



10/07/2026

Matthew James
NSG Glass North America, Inc.
21705 Pemberville Rd
Luckey, OH 43443

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL

Facility ID: 0387002042
Permit Number: P0141303
Permit Type: Administrative Modification
County: Wood

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

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the permit. A public notice will appear in the Ohio Environmental Protection Agency (Ohio EPA) [Weekly Review and Public Notices](#) website. A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically on the Ohio EPA document search webpage: [eDocument Search](#). Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrea Moore
Permitting Section
Ohio EPA, DAPC
50 West Town Street, Suite 700
P.O. Box 1049
Columbus, Ohio 43216-1049

and Ohio EPA DAPC, Northwest District Office
347 North Dunbridge Rd.
Bowling Green, OH 43402

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published on the Ohio EPA [Weekly Review and Public Notices](#) website. You will be notified in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Ohio EPA DAPC, Northwest District Office at (419)352-8461.

Sincerely,

Robert Hodanbosi
Chief, Division of Air Pollution Control

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

PUBLIC NOTICE

The following matters are the subject of this public notice by the Ohio Environmental Protection Agency. The complete public notice, including any additional instructions for submitting comments, requesting information, a public hearing, or filing an appeal may be obtained at: [Weekly Review and Public Notices | Ohio Environmental Protection Agency](#) or Hearing Clerk, Ohio EPA, 50 W. Town St., Columbus, Ohio 43215. Ph: 614-644-3037 email: HClerk@epa.ohio.gov

Draft Air Pollution Permit-to-Install Administrative Modification

NSG Glass North America, Inc.
21705 Pemberville Rd
Luckey, OH 43443

ID#: P0141303

Date of Action: 10/07/2026

Permit Desc: Administrative modification for a glass melting furnace (P001) to revise the allowable HCl and HF emissions and incorporate CEMS requirements for CO.

The permit can be accessed electronically and comments may be submitted at: <https://ohioepa.commentinput.com> - Search by entering the permit P0141303 in the "Search Projects" search box.

Permit Strategy Write-Up

1. Check all that apply:

☒ Synthetic Minor Determination

☐ Netting Determination

2. Source Description:

NSG Glass North America, Inc. (NSG) is an existing float glass manufacturing facility in Luckey, Ohio which is located in Wood County. The facility operates the following significant emissions units:

- Glass Melting Furnace (P001)
- Bath & Lehr (P002)
- Chemical Vapor Deposition Process (P003)
- Emergency Backup Generators and Pumps (P004-P007)
- On-Line Glass Cutting (P009)
- Cullet Return System (P010)
- Cullet Storage Piles (F001)
- Roadways and Parking Areas (F002)
- Material Handling operations including cullet loading and unloading (P901-P905)

This permitting action is an administrative modification for emissions unit P001, Glass Melting Furnace, to increase allowable HCl and HF emissions and add continuous emissions monitoring system (CEMS) requirements for CO. The facility utilizes a ceramic filter with ammonia injection and hydrated lime feed system followed by a selective catalytic reduction (SCR) unit to control HCL and HF emissions, while CO emissions remain uncontrolled.

3. Facility Emissions and Attainment Status:

This facility has requested federally enforceable restrictions for P001 to avoid MACT and PSD requirements. Without federally enforceable restrictions, this facility would be considered PSD major for NO_x and SO₂, and a major source for HAPs from HCl and HF emissions. Wood County is in attainment or unclassifiable for all NAAQS.

4. Source Emissions:

- The HCL emissions will be increasing as follows:
 - **Modes A and B:** The hourly emissions limitation will be increasing from 0.42 lb HCl/hr to 0.56 lb HCl/hr.
 - **Mode C:** The hourly emissions limitation will increase from 4.20 lbs HCl/hr to 5.60 lbs HCl/hr.
 - The rolling, 12-month emissions limitation will increase from 1.95 tpy to 2.59 tpy.
- The rolling, 12-month HF emissions will be changing from 0.68 tpy to 0.69 tpy.
- The CO emissions limitations will not be changing in this permitting action.



5. Conclusion:

The enforceable restrictions in this permit are sufficient to ensure the facility's emissions will remain below the PSD and MACT thresholds.

