.

Applicable Compliance Method –

This emissions limitation is based on the maximum natural gas fuel use in each emissions unit (0.0969 MMscf/hour) multiplied by the emission factor of 5.5 pounds/MMscf (from U.S. EPA, AP-42, Table 1.4-2, 7/98) and multiplying the hourly emissions rate by 8,760 hours per year and dividing by 2,000 pounds per ton.

f. Emissions Limitation –

The particulate emissions from each emissions unit (B309 and B310) shall not exceed 5.63 tons on a rolling 12-month basis.

Applicable Compliance Method –

This emissions limitation is based on the maximum natural gas fuel use in each emissions unit (0.169 MMscf/hour) multiplied by the emission factor of 7.6 pounds particulate/MMscf (the sum of the 5.7 pounds filterable particulate/MMscf plus 1.9 pounds condensable particulate/MMscf from U.S. EPA, AP-42, Table 1.4-2, 7/98) and multiplying the hourly emissions rate by 8,760 hours per year and dividing by 2,000 pounds per ton.

g. Emissions Limitation –

The SO₂ emissions from each emissions unit (B309 and B310) shall not exceed 0.44 ton on a rolling 12-month basis.

Applicable Compliance Method –

This emissions limitation is based on the maximum natural gas fuel use in each emissions unit (0.169 MMscf/hour) multiplied by the emission factor of 0.6 pound/MMscf (from U.S. EPA, AP-42, Table 1.4-2, 7/98) and multiplying the hourly emissions rate by 8,760 hours per year and dividing by 2,000 pounds per ton.

h. Emissions Limitation –

The VOC emissions from each emissions unit (B309 and B310) shall not exceed 4.07 tons on a rolling 12-month basis.

Applicable Compliance Method –

This emissions limitation is based on the maximum natural gas fuel use in each emissions unit (0.169 MMscf/hour) multiplied by the emission factor of 5.5 pounds/MMscf (from U.S. EPA, AP-42, Table 1.4-2, 7/98) and multiplying the hourly emissions rate by 8,760 hours per year and dividing by 2,000 pounds per ton.

i. Emissions Limitation – B307, B308, B309 and B310 combined

The combined volume of natural gas used in these emissions units shall not exceed 2,000 MMscf on a rolling 12-month basis.

The combined NO_x emissions from these emissions units shall not exceed 100.0 tons on a rolling 12-month basis.

The combined CO emissions from these emissions units shall not exceed 100.0 tons on a rolling 12-month basis.

The combined particulate emissions from these emissions units shall not exceed 7.60 tons on a rolling 12-month basis.



Applicable Compliance Method –

Compliance will be based on the monitoring and record keeping requirements of d)(3) and d)(4).

j. Emissions Limitation –

Visible particulate emissions from any stack serving each emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method –

If requested, compliance will be demonstrated based on the results of emissions testing according to U.S. EPA Reference Method 9 of 40 CFR Part 60, Appendix A and OAC rule 3745-17-03(B)(1).

k. Emissions Limitation –

The particulate emissions from each emissions unit shall not exceed 0.02 pound per million Btu of actual heat input.

Applicable Compliance Method –

If requested, compliance will be demonstrated based on the results of emissions testing according to U.S. EPA Reference Method 5 of 40 CFR Part 60, Appendix A and OAC rule 3745-17-03(B)(9).

- (2) The permittee shall conduct, or have conducted, emissions testing for each emissions unit (B307, B308, B309 and B310) in accordance with the following requirements:
- a. The emissions testing shall be conducted within 270 days after modification of each emissions unit is completed.
 - b. The emissions testing shall be conducted to demonstrate compliance with the 0.10 pound NO_x per million Btu actual heat input and 0.10 pound CO per million Btu actual heat input.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):
 - NO_x - U.S. EPA Reference Methods 1 through 4 and 7E of 40 CFR Part 60, Appendix A
 - CO - U.S. EPA Reference Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix AAlternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
 - d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable



emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

- e. Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).
- f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

- (1) None.



