



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

7/20/2015

Kathy Wiedeman
 P. H. Glatfelter Company - Chillicothe Facility
 232 East 8th Street
 Chillicothe, OH 45601

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
 Facility ID: 0671010028
 Permit Number: P0118907
 Permit Type: Administrative Modification
 County: Ross

Certified Mail

No	TOXIC REVIEW
No	PSD
No	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:

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

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

How to appeal this permit

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

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

How to save money, reduce pollution and reduce energy consumption

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

How to give us feedback on your permitting experience

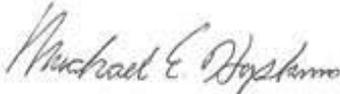
Please complete a survey at www.epa.ohio.gov/survey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

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

If you have any questions, please contact Ohio EPA DAPC, Southeast District Office at (740)385-8501 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



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

Cc: U.S. EPA
Ohio EPA-SEDO; Kentucky



Response to Comments

Facility ID:	0671010028
Facility Name:	P. H. Glatfelter Company - Chillicothe Facility
Facility Description:	Chillicothe Paper Mill.
Facility Address:	232 East 8TH St. Chillicothe, OH 45601 Ross County
Permit:	P0118907, Permit-To-Install - Administrative Modification
Ohio EPA provided a public comment period on revisions to the permit-to-install to incorporate changes Ohio EPA submitted in its June 14, 2014 State Implementation Plan (SIP) regarding the Best Available Retrofit Technology (BART) compliance date requirements for P.H. Glatfelter. A public hearing was not requested on this permit and therefore was not held. A public notice for the draft permit issuance was published in the Ohio EPA Weekly Review and appeared in the Chillicothe Gazette on 06/06/2015. The comment period ended on 07/07/2015. This document summarizes the comments during the associated comment period.	
Hearing date (if held)	N/A
Hearing Public Notice Date (if different from draft public notice)	N/A

The following comments were received during the comment period specified. Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format. PDF copies of the original comments in the format submitted are available upon request.

1. Topic: Compliance Date Extensions

- a. Comment: As for the specifics of the P.H. Glatfelter permit, thank you for forwarding the draft permit with the updated compliance schedule incorporated. As stated in our FLM response to the SIP revision, we recognize that the extension of the BART compliance date falls within the timeframe required under the Federal BART rule, and therefore have no formal comments on the draft permit. We do still encourage “BART installation and operation as expeditiously as practicable.” (**Claire O’Dea- USDA Forest Service Eastern Region, submitted via email**)
- a. Response: Thank you for your comment. Ohio EPA agrees with the commenter that the extension falls within the Federal BART rule timeframe and; therefore, Ohio EPA believes the request should be approvable. The installation and operation of BART as expeditiously as practicable is a high priority to Ohio EPA and the agency feels this is being observed by P.H. Glatfelter.



- b. Comment: Thank you for the opportunity to comment on the Draft Air Pollution Permit-to-Install Administrative Modification to PTI # P0103673 issued 3/7/2011 for P. H. Glatfelter Company - Chillicothe Facility (Draft Permit). We submit these comments on behalf of NPCA and our members who live near and/or recreate in Class I areas that are adversely impacted by haze pollution from the Glatfelter facility, including Great Smoky Mountains, Mammoth Cave, and Shenandoah National Parks. We oppose the modified compliance date for the implementation of Best Available Retrofit Technology (BART) proposed by the Draft Permit, which would allow several years of additional, unnecessary emissions to continue to pollute and harm our public lands and nearby communities.

The public notice's stated purpose of the modification is to "align the BART compliance with the new compliance date associated with the Industrial Boiler MACT... to allow[] for P.H. Glatfelter to select and implement a control strategy that would address both the MACT and BART." However, the additional time is not necessary and contradicts the statutory requirement that BART be installed "as expeditiously as possible." BART could and should have been implemented within the original timeframe.

The original date for BART compliance included several parts¹:

1. With regard to nitrogen oxides, a requirement to "routinely employing the Alstom Power low-NOx concentric firing system and vane close-coupled over fire air compartment, on a year-round basis, rather than limiting low-NOx operation to the control period (May 1 through September 30)" by December 31, 2014.
2. With regard to sulfur dioxide, first, a requirement to submit an application containing "a compliance plan outlining, at a minimum, the specific, selected control technologies and methods of compliance" by December 31, 2013, a year prior to the emission compliance date.
3. Also with regard to sulfur dioxide, to "achieve the required sulfur dioxide emission reduction, on a year-round basis" by December 31, 2014.
4. A requirement to install a "continuous emission monitoring system (CEMS)...to measure and record the daily sulfur dioxide emissions" by December 31, 2014.

The first and last of those requirements – employing equipment that is already installed at the facility, and installing a continuous emissions monitor – very clearly do not require any additional time for coordination with MACT requirements. These compliance dates should not be changed and to the extent that Glatfelter has not already complied with them, the facility is in violation of its federally enforceable permit. We ask OEPA not to change the compliance dates for these elements and to ensure that the Glatfelter facility is complying with them currently.

As to the second and third requirements, as noted by OEPA, the final MACT revision was issued by US EPA on January 31, 2013. Therefore, Glatfelter had most of a year before it was required to submit its plan for achieving emission reductions sufficient to satisfy BART, during which time it could have selected a control strategy that complied with both MACT and BART. It is not clear whether Glatfelter submitted the application due on December 31, 2013, which was prior to its February 2014 request to extend the compliance date. There is no indication that anything in US EPA's revision to the MACT requirements actually altered Glatfelter's ability to

¹ See Final Division of Air Pollution Control Permit-to-Install for P. H. Glatfelter Company - Chillicothe Facility, 3/7/2011, Ohio Regional Haze State Implementation Plan, Appendix H.



comply with BART. The change in compliance date for MACT did not change the expeditiousness with which BART can be installed.

We ask that OEPA not change the compliance dates for Glatfelter's application for a sulfur dioxide control strategy or for achieving the required emission reductions. However, if OEPA chooses to change the dates, it should require the application date a year prior to the emission reduction date (i.e. January 31, 2016 rather than January 31, 2017), consistent with both logical workflow and the relative timing of the original requirements (**Nathan miller- National Parks Conservation Association, submitted via email**)

- b. Response: The compliance date extensions fall within the Federal BART rule timeframe and; therefore, Ohio EPA believes the request should be approvable. Ohio EPA is currently working with P.H. Glatfelter to complete a natural gas conversion of the two coal-fired boilers that are subject to the BART requirements. This will provide even greater reductions in sulfur dioxide than those imposed by the BART requirements. Because the Federal BART rule timeframe allows more time for compliance, Ohio EPA felt it would be unreasonable to require the installation of a control technology to address the minimum BART requirements for the limited time period before P.H. Glatfelter's conversion to natural gas to address the Boiler MACT.

With respect to the "first and last of those requirements" identified by the commentor above, Ohio's 2011 State Implementation Plan (SIP) for Regional Haze stated "the NO_x and primary particulate emissions were determined to require no control beyond what is currently provided" to address visibility impacts. However, because the compliance option selected by P.H. Glatfelter is to maintain control measures constituting an "alternative to BART" that will achieve greater reasonable progress than would be achieved through installation and operation of BART (as allowed under 40CFR Part 51.308(e)(2)), P.H. Glatfelter's strategy for greater than reasonable progress included an agreement to operate this unit year round. Because the compliance date was extended to implement the sulfur dioxide BART strategy necessary to improve visibility and that compliance date remained within the Federal BART rule timeframe, Ohio EPA felt it was also reasonable to extend the compliance date for the greater than reasonable progress component.

It is important to note that P.H. Glatfelter has still been required by their previous permit(s) to operate their NO_x controls and monitor in accordance with the requirements previously established at a minimum during the ozone season control period required under Ohio Administrative Code Chapter 3745-14. This action did not relieve P. H. Glatfelter from those existing requirements. Rather, by the compliance date established by the BART requirements, the additional year-round operation of NO_x controls and compliance monitoring would become federally enforceable requirements as part of Ohio's State Implementation Plan for Regional Haze.