6. Please provide additional notes or comments as necessary:

None

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

<u>Pollutant</u>	<u>Tons Per Year</u>
PM ₁₀	23.00
PM _{2.5}	17.52
NO _x	209.64
SO ₂	54.07
VOC	10.92
CO	10.92
HCl	2.59
HF	0.69



**Environmental
Protection
Agency**

DRAFT

Division of Air Pollution Control

Permit-to-Install

for

NSG Glass North America, Inc.

Facility ID:	0387002042
Permit Number:	P0141303
Permit Type:	Administrative Modification
Issued:	10/07/2026
Effective:	To be entered upon final issuance

Division of Air Pollution Control
Permit-to-Install

for

NSG Glass North America, Inc.

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Authorization

Facility ID: 0387002042
Facility Description:
Application Number(s): M0008896, M0008789
Permit Number: P0141303
Permit Type: Permit-To-Install
Permit Fee: \$750.00 *DO NOT send payment at this time, subject to change before final issuance*
Issue Date: 10/07/2026
Effective Date: To be entered upon final issuance

This document constitutes issuance of a Permit-to-Install for the emissions unit(s) identified on the following page to:

NSG Glass North America, Inc.
21705 Pemberville Rd
Luckey, OH 43443

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

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

The above-named entity is hereby granted this Permit-to-Install for the air contaminant source(s) (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 described emissions unit(s) 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

John Logue
Director

Authorization (continued)

Permit Number: P0141303

Permit Description: Administrative modification for a glass melting furnace (P001) to revise the allowable HCl and HF emissions and incorporate CEMS requirements for CO.

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

Emissions Unit ID:	P001
Company Equipment ID:	P001
Superseded Permit Number:	P0131096
General Permit Category and Type:	Not Applicable

List of Commonly Used Abbreviations

AP-42 = U.S. EPA's Compilation of Air Pollution Emissions Factors	HVLP = high volume, low pressure	PER = Permit Evaluation Report
ASTM = American Society for Testing and Materials	LAER = lowest achievable emission rate	PM = particulate matter
BACT = Best Available Control Technology	lb(s)/hr = pound(s) per hour	PM ₁₀ = particulate matter with an aerodynamic diameter less than or equal to 10 microns
BAT = Best Available Technology	LDAR = leak detection and repair	PM _{2.5} = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns
CAA = Clean Air Act	LPG = liquefied petroleum gas/propane	ppb = parts per billion
CAM = compliance assurance monitoring	MACT = maximum achievable control technology	ppm = parts per million
CEMS = continuous emissions monitoring system	MAGLC = maximum acceptable ground level concentration	PSD = Prevention of Significant Deterioration
CFC = chlorofluorocarbon	mg/m ³ = milligrams per cubic meter	psi = pounds per square inch
CFR = Code of Federal Regulations	MM = million	psia = pounds per square inch absolute
CH ₄ = methane	MMBtu = million British Thermal Units	PTE = potential-to-emit
CI = compression ignition	MSDS = material safety data sheet	PTI = Permit-to-Install
CO = carbon monoxide	MSW = municipal solid waste	PTIO = Permit-to-Install and Operate
CO ₂ = carbon dioxide	NAAQS = National Ambient Air Quality Standard	PTO = Permit-to-Operate
COM = continuous opacity monitor	NESHAP = National Emission Standard for Hazardous Air Pollutants	PWR = process weight rate
DAPC = Division of Air Pollution Control	NG = natural gas	RACM = reasonably available control measures
DO/LAA = District Office/Local Air Agency	ng/m ³ = nanograms per cubic meter	RACT = reasonably available control technology
dscf = dry standard cubic foot	NH ₃ = ammonia	RATA = relative accuracy test audit
EAC = emissions activity category	NMHC = non-methane hydrocarbons	RTO = regenerative thermal oxidizer
eDocs = electronic documents database	NMOC = non-methane organic compound	SB265 = Senate Bill 265
ERAC = Environmental Review Appeals Commission	NO = nitrogen oxide	scfm = standard cubic feet per minute
ESP = electrostatic precipitator	NO ₂ = nitrogen dioxide	SI = spark ignition
EU = emissions unit	NO _x = nitrogen oxides	SIP = State Implementation Plan
FEPTIO = Federally Enforceable Permit-to-Install and Operate	NSPS = New Source Performance Standard	SO ₂ = sulfur dioxide
FER = Fee Emissions Report	NSR = New Source Review	SSMP = startup, shutdown, and malfunction plan
FR = Federal Register	NTV = Non-Title V	TDS = total dissolved solids
GACT = generally achievable control technology	O&M = operation and maintenance	TLV = threshold limit value
GHG = greenhouse gases	OAC = Ohio Administrative Code	TO = thermal oxidizer
gr/dscf = grains per dry standard cubic foot	OC = organic compound	TPH = ton(s) per hour
H ₂ S = hydrogen sulfide	Ohio EPA = Ohio Environmental Protection Agency	TPY = ton(s) per year
H ₂ SO ₄ = sulfuric acid	ORC = Ohio Revised Code	TSP = total suspended particulates
HAP = hazardous air pollutant	Pb = lead	VE = visible particulate emissions
HCl = hydrogen chloride	PBR = Permit-By-Rule	VMT = vehicle miles traveled
HF = hydrogen fluoride	PCB = polychlorinated biphenyl	VOC = volatile organic compound
Hg = mercury	PE = particulate emissions	WPP = work practice plan
hp = horsepower	PEMS = predictive emissions monitoring system	µg/m ³ = micrograms per cubic meter