2. Emissions Unit Group -Area A: B606,B607,B608,B609,

EU ID	Operations, Property and/or Equipment Description
B606	177 mmBtu/hour coal-fired spreader stoker boiler No. 4, with baghouse control, Building 31240 (2008)
B607	Facility 31240, boiler No. 5; natural gas-fired; 169 million BTU per hour nominal heat input
B608	Facility 31240, boiler No. 6; natural gas-fired; 169 million BTU per hour nominal heat input
B609	Facility 31240, boiler No. 7; natural gas-fired; 99.8 million BTU per hour nominal heat input

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)h., d)(5) through d)(8) and e)(3).

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) June 30, 2008	<u>Emissions Units B607, B608 and B609</u> See b)(2)a. and b)(2)b. The nitrogen oxides (NOx) emissions from each emissions unit shall not exceed 0.10 pound per million Btu actual heat input. The carbon monoxide (CO) emissions from each emissions unit shall not exceed 0.10 pound per million Btu of actual heat input.
b.	OAC rule 3745-31-05(A)(3) June 30, 2008	<u>Emissions Units B607 and B608:</u> The particulate emissions from each emissions unit shall not exceed 5.63 tons on a rolling 12-month basis (the particulate emissions consist of the particulate matter less than 10 microns (PM-10), particulate matter less than 2.5 microns (PM-2.5) and condensable particulate matter fractions).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>The sulfur dioxide (SO₂) emissions from each emissions unit shall not exceed 0.44 ton on a rolling 12-month basis.</p> <p>The volatile organic compound (VOC) emissions from each emissions unit shall not exceed 4.07 tons on a rolling 12-month basis.</p> <p><u>Emissions Units B609:</u></p> <p>The particulate emissions from this emissions unit shall not exceed 3.32 tons on a rolling 12-month basis (the particulate emissions consist of the PM-10, PM-2.5 and condensable particulate matter fractions).</p> <p>The SO₂ emissions from each emissions unit shall not exceed 0.26 ton on a rolling 12-month basis.</p> <p>The VOC emissions from each emissions unit shall not exceed 2.40 tons on a rolling 12-month basis.</p> <p>See b)(2)b. through b)(2)d.</p> <p>Compliance with this rule also includes compliance with OAC rules 3745 -17-07(A) and 3745-17-10(B), 40 CFR Part 60, Subpart Dc and 40 CFR Part 63, Subpart DDDDD.</p>
c.	OAC rule 3745-31-05(A)(3)(a)(ii) June 30, 2008	See b)(2)e.
d.	OAC rule 3745-31-05(D) Synthetic Minor to avoid major new source review	<p>The combined NO_x emissions from these emissions units shall not exceed 120.0 tons on a rolling 12-month basis.</p> <p>The combined CO emissions from these emissions units shall not exceed 120.0 tons on a rolling 12-month basis.</p> <p>The combined particulate emissions from these emissions units shall not exceed 9.12 tons on a rolling 12-month basis (the particulate emissions consist of the PM-</p>



Effective Date: To be entered upon final issuance

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		10, PM-2.5 and condensable particulate matter fractions). See b)(2)b., and b)(2)f. <u>Emissions Unit B606:</u> See b)(2)b.
e.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack serving each emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
f.	OAC rule 3745-17-10(B)(1)	The particulate emissions from each emissions unit shall not exceed 0.02 pound per million Btu of actual heat input.
g.	OAC rule 3745-114-01 and ORC 3704.03(F)	See d)(5) through d)(8) and e)(3)
h.	40 CFR Part 60, Subpart Dc	See b)(2)g.
i.	40 CFR Part 63, Subpart DDDDD	See Section B.2. and b)(2)b.

(2) Additional Terms and Conditions

a. The BAT determination for these emissions units includes:

- i. Use of only natural gas as fuel;
- ii. The use of low NOx burners and a continuous oxygen trim system to control air-to-fuel ratio; and
- iii. Employment of good combustion practices and a continuous oxygen trim system to control air-to-fuel ratio to reduce CO emissions.

b. Emissions Units B607 and B608 are being converted from coal to natural fuel. Each emissions unit will be converted individually, one prior to the other, (so that only one boiler will be out of service at any time) that will lead to a temporary period of time when one emissions units will be using coal and one will be using natural gas. While still using coal, each emissions unit shall continue to operate in accordance with PTI 08-04162 (issued July 3, 2001) and the effective Title V operating permit. The terms and conditions of this PTI will become effective for each emissions unit upon completion of its conversion to natural gas fuel.