In summary, P.H. Glatfelter's pending conversion to natural gas by the timeframe required by the Boiler MACT and within the timeframe intended under the Federal BART rule to address visibility will provide even greater reductions in pollutants than necessary to address P.H. Glatfelter's visibility requirements. Ohio EPA believes this is the best path forward to achieve greater than reasonable progress than would be achieved through BART alone.



FINAL

**Division of Air Pollution Control
Permit-to-Install**

for

P. H. Glatfelter Company - Chillicothe Facility

Facility ID:	0671010028
Permit Number:	P0118907
Permit Type:	Administrative Modification
Issued:	7/20/2015
Effective:	7/20/2015



Division of Air Pollution Control
Permit-to-Install
for
P. H. Glatfelter Company - Chillicothe Facility

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Final Permit-to-Install
P. H. Glatfelter Company - Chillicothe Facility
Permit Number: P0118907
Facility ID: 0671010028
Effective Date: 7/20/2015

Authorization

Facility ID: 0671010028
Facility Description: Chillicothe Paper Mill.
Application Number(s): M0003371
Permit Number: P0118907
Permit Description: Administrative modification to PTI # P0103673 issued 3/7/2011 to align compliance date for the BART requirements with the approved Boiler MACT compliance date of January 31, 2017 to request to align the compliance date. The request states that this will allow Glatfelter to implement a strategy that meets compliance requirements as specified in Boiler MACT and the BART regulations as well as meet all regulatory compliance deadlines.
Permit Type: Administrative Modification
Permit Fee: \$3,000.00
Issue Date: 7/20/2015
Effective Date: 7/20/2015

This document constitutes issuance to:

P. H. Glatfelter Company - Chillicothe Facility
232 East 8TH St.
Chillicothe, OH 45601

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

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

Ohio EPA DAPC, Southeast District Office
2195 Front Street
Logan, OH 43138
(740)385-8501

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: P0118907
Permit Description: Administrative modification to PTI # P0103673 issued 3/7/2011 to align compliance date for the BART requirements with the approved Boiler MACT compliance date of January 31, 2017 to request to align the compliance date. The request states that this will allow Glatfelter to implement a strategy that meets compliance requirements as specified in Boiler MACT and the BART regulations as well as meet all regulatory compliance deadlines.

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

Emissions Unit ID:	B002
Company Equipment ID:	No.7 Boiler
Superseded Permit Number:	P0103673
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B003
Company Equipment ID:	No. 8 Boiler
Superseded Permit Number:	P0103673
General Permit Category and Type:	Not Applicable



Final Permit-to-Install
P. H. Glatfelter Company - Chillicothe Facility
Permit Number: P0118907
Facility ID: 0671010028
Effective Date: 7/20/2015

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 Ohio EPA DAPC, Southeast District Office.

- (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Ohio EPA DAPC, Southeast District Office. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.
 - (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the Ohio EPA DAPC, Southeast District Office every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
 - (4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

5. Scheduled Maintenance/Malfunction Reporting

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

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

6. Compliance Requirements

- a) 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 Ohio EPA DAPC, Southeast District Office concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
- (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

7. Best Available Technology

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

8. Air Pollution Nuisance

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

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Southeast District Office.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA DAPC, Southeast District Office. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted 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.



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B. Facility-Wide Terms and Conditions

[OAC rule 3745-14-01(E)(3)(d)]

- f) A NO_x allowance shall not be deducted, in order to comply with the requirement under paragraph (E)(3)(a) of OAC rule 3745-14-01, for a control period in a year prior to the year for which the NO_x allowance was allocated.

[OAC rule 3745-14-01(E)(3)(e)]

- g) Each ton of NO_x emitted in excess of the NO_x budget emission limitation, as defined in OAC rule 3745-14-01(B)(2)(yy), shall constitute a separate violation of OAC Chapter 3745-14, the Clean Air Act, and applicable Ohio law. The owners and operators of a NO_x budget unit that has excess emissions in any control period shall surrender the NO_x allowances required for deduction under paragraph (E)(4)(a) of OAC rule 3745-14-06 and pay any fine, penalty, or assessment or comply with any other remedy imposed under paragraph (E)(4)(c) of OAC rule 3745-14-06.

[OAC rules 3745-14-01(E)(3)(b), 3745-14-01(E)(4)(a) and 3745-14-01(E)(4)(b)]

- h) When recorded by the Administrator pursuant to OAC rules 3745-14-06 and 3745-14-07, every allocation, transfer, or deduction of a NO_x allowance to or from a NO_x budget unit's compliance account or the overdraft account of the source where the unit is located is deemed to amend automatically, and become a part of, any NO_x budget permit of the NO_x budget unit by operation of law without any further review.

[OAC rule 3745-14-01(E)(3)(h)]

- i) Except as provided below, the Director shall revise the NO_x budget permit, as necessary, in accordance with OAC rule 3745-77-08. Each NO_x budget permit is deemed to incorporate automatically the definitions of terms under paragraph (B) of OAC rule 3745-14-01 and, when recorded by the Administrator, in accordance with OAC rules 3745-14-06 and 3745-14-07, every allocation, transfer, or deduction of a NO_x allowance to or from the compliance accounts of the NO_x budget units covered by the permit or the overdraft account of the NO_x budget source covered by the permit.

[OAC rules 3745-14-03(D)(2) and 3745-14-03(E)(1)]

- j) The owner or operator of a NO_x budget unit shall comply with the prohibitions under OAC rule 3745-14-08(A)(5).

[OAC rule 3745-14-08(A)(5)]

- k) The owners and operators of the NO_x budget unit shall keep on site at the source each of the following documents for a period of five years from the date the document is created: (This period may be extended for cause, at any time prior to the end of five years, in writing by the Director or Administrator.)

- (1) the account certificate of representation for the NO_x authorized account representative for the NO_x budget unit and all documents that demonstrate the truth of the statements in the account certificate of representation, in accordance with paragraph (D) of OAC rule 3745-14-02, provided that the certificate and documents shall be retained on site at the

source beyond such five-year period until such documents are superseded because of the submission of a new account certificate or representation changing the NOx authorized account representative;

- (2) all emission monitoring information, in accordance with OAC rule 3745-14-08;
- (3) copies of all reports, compliance certifications, and other submissions and all records made or required under the NOx budget trading program; and
- (4) copies of all documents used to complete a NOx budget permit application and any other submission under the NOx budget trading program or to demonstrate compliance with the requirements of the NOx budget trading program.

[OAC rule 3745-14-01(E)(5)(a)(i) through (iv)]

- l) The permittee shall operate and maintain equipment to continuously monitor and record nitrogen oxide emissions from these emissions units in units of the applicable standard(s). Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 75.

Each continuous monitoring system consists of all the equipment used to acquire data and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software. This includes all systems required to monitor the NOx emission rate, NOx concentration, heat input rate, and stack flow rate, in accordance with 40 CFR Parts 75.71 and 75.72.

The permittee shall comply with the initial and re-certification procedures of 40 CFR Part 75. The permittee shall maintain on-site documentation from the USEPA or the Ohio EPA that the continuous nitrogen oxide monitoring system has been certified in accordance with 40 CFR Part 75. The letter of certification shall be made available to the Director upon request.

The permittee shall maintain records of the following data obtained by the continuous nitrogen oxide monitoring system: emissions of nitrogen oxides in lb/million Btu actual heat input on an hourly average basis, emissions of nitrogen oxides in lbs/hr, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

Whenever the monitoring system fails to meet the quality assurance or data validation requirements of 40 CFR Part 75, data shall be substituted using the applicable procedures in Subpart D, Appendix D, or Appendix E of 40 CFR Part 75.

[OAC rules 3745-14-01(E)(2)(a), 3745-14-01(E)(5)(a)(ii), 3745-14-08(A)(2)(a) through (A)(2)(d), 3745-14-08(B)(1), and 3745-14-08(C)(1)]

- m) The permittee shall comply with the monitoring plan requirements of 40 CFR Part 75.62, except that the monitoring plan shall also include all of the information required by Subpart H of 40 CFR Part 75.

[OAC rule 3745-14-08(E)(2)(a)]

- n) The NO_x authorized account representative of the NO_x budget unit shall submit the reports and compliance certifications required under the NO_x budget trading program, including those under OAC rules 3745-14-04 and 3745-14-08, to the Director and Administrator.

[OAC rule 3745-14-01(E)(5)(b)]

- o) Each submission under the NO_x budget trading program shall be submitted, signed, and certified by the NO_x authorized account representative for each NO_x budget source on behalf of which the submission is made. Each such submission shall include the following certification statement by the NO_x authorized account representative:

"I am authorized to make this submission on behalf of the owners and operators of the NO_x budget sources or NO_x budget units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

If the NO_x authorized account representative for a NO_x budget unit subject to an acid rain emission limitation who signed and certified any submission that is made under Subpart F or G of 40 CFR Part 75 and which includes data and information required under OAC rule 3745-14-08 or Subpart H of 40 CFR Part 75 is not the same person as the designated representative or the alternate designated representative for the unit under 40 CFR Part 72, then the submission shall also be signed by the designated representative or the alternate designated representative.

[OAC rules 3745-14-02(A)(5) and 3745-14-08(E)(1)(b)]

- p) The NO_x authorized account representative shall submit quarterly reports that include all of the data and information required in Subpart H of 40 CFR Part 75 for each NO_x budget unit (or group of units using a common stack) and the data and information in Subpart G of 40 CFR Part 75. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30 and October 30 of each year and shall be submitted in the manner specified in Subpart H of 40 CFR Part 75 and 40 CFR Part 75.64.

[OAC rules 3745-14-08(E)(4)(a) and 3745-14-08(E)(4)(c)(i)]

- q) The NO_x authorized account representative shall submit to the Administrator a compliance certification in support of each quarterly report based on a reasonable inquiry of those persons with primary responsibility for ensuring that all of the unit's emissions are correctly and fully monitored. The compliance certification shall state that:

(1) the monitoring data submitted were recorded in accordance with the applicable requirements of OAC rule 3745-14-08 and 40 CFR Part 75, including the quality assurance procedures and specifications; and

(2) for a unit with add-on NO_x emission controls and for all hours where data are substituted in accordance with 40 CFR Part 75.34(a)(1), the add-on emission control were operating within the range of parameters listed in the quality assurance program under Appendix B

of 40 CFR Part 75 and the substitute values do not systematically underestimate the NOx emissions.

[OAC rule 3745-14-08(E)(4)(d)(i) and (ii)]

- r) The NOx authorized account representative for a NOx budget unit shall submit written notice of monitoring system certification and re-certification test dates to the Director and the Administrator in accordance with 40 CFR Part 75.61. The NOx authorized account representative shall submit a certification application to the Administrator, U.S. EPA, Region V Office, and the Director within forty-five days after completing all initial or re-certification tests required under paragraph (B) of OAC rule 3745-14-08, including the information required under Subpart H of 40 CFR Part 75.

[OAC rules 3745-14-08(D) and 3745-14-08(E)(3)]

- s) For each control period in which one or more NOx budget units at a source are subject to the NOx budget emission limitation, the NOx authorized account representative of the source shall submit to the Director and the Administrator, by November 30 of that year, a compliance certification report for each source covering all such units.

The NOx authorized account representative shall include the following elements in the compliance certification report, in a format prescribed by the Administrator, concerning each unit at the source and subject to the NOx budget emission limitation for the control period covered by the report:

- (1) identification of each NOx budget unit;
- (2) at the NOx authorized account representative's option, the serial numbers of the NOx allowances that are to be deducted from each unit's compliance account under paragraph (E) of OAC rule 3745-14-06 for the control period;
- (3) at the NOx authorized account representative's option, for units sharing a common stack and having NOx emissions that are not monitored separately or apportioned in accordance with OAC rule 3745-14-08, the percentage of allowances that is to be deducted from each unit's compliance account under paragraph (E)(5) of OAC rule 3745-14-06; and
- (4) the compliance certification under paragraph (A)(3) of OAC rule 3745-14-04.

[OAC rules 3745-14-04(A)(1) and 3745-14-04(A)(2)]

- t) In the compliance certification report under Section 2.s)(4) above, the NOx authorized account representative shall certify, based upon reasonable inquiry of those persons with the primary responsibility for operating the source and the NOx budget units at the source in compliance with the NOx budget trading program, whether each NOx budget unit for which the compliance certification is submitted was operated during the calendar year covered by the report in compliance with the requirements of the NOx budget trading program applicable to the unit, including all the following:

- (1) whether the unit was operated in compliance with the NOx budget emission limitation;

- (2) whether the monitoring plan that governs the unit has been maintained to reflect the actual operation and monitoring of the unit, and contains all information necessary to attribute NOx emissions to the unit, in accordance with OAC rule 3745-14-08;
- (3) whether all the NOx emissions from the unit, or group of units (including the unit) using a common stack, were monitored or accounted for through the missing data procedures and reported in the quarterly monitoring reports, including whether conditional data were reported in the quarterly reports in accordance with OAC rule 3745-14-08, and if conditional data were reported, the permittee shall indicate whether the status of all conditional data has been resolved and all necessary quarterly report submissions have been made; and
- (4) whether the facts that form the basis for certification under OAC rule 3745-14-08 of each monitor at the unit or group of units (including the unit) using a common stack, or for using an excepted monitoring method or alternative monitoring method approved under OAC rule 3745-14-08, if any, have changed. If a change is required to be reported under Section 2.s)(4) above, specify the nature of the change, the reason for the change, when the change occurred, and how the unit's compliance status was determined subsequent to the change, including what method was used to determine emissions when a change mandated the need for monitor re-certification.

[OAC rule 3745-14-04(A)(3)]

- u) The NOx authorized account representative shall submit a complete NOx budget permit renewal application for the NOx budget source covering the NOx budget units at the source in accordance with paragraph (E) of OAC rule 3745-77-08.

[OAC rule 3745-14-03(B)(3)(a)]

- v) The emission measurements recorded and reported in accordance with OAC rule 3745-14-08 shall be used to determine compliance by the unit with the NOx budget emission limitation under paragraph (E)(3) of OAC rule 3745-14-01.

[OAC rule 3745-14-01(E)(2)(b)]

- w) The permittee shall develop and maintain a written quality assurance/quality control plan for each continuous NOx monitoring system designed to ensure continuous valid and representative readings of NOx emissions in units of the applicable standard. The plan shall follow the requirements of 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NOx monitoring system must be kept on-site and available for inspection during regular office hours.

[OAC rules 3745-14-08(A)(2)(c) and 3745-14-08(A)(2)(d)]

Note: Ohio EPA DAPC has completed rule amendments for OAC Chapter 3745-14, specifically OAC rule 3745-14-01 and OAC rule 3745-14-06, to facilitate the transition of the affected units from OAC Chapter 3745-14 into the federal Clean Air Interstate Rule (CAIR) program and to begin the process of "sunsetting" the parts of OAC Chapter 3745-14 which will no longer be needed as a result of Ohio's CAIR rules (OAC Chapter 3745-109). The revised applicability section of OAC Chapter 3745-14 allows the rules to remain available as a backup until court required revisions to the federal CAIR program have been completed. The



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revision to OAC rule 3745-14-01(C)(2)(a) requires all affected units to be subject to and meet the requirements of Ohio's CAIR program beginning in 2009. Should U.S. EPA eliminate or suspend the CAIR program, this revision would require these units to revert back and meet the requirements of OAC Chapter 3745-14, provided a NOx allowance tracking system is maintained by U.S. EPA.

Clean Air Interstate Rule - OAC Chapter 3745-109

The permittee shall ensure that any CAIR NOx, SO2, or NOx ozone season units complies with the requirements of OAC Chapter 3745-109, which includes submitting timely permit applications. The requirements of this rule will be specified in the Title V permit issued to this facility.