Emissions Unit B606 shall permanently cease operation and shutdown on or before January 31, 2017. Prior to shutdown emissions unit B606 shall continue to operate in accordance with PTI 08-04162 (issued July 3, 2001) and the effective Title V operating permit.

Effective Date: To be entered upon final issuance

- c. This Best Available Technology (BAT) emissions limitation applies until U.S. EPA approves the Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- d. The particulate, SO₂, and VOC emissions limitations for each emissions unit were established to reflect the potential to emit for each emissions unit. Therefore, it is not necessary to establish monitoring or record keeping for these emissions limitations.
- e. The requirements of this rule apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP. The BAT requirements of OAC rule 3745-31-05(A)(3) do not apply to the particulate, VOC and SO₂ emissions from these emissions units because the uncontrolled potential emissions are less than 10 tons per year.
- f. The combined volume of natural gas used in emissions units B607, B608 and B609 shall not exceed 2,400 MMscf on a rolling 12-month basis. To ensure enforceability during the first 12 months of operation, the permittee shall not exceed the fuel use volume specified in the following table:

<u>Month</u>	<u>Cumulative natural gas use (MMscf)</u>
1	600
1-2	1,200
1-3	1,800
1-4	2,400
1-5	2,400
1-6	2,400
1-7	2,400
1-8	2,400
1-9	2,400
1-10	2,400
1-11	2,400
1-12	2,400

After the first 12 months of operation compliance with the rolling 12-month natural gas use limitation shall be based on a rolling 12-month sum of the actual natural gas use rates for the previous 12 months.

- g. New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units - Emissions unit B609 is a steam generating unit as defined in 40 CFR 60.41, however, there are no standards for units that only burn natural gas.
- c) Operational Restrictions
- (1) The permittee shall burn only natural gas in these emissions units.

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

- (1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel used in these emissions units.
- (2) The permittee shall install, operate, and maintain equipment to monitor and record the natural gas flow rates to these emissions units, in standard cubic feet per hour (scfh). The monitoring device and any recorder shall be installed, calibrated, operated, and maintained in accordance with manufacturer recommendations, instructions, and operating manuals and/or the permittee's established protocols for proper operation. The flow monitoring equipment shall have an accuracy of within plus or minus five percent (5%). The monitoring device and any recorder shall be maintained in continuous operation when these emissions units are in operation, except during periods of calibration, adjustment, or repair conducted in accordance with the maintenance and calibration schedules provided by the permittee, unless otherwise specified in the applicable monitoring requirements of 40 CFR Part 60 for these emissions units.
- (3) The permittee shall maintain monthly records of the following information for each emissions unit*:
 - a. the total quantity of natural gas used in each emissions unit, each month, in MMscf, in accordance with d)(2);
 - b. the average heat content, in Btu per cubic foot, of the natural gas combusted in each emissions unit;
 - c. the actual heat input, in MMBtu, for each emissions unit [(d)(3)a. multiplied by d)(3)b. divided by one million];
 - d. the total NO_x emissions for each month, in tons (determined by multiplying the total heat input for each month (as determined in d)(3)c.) by the emission rate, in pound NO_x/MMBtu heat input determined in the last stack test that showed each emissions unit was in compliance divided by 2,000 pounds per ton);
 - e. the total CO emissions for each month, in tons (determined by multiplying the total heat input for each month (as determined in d)(3)c.) by the emission rate, in pound CO/MMBtu heat input determined in the last stack test that showed each emissions unit was in compliance divided by 2,000 pounds per ton);
 - f. the total particulate emissions for each month, in tons, determined by multiplying the total natural gas use for each month (as determined in d)(3)a.) by the emission rate, in pounds particulate/MMScf for each fraction (PM-10 and condensable) divided by 2,000 pound per ton.

*For emissions units B607 and B608 these requirements shall become effective for each emissions unit upon completion of its conversion to natural gas fuel.