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C. Emissions Unit Terms and Conditions

1. B002, No.7 Boiler

Operations, Property and/or Equipment Description:

Emissions unit B002 (Boiler No. 7) is a wet bottom, pulverized coal-fired boiler (Combustion Engineering model VU-405) having a maximum heat input capacity of 422 million Btu per hour, capable of firing number 2 fuel oil as backup fuel, and is a backup control device for non-condensable gases (NCG) generated by other facility emissions units. The unit is controlled with a cyclone/multi-clone, an electrostatic precipitator (ESP), a low nitrogen oxides concentric firing system and a vane close-coupled overfire air compartment (Alstom Power) (Administrative modification to PTI # P0103673 issued 3/7/2011 to align compliance date for the BART requirements with the approved Boiler MACT compliance date of January 31, 2017).

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) None.
- b) Applicable Emissions Limitations and/or Control Requirements
 - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	See section c)(2) below.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions from the exhaust stack serving emissions units B002 and B003 shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
c.	OAC rule 3745-17-10(C)(1)	Particulate emissions shall not exceed 0.10 pound per million Btu of actual heat input, when firing coal. The particulate emission limitation specified in 40 CFR Part 63, Subpart DDDDD for this emissions unit, when firing coal, is currently more stringent than this particulate emission limitation. Unless the applicable 40 CFR Part 63, Subpart DDDDD emission limitation is revised under "reconsideration", after the specified compliance date for this emissions unit, this particulate emission limitation will be less stringent than the particulate emission limitation established pursuant to Subpart DDDDD.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-17-10(B)(1)	Particulate emissions shall not exceed 0.020 pound per million Btu of actual heat input, when firing only number 2 fuel oil. The particulate emission limitation specified in 40 CFR Part 63, Subpart DDDDD for this emissions unit, when firing only number 2 fuel oil, is currently more stringent than this particulate emission limitation. Unless the applicable 40 CFR Part 63, Subpart DDDDD emission limitation is revised under "reconsideration", after the specified compliance date for this emissions unit, this particulate emission limitation will be less stringent than the particulate emission limitation established pursuant to Subpart DDDDD.
e.	OAC rule 3745-18-77(B)(1)	Sulfur dioxide emissions shall not exceed 9.9 pounds per million Btu actual heat input. After the compliance date listed under b)(2)b. below, this emission limitation will be less stringent than the emission limitation established pursuant to 40 CFR Part 51.308(e) (see b)(1)g. below).
f.	OAC Chapters 3745-14 and 3745-109	See section b)(2)a. below.
g.	40 CFR Part 51.308(e) Federally enforceable limitation to comply with the BART requirements of U.S. EPA's Regional Haze Regulations.	After the compliance date listed under b)(2)b. below, sulfur dioxide emissions from emissions units B002 and B003, combined, shall not exceed 24,930 pounds per calendar day.
h.	40 CFR Part 63, Subpart DDDDD	See b)(2)c. below. Also see 40 CFR Part 63.7500 and Table 2 to Subpart DDDDD.
i.	40 CFR Part 63, Subpart A	See 40 CFR Part 63.7565 and Table 10 to Subpart DDDDD for the Applicability of General Provisions to this Subpart.

(2) Additional Terms and Conditions

- a. Refer to Part B. – Facility-Wide Terms and Conditions of the permit for the requirements of OAC Chapter 3745-14 "NOx Budget Trading Program in Ohio" and OAC Chapter 3745-109 "Clean Air Interstate Rule."

- b. Emissions units B002 and B003 (Boilers No. 7 and No. 8, respectively) are subject to the Best Available Retrofit Technology (BART) requirements of the U.S. EPA's Regional Haze Regulations (40 CFR Part 51, Subpart P). The permittee shall operate and maintain control measures constituting an "alternative to BART" that will achieve greater reasonable progress than would be achieved through installation and operation of BART, as allowed under 40 CFR Part 51.308(e)(2).

In addition to using a cyclone/multi-clone and an ESP to control the particulate emissions, emissions unit B002 (Boiler No. 7) is equipped with an Alstom Power low nitrogen oxides (low-NOx) concentric firing system and a vane close-coupled over fire air compartment, which, based upon Ohio EPA's analysis, satisfy the BART nitrogen oxides technology requirement.

The permittee shall achieve the required nitrogen oxides emission reduction by not later than January 31, 2017 by routinely employing the Alstom Power low-NOx concentric firing system and vane close-coupled over fire air compartment, on a year-round basis, rather than limiting low-NOx operation to the control period (May 1 through September 30) specified in OAC Chapter 3745-14.

The permittee shall achieve the required sulfur dioxide emission reduction, on a year-round basis, by not later than January 31, 2017. As part of this "alternative to BART," the permittee shall install, operate, and maintain control technology sufficient to meet the emissions limitation in section b)(1)g. This may include an add-on control device, use of an alternative fuel, use of low sulfur fuel, permanent shutdown of emissions unit B002, or a combination of these measures. By no later than January 31, 2017, the permittee shall submit to Ohio EPA an application for modification of this federally enforceable permit. The application shall include a compliance plan outlining, at a minimum, the specific, selected control technologies and methods of compliance; and these requirements, along with any appropriate monitoring, recordkeeping, and reporting requirements, shall be incorporated into the federally enforceable permit by no later than January 31, 2017. A continuous emission monitoring system (CEMS) shall be installed for this emissions unit by no later than January 31, 2017 to measure and record the daily sulfur dioxide emissions.

- c. This emissions unit will be subject to the applicable requirements specified in 40 CFR Part 63, Subpart DDDDD when the regulations become effective on January 31, 2017.

c) Operational Restrictions

- (1) The quality of the oil burned in this emissions unit shall meet a sulfur content that is sufficient to comply with the allowable sulfur dioxide emission limitation specified in section b)(1)e. above.
- (2) This emissions unit shall not be taken out of service at the same time as both emissions units B003 (Boiler No. 8) and B013 (Wood Waste Boiler), except during emergency outages. Emissions unit B013 shall serve as the primary incineration point for high-volume low concentration NCG. Either emissions unit B002 or B003 shall serve as a

backup control device for high-volume low concentration NCG combustion. If emissions unit B002 is permanently shutdown, emissions unit B003 shall serve as the backup control device for high-volume low concentration NCG combustion and shall not be taken out of service at the same time as emissions unit B013, except during emergency outages.

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

- (1) The permittee shall operate and maintain equipment to continuously monitor and record the opacity of the visible particulate emissions of the combined emissions from emissions units B002 and B003. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The continuous monitoring system consists of all the equipment used to acquire data and includes the data recording/processing hardware and software.

The permittee shall maintain a letter of certification from the Ohio EPA, Central Office documenting that the continuous opacity monitoring system has been certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 1. The letter of certification shall be made available to the Ohio EPA, Southeast District Office upon request.

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

- (2) The permittee shall maintain a written quality assurance/quality control plan for the continuous opacity monitoring system designed to ensure continuous valid and representative readings of opacity. The plan shall include, as a minimum, conducting and recording daily automatic zero/span checks, provisions for conducting a quarterly audit of the continuous opacity monitoring system, and a description of preventive maintenance activities. The quality assurance/quality control plan must be kept on site and available for inspection during regular office hours.
- (3) To obtain an exemption pursuant to OAC rule 3745-17-07(A)(3)(a)(i) or (A)(3)(b)(i), the permittee shall operate and maintain a temperature monitor and recorder that measures and records the temperature of the boiler exhaust gases entering the ESP during (a) all periods of start-up until the ESP is operational or until the inlet temperature of the ESP achieves the temperature level specified in OAC rule 3745-17-07(A)(3)(a)(i) and (b) all periods of shutdown until the inlet temperature of the ESP drops below the temperature level specified in OAC rule 3745-17-07(A)(3)(b)(i). An electronic or hardcopy record of the temperatures during periods of start-up and shutdown shall be maintained.

The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with manufacturer's recommendations, with any modifications deemed necessary by the permittee, and shall be capable of accurately measuring the temperature of the boiler exhaust gases in units of degrees Fahrenheit.

- (4) The permittee shall maintain monthly records of the total quantity of coal burned, and the results of the analyses for ash content, sulfur content, heat content, and the average

sulfur dioxide emission rate (in lbs/million Btu). The coal collection and sampling procedures and analyses for ash content, sulfur content, and heat content shall be performed in accordance with the following:

The permittee shall collect monthly composite samples of the coal burned in this emissions unit. A sufficient number of individual samples shall be collected so that each composite sample is representative of the average quality of coal burned in this emissions unit during each calendar month. The coal sampling shall be performed in accordance with the most recent version of ASTM method D2234, Collection of a Gross Sample of Coal.