- (4) The permittee shall maintain monthly records of the following information as a combined total for emissions units B607, B608 and B609*:

- a. the total quantity of natural gas used, each month, in MMscf on a rolling 12-month basis or during the first 12 calendar months of operation the cumulative natural gas use for each calendar month (i.e., the sum of the monthly natural gas use rates for each emissions unit calculated in d)(3)a. above for the previous 12 months),
- b. the total NO_x emissions, for each month, in tons, on a rolling 12-month basis or during the first 12 calendar months of operation the cumulative NO_x emissions for each calendar month (i.e., the sum of the monthly emissions rates for each emissions unit calculated in d)(3)d. above for the previous 12-months);
- c. the total CO emissions, for each month, in tons, on a rolling 12-month basis or during the first 12 calendar months of operation the cumulative CO emissions for each calendar month (i.e., the sum of the monthly emissions rates for each emissions unit calculated in d)(3)e. above for the previous 12-months);
- d. the total particulate emissions, for each month, in tons, on a rolling 12-month basis or during the first 12 calendar months of operation the cumulative particulate emissions for each calendar month (i.e., the sum of the monthly emissions rates for each emissions unit calculated in d)(3)f. above for the previous 12-months).

*For emissions units B607 and B608 these requirements shall become effective for each emissions unit upon completion of its conversion to natural gas fuel.

- (5) The PTI application for emissions units, B607 and B608, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
 - a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices";
or

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

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

c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" 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

Maximum Hourly Emission Rate (pounds/hour): 0.60

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m³): 0.80

MAGLC (µg/m³): 4,200

The permittee, has demonstrated that emissions of hexane, from emissions units B607 and B608, 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).

(6) 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.

- (7) 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.
- (8) 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 reports that identify each day when a fuel other than natural gas was used in each emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
- (2) The permittee shall submit quarterly deviation reports that identify the following:
 - a. all exceedances of the 2,400 MMscf rolling 12-month natural gas use limitation;
 - b. all exceedances of the 120.0 tons NO_x rolling 12-month emissions limitation;
 - c. all exceedances of the 120.0 tons CO rolling 12-month emissions limitation;
 - d. all exceedances of the 9.12 tons particulate rolling 12-month emissions limitation;
 - e. the probable cause of each deviation;
 - f. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations; and
 - g. the magnitude and duration of each deviation.

If no deviations 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) The permittee shall submit annual reports that include any changes to any parameter or value used in the dispersion model used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1 hour maximum concentration. The report should include:
 - a. the original model input;
 - b. the updated model input;
 - c. the reason for the change(s) to the input parameter(s); and
 - d. a summary of the results of the updated modeling, including the input changes; and
 - e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.
- (4) If no changes to the emissions, emissions units, or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

f) Testing Requirements

(1) Compliance with the Emissions Limitations specified in b) shall be determined in accordance with the following methods:

a. Emissions Limitation –

The NO_x emissions from each emissions unit shall not exceed 0.10 pound per million Btu of actual heat input.

Applicable Compliance Method –

Compliance shall be based on emissions testing conducted according to U.S. EPA Reference Methods 1 through 4 and 7E of 40 CFR Part 60, Appendix A. See f)(2).

b. Emissions Limitation –

The CO emissions from each emissions unit shall not exceed 0.10 pound per million Btu of actual heat input.

Applicable Compliance Method –

Compliance shall be based on emissions testing conducted according to U.S. EPA Reference Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A. See f)(2).

c. Emissions Limitation –

The particulate emissions from emissions unit B609 shall not exceed 0.44 ton on a rolling 12-month basis.

Applicable Compliance Method –

This emissions limitation was developed by multiplying the maximum natural gas fuel use in each emissions unit (0.0998 MMscf/hour) multiplied by the emission factor of 7.6 pounds particulate/MMscf (the sum of the 5.7 pounds filterable particulate/MMscf plus 1.9 pounds condensable particulate/MMscf from U.S. EPA, AP-42, Table 1.4-2, 7/98) and the hourly emissions rate by 8,760 hours per year and dividing by 2,000 pounds per ton.

d. Emissions Limitation –

The SO₂ emissions from emissions unit B609 shall not exceed 0.26 ton on a rolling 12-month basis.

Applicable Compliance Method –

This emissions limitation is based on the maximum natural gas fuel use in each emissions unit (0.0998 MMscf/hour) multiplied by the emission factor of 0.6 pound/MMscf (from U.S. EPA, AP-42, Table 1.4-2, 7/98) and multiplying the

hourly emissions rate by 8,760 hours per year and dividing by 2,000 pounds per ton. Therefore, compliance with the hourly emissions limitation will also ensure compliance with the annual emissions limitation.

e. Emissions Limitation –

The VOC emissions from emissions unit B609 shall not exceed 2.40 tons on a rolling 12-month basis.