Each monthly composite sample of coal shall be analyzed for ash content (in percent), sulfur content (in percent), and heat content (in Btu/pound). The analytical methods for ash content, sulfur content, and heat content shall be the most recent version of: ASTM method D3174, Ash in the Analysis of Coal and Coke; ASTM method D3177, Total Sulfur in the Analysis Sample of Coal and Coke or ASTM method D4239, Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods; and ASTM method D5865, Gross Calorific Value of Coal and Coke, respectively. Alternative, equivalent methods may be used upon written approval from the Ohio EPA, Southeast District Office.

The requirements to analyze the sulfur content of the composite coal sample and to calculate the pounds per million Btu sulfur dioxide emission rate pursuant to this term and condition shall terminate on January 31, 2017 because the sulfur dioxide continuous monitoring system required under section d)(6) and the monitoring and recordkeeping provisions for the pounds per million Btu and pounds per calendar day emission limitations under section d)(8) become effective on that date.

(5) The permittee shall comply with the requirements of one of the following alternatives pertaining to the use of number 2 fuel oil:

a. Alternative 1:

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

b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil

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

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

The requirements to analyze the sulfur content of the number 2 fuel oil and to calculate the pounds per million Btu sulfur dioxide emission rate pursuant to this term and condition shall terminate on January 31, 2017 because the sulfur dioxide continuous monitoring system required under section d)(6) and the monitoring and recordkeeping provisions for the pounds per million Btu and pounds per calendar day emission limitations under section d)(8) become effective on that date.

- (6) By not later than January 31, 2017, the permittee shall install, operate, and maintain equipment to continuously monitor and record sulfur dioxide and exhaust gas flow data for this emissions unit in units of the applicable standards (pounds per million Btu and pounds per calendar day). Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60, Appendix B, Performance Specification 6, and be operated in accordance with 40 CFR Part 60.13 unless otherwise specified in d)(7) below.

The permittee shall maintain records of all data obtained by the continuous sulfur dioxide and exhaust gas flow monitoring system including, but not limited to, minute-by-minute concentration data for sulfur dioxide; minute-by-minute flow data in ACFM; sulfur dioxide data in pounds per day; the results of all daily, weekly, and quarterly calibration checks; and the magnitude of any calibration adjustments.

Each continuous emissions monitoring system (CEMS) consists of all the equipment used to acquire and record data and includes any sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

The data recorded by the CEMS shall be used to determine compliance with the applicable emission limitations on an ongoing basis.

- (7) By not later than April 31, 2016, the permittee shall develop a written quality assurance/quality control plan for the continuous sulfur dioxide and exhaust gas flow monitoring system designed to meet all requirements as listed in 40 CFR Part 60, Appendix F and ensure continuous valid and representative readings of sulfur dioxide and flow. The plan shall describe in detail, complete, step-by-step procedures and operations for each of the following activities:

- a. calibration of CEMS;
- b. calibration drift determination and adjustment of CEMS;
- c. preventive maintenance of CEMS (including spare parts inventory);
- d. data recording, calculations, and reporting;
- e. accuracy audit procedures including sampling and analysis methods; and
- f. program of corrective action for malfunctioning CEMS.

The permittee shall be required to complete a CEMS certification relative accuracy test audit (RATA), in accordance with the procedures specified in 40 CFR Part 60, Appendix F, by not later than January 31, 2017. From the date of CEMS certification forward, the permittee may forego annual RATA requirements as listed in 40 CFR Part 60, Appendix F, by completing a quarterly cylinder gas or relative accuracy audit, in accordance with 40 CFR Part 60, Appendix F, for each quarter of the year. Should any CEMS not pass a cylinder gas or relative accuracy audit on the first attempt for two consecutive quarters (even though a recalibration or repair allows the second attempted cylinder gas or relative accuracy audit to pass), the permittee shall complete a RATA within 60 days of the second quarter's failed cylinder gas or relative accuracy audit. The permittee shall also complete a RATA for the CEMS within six months prior to the expiration of this permit. RATA testing may also be required if the CEMS as listed on the CEMS certification letter from the Ohio EPA, Central Office, or any CEMS associated equipment, is changed or modified.

Beginning on January 31, 2017, the permittee shall perform daily zero/span calibration drift checks on each sulfur dioxide and flow CEMS for 60 consecutive operating days in accordance with the requirements specified in 40 CFR Part 60, Appendix F, section 4. If, on the first attempt, the results of each daily zero/span calibration drift check are less than the criteria for excessive calibration drift specified in 40 CFR Part 60, Appendix F, section 4.3 (as determined by the Ohio EPA, Southeast District Office), the permittee shall begin performing zero/span calibration drift checks on a weekly basis. If any CEMS should fail a weekly zero/span calibration drift check for two consecutive weeks (based on the criteria of being two times over the limit as stated in Appendix F, section 4.3), the permittee shall perform daily zero/span calibration drift checks until such time as 60 consecutive daily zero/span calibration drift checks have been successfully completed within the criteria specified in Appendix F, section 4.3.

The quality assurance/quality control plan and a logbook dedicated to the sulfur dioxide and flow CEMS must be kept on site and available for inspection during regular office hours.

- (8) By not later than January 31, 2017, the permittee shall maintain daily records of the following information:
 - a. the total sulfur dioxide emissions from this emissions unit based upon the data collected in section d)(6), in pounds per million Btu and pounds per calendar day;

- b. the total sulfur dioxide emissions from this emissions unit and emissions unit B003, combined, based upon the data collected in section d)(6) for each unit, in pounds per calendar day; and
 - c. the identification of any days (excluding any days within the “control period” specified in OAC Chapter 3745-14) when this emissions unit was in service and the unit’s low-NOx concentric firing system and vane close-coupled over fire air compartment were not operating.
- (9) The permittee shall maintain records for each day when emissions units B002, B003, and B013 were all off line and the venting of high-volume low concentration NCG was uncontrolled. If emissions unit B002 is permanently shut down after January 31, 2017, the permittee shall maintain records for each day when emissions units B003 and B013 were off line and the venting of high-volume low concentration NCG was uncontrolled.
- e) Reporting Requirements
- (1) The permittee shall submit reports (hardcopy or electronic format) within one month following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting all instances of opacity values in excess of the limitation specified in section b)(1)b. of these terms and conditions, detailing the date, commencement and completion times, duration, magnitude (percent opacity), reason (if known), and corrective actions taken (if any) of each 6-minute block average above the applicable opacity limitations.
- The reports shall also identify any excursions of the start-up and shutdown provisions specified in OAC rule 3745-17-07(A)(3) and document any continuous opacity monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included in the quarterly report.
- If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the date, time, reason, and corrective action taken for each time period of monitoring system malfunction. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report.
- These quarterly excess emission reports shall be submitted by January 31, April 30, July 31, and October 31 of each year, and each report shall address the data obtained during the previous calendar quarter.
- (2) The permittee shall submit quarterly deviation (excursion) reports that identify whenever a monthly composite sample collected pursuant to section d)(4) above indicates a deviation from the allowable sulfur dioxide emission rate. These reports shall be submitted in accordance with the reporting requirements specified in the Standard Terms and Conditions of this permit.

The requirements to submit quarterly deviation (excursion) reports pursuant to this term and condition shall terminate on January 31, 2017 because the sulfur dioxide continuous monitoring system required under section d)(6) and the monitoring and recordkeeping provisions for the pounds per million Btu and pounds per calendar day emission limitations under section d)(8) become effective on that date.

- (3) The permittee shall notify the Ohio EPA, Southeast District Office in writing of any record that shows a deviation of the allowable sulfur dioxide emission limitation based upon the calculated sulfur dioxide emission rates from section d)(5) above when firing number 2 fuel oil. The notification shall include a copy of such record and shall be sent to the Ohio EPA, Southeast District Office. These reports shall be submitted in accordance with the reporting requirements specified in the Standard Terms and Conditions of this permit.