Applicable Compliance Method –

This emissions limitation is based on the maximum natural gas fuel use in each emissions unit (0.0998 MMscf/hour) multiplied by the emission factor of 5.5 pounds/MMscf (from U.S. EPA, AP-42, Table 1.4-2, 7/98) and multiplying the hourly emissions rate by 8,760 hours per year and dividing by 2,000 pounds per ton.

f. Emissions Limitation –

The particulate emissions from each emissions unit (B607 and B608) shall not exceed 5.63 tons on a rolling 12-month basis.

Applicable Compliance Method –

This emissions limitation is based on the maximum natural gas fuel use in each emissions unit (0.169 MMscf/hour) multiplied by the emission factor of 7.6 pounds particulate/MMscf (the sum of the 5.7 pounds filterable particulate/MMscf plus 1.9 pounds condensable particulate/MMscf from U.S. EPA, AP-42, Table 1.4-2, 7/98) and multiplying the hourly emissions rate by 8,760 hours per year and dividing by 2,000 pounds per ton.

g. Emissions Limitation –

The SO₂ emissions from each emissions unit (B607 and B608) shall not exceed 0.44 ton on a rolling 12-month basis.

Applicable Compliance Method –

This emissions limitation is based on the maximum natural gas fuel use in each emissions unit (0.169 MMscf/hour) multiplied by the emission factor of 0.6 pound/MMscf (from U.S. EPA, AP-42, Table 1.4-2, 7/98) and multiplying the hourly emissions rate by 8,760 hours per year and dividing by 2,000 pounds per ton.

h. Emissions Limitation –

The VOC emissions from each emissions unit (B607 and B608) shall not exceed 4.07 tons on a rolling 12-month basis.

Applicable Compliance Method –

This emissions limitation is based on the maximum natural gas fuel use in each emissions unit (0.169 MMscf/hour) multiplied by the emission factor of 5.5 pounds/MMscf (from U.S. EPA, AP-42, Table 1.4-2, 7/98) and multiplying the hourly emissions rate by 8,760 hours per year and dividing by 2,000 pounds per ton.

i. Emissions Limitation – B607, B608 and B609 combined

The combined volume of natural gas used in these emissions units shall not exceed 2,400 MMscf on a rolling 12-month basis.

The combined NOx emissions from these emissions units shall not exceed 120.0 tons on a rolling 12-month basis.

The combined CO emissions from these emissions units shall not exceed 120.0 tons on a rolling 12-month basis.

The combined particulate emissions from these emissions units shall not exceed 9.12 tons on a rolling 12-month basis.

Applicable Compliance Method –

Compliance will be based on the monitoring and record keeping requirements of d)(3) and d)(4).

j. Emissions Limitation –

Visible particulate emissions from any stack serving each emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method –

If requested, compliance will be demonstrated based on the results of emissions testing according to U.S. EPA Reference Method 9 of 40 CFR Part 60, Appendix A and OAC rule 3745-17-03(B)(1).

k. Emissions Limitation –

The particulate emissions from each emissions unit shall not exceed 0.02 pound per million Btu of actual heat input.

Applicable Compliance Method –

If requested, compliance will be demonstrated based on the results of emissions testing according to U.S. EPA Reference Method 5 of 40 CFR Part 60, Appendix A and OAC rule 3745-17-03(B)(9).

- (2) The permittee shall conduct, or have conducted, emission testing for each emissions unit (B607, B608 and B609) in accordance with the following requirements:
- a. The emission testing shall be conducted within 270 days after modification of each emissions unit is completed.
 - b. The emission testing shall be conducted to demonstrate compliance with the 0.10 pound NO_x per million Btu actual heat input and 0.10 pound CO per million Btu actual heat input.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

NO_x - U.S. EPA Reference Methods 1 through 4 and 7E of 40 CFR Part 60, Appendix A

CO - U.S. EPA Reference Methods 1 through 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.
 - d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.
 - e. Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).
 - f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.



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

g) Miscellaneous Requirements

- (1) None.