The requirements to submit quarterly deviation (excursion) reports pursuant to this term and condition shall terminate on January 31, 2017 because the sulfur dioxide continuous monitoring system required under section d)(6) and the monitoring and recordkeeping provisions for the pounds per million Btu and pounds per calendar day emission limitations under section d)(8) become effective on that date.

- (4) The permittee shall submit quarterly deviation (excursion) reports that identify any period of time when emissions units B002, B003, and B013 were all off line and the venting of high-volume low concentration NCG was uncontrolled. If emissions unit B002 is permanently shut down after January 31, 2017, the permittee shall submit deviation (excursion) reports that identify any period of time when emissions units B003 and B013 were off line and the venting of high-volume low concentration NCG was uncontrolled. These reports shall be submitted in accordance with the reporting requirements specified in the Standard Terms and Conditions of this permit.
- (5) Beginning in calendar year 2017, the permittee shall submit reports within one month following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of sulfur dioxide values in excess of the applicable limitations (pounds per million Btu and pounds per calendar day) specified in this permit.

The reports shall document any continuous sulfur dioxide and exhaust gas flow monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

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



quarterly excess emission reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter.

- (6) Beginning in calendar year 2017, the permittee shall submit quarterly deviation (excursion) reports that identify any days (excluding any days within the "control period" specified in OAC Chapter 3745-14) when this emissions unit was in service and the unit's low-NOx concentric firing system and vane close-coupled over fire air compartment were not operating.

These reports shall be submitted in accordance with the reporting requirements specified in the Standard Terms and Conditions of this permit.

f) Testing Requirements

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

- a. Emission Limitation:

Visible particulate emissions from the exhaust stack serving emissions units B002 and B003 shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Methods:

If required, compliance with this emission limitation shall be demonstrated through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

Ongoing compliance with this emission limitation may be demonstrated based upon the records required pursuant to section d)(1).

- b. Emission Limitation:

Particulate emissions shall not exceed 0.10 pound per million Btu of actual heat input, when firing coal.

Applicable Compliance Method:

If required, compliance with this emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

- c. Emission Limitation:

Particulate emissions shall not exceed 0.020 pound per million Btu of actual heat input, when firing only number 2 fuel oil.



Applicable Compliance Method:

Compliance with this emission limitation may be determined by multiplying an emission factor of 2.0 pounds of particulates per 1000 gallons of fuel oil fired by the emissions unit's maximum hourly fuel oil firing capacity (1584 gallons/hr), dividing by the emissions unit's rated heat input capacity (422 million Btu/hr), and dividing by 1000. This emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.3, Table 1.3-1 (5/10).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

d. Emission Limitation:

Sulfur dioxide emissions shall not exceed 9.9 pounds per million Btu actual heat input.

Applicable Compliance Methods:

When firing fuel oil, compliance with this sulfur dioxide emission limitation may be demonstrated based upon the records required pursuant to section d)(5).

When firing coal, compliance with this sulfur dioxide emission limitation may be demonstrated based upon the records required pursuant to section d)(4).

On and after installation and operation of the control technology required under section b)(2)b. above is complete, compliance with this sulfur dioxide emission limitations shall be demonstrated based upon the records required pursuant to sections d)(6) and d)(8).

Also, if required, the permittee shall demonstrate compliance with the allowable sulfur dioxide emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6 or 6A.

e. Emission Limitation:

By not later than January 31, 2017, sulfur dioxide emissions from emissions units B002 and B003, combined, shall not exceed 24,930 pounds per calendar day.

Applicable Compliance Method:

Compliance with this sulfur dioxide emission limitation shall be demonstrated based upon the records required pursuant to sections d)(6) and d)(8).

Also, if required, the permittee shall demonstrate compliance with the allowable sulfur dioxide emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6 or 6A.



Final Permit-to-Install
P. H. Glatfelter Company - Chillicothe Facility
Permit Number: P0118907
Facility ID: 0671010028
Effective Date: 7/20/2015

- g) Miscellaneous Requirements
 - (1) None.

2. B003, No. 8 Boiler

Operations, Property and/or Equipment Description:

Emissions unit B003 (Boiler No.8) is a wall-fired, pulverized coal-fired boiler (Alstom/Combustion Engineering) having a maximum heat input capacity of 505 million Btu per hour, capable of firing number 2 fuel oil as backup fuel, and is a backup control device for non-condensable gases (NCG) generated by other facility emissions units. The emissions unit is controlled with a cyclone/multi-clone, four low-NOx staged-combustion burners (Advanced Combustion Technology), and an electrostatic precipitator (Environmental Elements Dry Precipitator) (Administrative modification to PTI # P0103673 issued 3/7/2011 to align compliance date for the BART requirements with the approved Boiler MACT compliance date of January 31, 2017).

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) None.
- b) Applicable Emissions Limitations and/or Control Requirements
 - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	See section c)(2) below.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions from the exhaust stack serving emissions units B002 and B003 shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-10(C)(1)	Particulate emissions shall not exceed 0.10 pound per million Btu of actual heat input, when firing coal. The particulate emission limitation specified in 40 CFR Part 63, Subpart DDDDD for this emissions unit, when firing coal, is currently more stringent than this particulate emission limitation. Unless the applicable 40 CFR Part 63, Subpart DDDDD emission limitation is revised under "reconsideration", after the specified compliance date for this emissions unit, this particulate emission limitation will be less stringent than the particulate emission limitation established



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		pursuant to Subpart DDDDD.
	OAC rule 3745-17-10(B)(1)	Particulate emissions shall not exceed 0.020 pound per million Btu of actual heat input, when firing only number 2 fuel oil. The particulate emission limitation specified in 40 CFR Part 63, Subpart DDDDD for this emissions unit, when firing only number 2 fuel oil, is currently more stringent than this particulate emission limitation. Unless the applicable 40 CFR Part 63, Subpart DDDDD emission limitation is revised under "reconsideration", after the specified compliance date for this emissions unit, this particulate emission limitation will be less stringent than the particulate emission limitation established pursuant to Subpart DDDDD.
	OAC rule 3745-18-77(B)(1)	Sulfur dioxide emissions shall not exceed 9.9 pounds per million Btu actual heat input. After the compliance date listed under b)(2)b. below, this emission limitation will be less stringent than the emission limitation established pursuant to 40 CFR Part 51.308(e) (see b)(1)g. below).
	OAC Chapters 3745-14 and 3745-109	See section b)(2)a. below.
	40 CFR Part 51.308(e) Federally enforceable limitation to comply with the BART requirements of U.S. EPA's Regional Haze Regulations.	After the compliance date listed under b)(2)b. below, sulfur dioxide emissions from emissions units B002 and B003, combined, shall not exceed 24,930 pounds per calendar day.
	40 CFR Part 63, Subpart DDDDD	See b)(2)c. below. Also see 40 CFR Part 63.7500 and Table 2 to Subpart DDDDD.
	40 CFR Part 63, Subpart A	See 40 CFR Part 63.7565 and Table 10 to Subpart DDDDD for the Applicability of General Provisions to this Subpart.

(2) Additional Terms and Conditions

- a. Refer to Part B. – Facility-Wide Terms and Conditions of the permit for the requirements of OAC Chapter 3745-14 "NO_x Budget Trading Program in Ohio" and OAC Chapter 3745-109 "Clean Air Interstate Rule."

- b. Emissions units B002 and B003 (Boilers No. 7 and No. 8, respectively) are subject to the Best Available Retrofit Technology (BART) requirements of the U.S. EPA's Regional Haze Regulations (40 CFR Part 51, Subpart P). The permittee shall operate and maintain control measures constituting an "alternative to BART" that will achieve greater reasonable progress than would be achieved through installation and operation of BART, as allowed under 40 CFR Part 51.308(e)(2).

In addition to using a cyclone/multi-clone and an ESP to control the particulate emissions, emissions unit B003 (Boiler No. 8) is equipped with four Advanced Combustion Technology low-NOx staged-combustion burners, which, based upon Ohio EPA's analysis, satisfy the BART nitrogen oxides technology requirement.

The permittee shall achieve the required nitrogen oxides emission reduction by not later than January 31, 2017 by routinely employing the four Advanced Combustion Technology staged-combustion burners in their lowest-NOx mode on a year-round basis, rather than limiting low-NOx operation to the control period (May 1 through September 30) specified in OAC Chapter 3745-14.

The permittee shall achieve the required sulfur dioxide emission reduction, on a year-round basis, by not later than January 31, 2017. As part of this "alternative to BART," the permittee shall install, operate, and maintain control technology sufficient to meet the emissions limitation in section b)(1)g. This may include an add-on control device, use of an alternative fuel, use of low sulfur fuel, permanent shutdown of emissions unit B002, or a combination of these measures. By no later than January 31, 2017, the permittee shall submit to Ohio EPA an application for modification of this federally enforceable permit. The application shall include a compliance plan outlining, at a minimum, the specific, selected control technologies and methods of compliance; and these requirements, along with any appropriate monitoring, recordkeeping, and reporting requirements, shall be incorporated into the federally enforceable permit by no later than January 31, 2017. A continuous emission monitoring system (CEMS) shall be installed for this emissions unit by no later than January 31, 2017 to measure and record the daily sulfur dioxide emissions.

- c. This emissions unit will be subject to the applicable requirements specified in 40 CFR Part 63, Subpart DDDDD when the regulations become effective on January 31, 2017.

c) Operational Restrictions

- (1) The quality of the oil burned in this emissions unit shall meet a sulfur content that is sufficient to comply with the allowable sulfur dioxide emission limitation specified in section b)(1)e. above.
- (2) This emissions unit shall not be taken out of service at the same time as both emissions units B003 (Boiler No. 8) and B013 (Wood Waste Boiler), except during emergency outages. Emissions unit B013 shall serve as the primary incineration point for high-volume low concentration NCG. Either emissions unit B002 or B003 shall serve as a

backup control device for high-volume low concentration NCG combustion. If emissions unit B002 is permanently shutdown, emissions unit B003 shall serve as the backup control device for high-volume low concentration NCG combustion and shall not be taken out of service at the same time as emissions unit B013, except during emergency outages.

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

- (1) The permittee shall operate and maintain equipment to continuously monitor and record the opacity of the visible particulate emissions of the combined emissions from emissions units B002 and B003. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The continuous monitoring system consists of all the equipment used to acquire data and includes the data recording/processing hardware and software.

The permittee shall maintain a letter of certification from the Ohio EPA, Central Office documenting that the continuous opacity monitoring system has been certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 1. The letter of certification shall be made available to the Ohio EPA, Southeast District Office upon request.

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

- (2) The permittee shall maintain a written quality assurance/quality control plan for the continuous opacity monitoring system designed to ensure continuous valid and representative readings of opacity. The plan shall include, as a minimum, conducting and recording daily automatic zero/span checks, provisions for conducting a quarterly audit of the continuous opacity monitoring system, and a description of preventive maintenance activities. The quality assurance/quality control plan must be kept on site and available for inspection during regular office hours.
- (3) To obtain an exemption pursuant to OAC rule 3745-17-07(A)(3)(a)(i) or (A)(3)(b)(i), the permittee shall operate and maintain a temperature monitor and recorder that measures and records the temperature of the boiler exhaust gases entering the ESP during (a) all periods of start-up until the ESP is operational or until the inlet temperature of the ESP achieves the temperature level specified in OAC rule 3745-17-07(A)(3)(a)(i) and (b) all periods of shutdown until the inlet temperature of the ESP drops below the temperature level specified in OAC rule 3745-17-07(A)(3)(b)(i). An electronic or hardcopy record of the temperatures during periods of start-up and shutdown shall be maintained.

The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with manufacturer's recommendations, with any modifications deemed necessary by the permittee, and shall be capable of accurately measuring the temperature of the boiler exhaust gases in units of degrees Fahrenheit.

- (4) The permittee shall maintain monthly records of the total quantity of coal burned, and the results of the analyses for ash content, sulfur content, heat content, and the average

sulfur dioxide emission rate (in lbs/million Btu). The coal collection and sampling procedures and analyses for ash content, sulfur content, and heat content shall be performed in accordance with the following:

The permittee shall collect monthly composite samples of the coal burned in this emissions unit. A sufficient number of individual samples shall be collected so that each composite sample is representative of the average quality of coal burned in this emissions unit during each calendar month. The coal sampling shall be performed in accordance with the most recent version of ASTM method D2234, Collection of a Gross Sample of Coal.

Each monthly composite sample of coal shall be analyzed for ash content (in percent), sulfur content (in percent), and heat content (in Btu/pound). The analytical methods for ash content, sulfur content, and heat content shall be the most recent version of: ASTM method D3174, Ash in the Analysis of Coal and Coke; ASTM method D3177, Total Sulfur in the Analysis Sample of Coal and Coke or ASTM method D4239, Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods; and ASTM method D5865, Gross Calorific Value of Coal and Coke, respectively. Alternative, equivalent methods may be used upon written approval from the Ohio EPA, Southeast District Office.

The requirements to analyze the sulfur content of the composite coal sample and to calculate the pounds per million Btu sulfur dioxide emission rate pursuant to this term and condition shall terminate on January 31, 2017 because the sulfur dioxide continuous monitoring system required under section d)(6) and the monitoring and recordkeeping provisions for the pounds per million Btu and pounds per calendar day emission limitations under section d)(8) become effective on that date.

(5) The permittee shall comply with the requirements of one of the following alternatives pertaining to the use of number 2 fuel oil:

a. Alternative 1:

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

b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil

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

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

The requirements to analyze the sulfur content of the number 2 fuel oil and to calculate the pounds per million Btu sulfur dioxide emission rate pursuant to this term and condition shall terminate on January 31, 2017 because the sulfur dioxide continuous monitoring system required under section d)(6) and the monitoring and recordkeeping provisions for the pounds per million Btu and pounds per calendar day emission limitations under section d)(8) become effective on that date.

- (6) By not later than January 31, 2017, the permittee shall install, operate, and maintain equipment to continuously monitor and record sulfur dioxide and exhaust gas flow data for this emissions unit in units of the applicable standards (pounds per million Btu and pounds per day). Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60, Appendix B, Performance Specification 6, and be operated in accordance with 40 CFR Part 60.13 unless otherwise specified in d)(7) below.

The permittee shall maintain records of all data obtained by the continuous sulfur dioxide and exhaust gas flow monitoring system including, but not limited to, minute-by-minute concentration data for sulfur dioxide; minute-by-minute flow data in ACFM; sulfur dioxide data in pounds per day; the results of all daily, weekly, and quarterly calibration checks; and the magnitude of any calibration adjustments.

Each continuous emissions monitoring system (CEMS) consists of all the equipment used to acquire and record data and includes any sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

The data recorded by the CEMS shall be used to determine compliance with the applicable emission limitations on an ongoing basis.

- (7) By not later than April 31, 2016, the permittee shall develop a written quality assurance/quality control plan for the continuous sulfur dioxide and exhaust gas flow monitoring system designed to meet all requirements as listed in 40 CFR Part 60, Appendix F and ensure continuous valid and representative readings of sulfur dioxide and flow. The plan shall describe in detail, complete, step-by-step procedures and operations for each of the following activities:

- a. calibration of CEMS;
- b. calibration drift determination and adjustment of CEMS;
- c. preventive maintenance of CEMS (including spare parts inventory);
- d. data recording, calculations, and reporting;
- e. accuracy audit procedures including sampling and analysis methods; and
- f. program of corrective action for malfunctioning CEMS.

The permittee shall be required to complete a CEMS certification relative accuracy test audit (RATA), in accordance with the procedures specified in 40 CFR Part 60, Appendix F, by not later than January 31, 2017. From the date of CEMS certification forward, the permittee may forego annual RATA requirements as listed in 40 CFR Part 60, Appendix F, by completing a quarterly cylinder gas or relative accuracy audit, in accordance with 40 CFR Part 60, Appendix F, for each quarter of the year. Should any CEMS not pass a cylinder gas or relative accuracy audit on the first attempt for two consecutive quarters (even though a recalibration or repair allows the second attempted cylinder gas or relative accuracy audit to pass), the permittee shall complete a RATA within 60 days of the second quarter's failed cylinder gas or relative accuracy audit. The permittee shall also complete a RATA for the CEMS within six months prior to the expiration of this permit. RATA testing may also be required if the CEMS as listed on the CEMS certification letter from the Ohio EPA, Central Office, or any CEMS associated equipment, is changed or modified.

Beginning on January 31, 2017, the permittee shall perform daily zero/span calibration drift checks on each sulfur dioxide and flow CEMS for 60 consecutive operating days in accordance with the requirements specified in 40 CFR Part 60, Appendix F, section 4. If, on the first attempt, the results of each daily zero/span calibration drift check are less than the criteria for excessive calibration drift specified in 40 CFR Part 60, Appendix F, section 4.3 (as determined by the Ohio EPA, Southeast District Office), the permittee shall begin performing zero/span calibration drift checks on a weekly basis. If any CEMS should fail a weekly zero/span calibration drift check for two consecutive weeks (based on the criteria of being two times over the limit as stated in Appendix F, section 4.3), the permittee shall perform daily zero/span calibration drift checks until such time as 60 consecutive daily zero/span calibration drift checks have been successfully completed within the criteria specified in Appendix F, section 4.3.

The quality assurance/quality control plan and a logbook dedicated to the sulfur dioxide and flow CEMS must be kept on site and available for inspection during regular office hours.

- (8) By not later than January 31, 2017, the permittee shall maintain daily records of the following information:
 - a. the total sulfur dioxide emissions from this emissions unit based upon the data collected in section d)(6), in pounds per million Btu and pounds per calendar day;

- b. the total sulfur dioxide emissions from this emissions unit and emissions unit B002, combined, based upon the data collected in section d)(6) for each unit, in pounds per calendar day; and
 - c. the identification of any days (excluding any days within the “control period” specified in OAC Chapter 3745-14) when this emissions unit was in service and the unit’s low-NOx staged-combustion burners were not operating at their lowest-NOx mode.
- (9) The permittee shall maintain records for each day when emissions units B002, B003, and B013 were all off line and the venting of high-volume low concentration NCG was uncontrolled. If emissions unit B002 is permanently shut down after January 31, 2017, the permittee shall maintain records for each day when emissions units B003 and B013 were off line and the venting of high-volume low concentration NCG was uncontrolled.
- e) Reporting Requirements
- (1) The permittee shall submit reports (hardcopy or electronic format) within one month following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting all instances of opacity values in excess of the limitation specified in section b)(1)b. of these terms and conditions, detailing the date, commencement and completion times, duration, magnitude (percent opacity), reason (if known), and corrective actions taken (if any) of each 6-minute block average above the applicable opacity limitations.
- The reports shall also identify any excursions of the start-up and shutdown provisions specified in OAC rule 3745-17-07(A)(3) and document any continuous opacity monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included in the quarterly report.
- If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the date, time, reason, and corrective action taken for each time period of monitoring system malfunction. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report.
- These quarterly excess emission reports shall be submitted by January 31, April 30, July 31, and October 31 of each year, and each report shall address the data obtained during the previous calendar quarter.
- (2) The permittee shall submit quarterly deviation (excursion) reports that identify whenever a monthly composite sample collected pursuant to section d)(4) above indicates a deviation from the allowable sulfur dioxide emission rate. These reports shall be submitted in accordance with the reporting requirements specified in the Standard Terms and Conditions of this permit.

The requirements to submit quarterly deviation (excursion) reports pursuant to this term and condition shall terminate on January 31, 2017 because the sulfur dioxide continuous monitoring system required under section d)(6) and the monitoring and recordkeeping provisions for the pounds per million Btu and pounds per calendar day emission limitations under section d)(8) become effective on that date.

- (3) The permittee shall notify the Ohio EPA, Southeast District Office in writing of any record that shows a deviation of the allowable sulfur dioxide emission limitation based upon the calculated sulfur dioxide emission rates from section d)(5) above when firing number 2 fuel oil. The notification shall include a copy of such record and shall be sent to the Ohio EPA, Southeast District Office. These reports shall be submitted in accordance with the reporting requirements specified in the Standard Terms and Conditions of this permit.

The requirements to submit quarterly deviation (excursion) reports pursuant to this term and condition shall terminate on January 31, 2017 because the sulfur dioxide continuous monitoring system required under section d)(6) and the monitoring and recordkeeping provisions for the pounds per million Btu and pounds per calendar day emission limitations under section d)(8) become effective on that date.

- (4) The permittee shall submit quarterly deviation (excursion) reports that identify any period of time when emissions units B002, B003, and B013 were all off line and the venting of high-volume low concentration NCG was uncontrolled. If emissions unit B002 is permanently shut down after January 31, 2017, the permittee shall submit deviation (excursion) reports that identify any period of time when emissions units B003 and B013 were off line and the venting of high-volume low concentration NCG was uncontrolled. These reports shall be submitted in accordance with the reporting requirements specified in the Standard Terms and Conditions of this permit.
- (5) Beginning in calendar year 2017, the permittee shall submit reports within one month following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of sulfur dioxide values in excess of the applicable limitations (pounds per million Btu and pounds per day) specified in this permit.

The reports shall document any continuous sulfur dioxide and exhaust gas flow monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

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

quarterly excess emission reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter.

- (6) Beginning in calendar year 2017, the permittee shall submit quarterly deviation (excursion) reports that identify any days (excluding any days within the “control period” specified in OAC Chapter 3745-14) when this emissions unit was in service and the unit’s low-NOx staged-combustion burners were not operating at their lowest-NOx mode.

These reports shall be submitted in accordance with the reporting requirements specified in the Standard Terms and Conditions of this permit.

f) Testing Requirements

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

a. Emission Limitation:

Visible particulate emissions from the exhaust stack serving emissions units B002 and B003 shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Methods:

If required, compliance with this emission limitation shall be demonstrated through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

Ongoing compliance with this emission limitation may be demonstrated based upon the records required pursuant to section d)(1).

b. Emission Limitation:

Particulate emissions shall not exceed 0.10 pound per million Btu of actual heat input, when firing coal.

Applicable Compliance Method:

If required, compliance with this emission limitation also shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

c. Emission Limitation:

Particulate emissions shall not exceed 0.020 pound per million Btu of actual heat input, when firing only number 2 fuel oil.



Applicable Compliance Method:

Compliance with this emission limitation may be determined by multiplying an emission factor of 2.0 pounds of particulates per 1000 gallons of fuel oil fired by the emissions unit's maximum hourly fuel oil firing capacity (3504 gallons/hr), dividing by the emissions unit's rated heat input capacity (505 million Btu/hr), and dividing by 1000. This emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.3, Table 1.3-1 (5/10).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

d. Emission Limitation:

Sulfur dioxide emissions shall not exceed 9.9 pounds per million Btu actual heat input.

Applicable Compliance Methods:

When firing fuel oil, compliance with this sulfur dioxide emission limitation may be demonstrated based upon the records required pursuant to section d)(5).

When firing coal, compliance with this sulfur dioxide emission limitation may be demonstrated based upon the records required pursuant to section d)(4).

On and after installation and operation of the control technology required under section b)(2)b. above is complete, compliance with this sulfur dioxide emission limitation shall be demonstrated based upon the records required pursuant to sections d)(6) and d)(8).

Also, if required, the permittee shall demonstrate compliance with the allowable sulfur dioxide emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6 or 6A.

e. Emission Limitation:

By not later than January 31, 2017, sulfur dioxide emissions from emissions units B002 and B003, combined, shall not exceed 24,930 pounds per calendar day.

Applicable Compliance Method:

Compliance with this sulfur dioxide emission limitation shall be demonstrated based upon the records required pursuant to sections d)(6) and d)(8).

Also, if required, the permittee shall demonstrate compliance with the allowable sulfur dioxide emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6 or 6A.



Final Permit-to-Install
P. H. Glatfelter Company - Chillicothe Facility
Permit Number: P0118907
Facility ID: 0671010028
Effective Date: 7/20/2015

- g) Miscellaneous Requirements
 - (1) None.