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), 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, Northwest 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, Northwest District Office. The written reports shall be submitted quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.



- (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the Ohio EPA DAPC, Northwest District Office every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semiannual report, which states that no deviations occurred during that period.
 - (4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

5. Scheduled Maintenance/Malfunction Reporting

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

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

6. Compliance Requirements

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

7. Best Available Technology

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

8. Air Pollution Nuisance

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

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Northwest District Office.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will



be taken, shall be submitted to the Ohio EPA DAPC, Northwest District Office. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted 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 once by twelve 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 shut down 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 any other 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 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.

B. Facility Wide Terms and Conditions

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

C. Emissions Unit Terms and Conditions

1. P001, P001
Operations, Property and/or Equipment Description:

Glass Melting Furnace, Stack S01

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

(1) b)(1)f., d)(13) through d)(16) and e)(6).

- b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D)	See b)(2)a. and c)(1)
b.	ORC 3704.03(T)	VOC emissions shall not exceed 0.91 ton per month averaged over a rolling, 12-month period CO emissions shall not exceed 0.91 ton per month, averaged over a rolling, 12-month period. See b)(2)b. and b)(2)c.
c.	OAC rule 3745-17-07(A)	Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
d.	OAC rule 3745-17-11(B)	See b)(2)d.
e.	OAC rule 3745-18-06	See b)(2)e.
f.	OAC rule 3745-114-01 ORC 3704.03(F)(3)(c) and (F)(4)	See d)(13) through d)(16) and e)(6).
g.	40 CFR Part 60, Subpart CC (40 CFR 60.290 - 40 CFR 60.296) [In accordance with 40 CFR 60.291, this emission unit is a flat glass melting furnace fired exclusively with gaseous fuels subject to the emissions limitations/control measures specified in this section.]	0.225 grams of particulate matter per kilogram of glass produced (0.45 lb particulate matter per ton of glass produced) See e)(7) and f)(1).



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
h.	40 CFR Part 60, Subpart A (40 CFR Part 60.1 – 60.19)	See b)(2)f.

(2) Additional Terms and Conditions

- a. The following federally enforceable emission limitations are established for the purpose of limiting PTE to avoid PSD requirements, and for HAPs, to avoid MACT requirements. The federally enforceable emission limitations are based on the operational restrictions contained in c)(1):

Operating Mode	Emissions Limitations (lbs/hr)						Mode Operating Time ^d (hrs/yr)
	NO _x	SO ₂	PM ₁₀	PM _{2.5}	HCl	HF	
A ^a	46.20	12.00	5.25	4.00	0.56	0.15	8,608
B ^b	198.00	12.00	5.25	4.00	0.56	0.15	96
C ^c	46.20	60.25	5.25	4.00	5.60	1.50	56
Emissions Limitations (tons per rolling 12-month period) ^e	209.64	54.07	23.00	17.52	2.59	0.69	

Notes:

^a Operating Mode A = Normal operations (excludes maintenance performed in Modes B & C).

^b Operating Mode B = SCR bypass for catalyst change or discontinued ammonia feed for planned maintenance including ammonia lance change, ammonia pump station/piping maintenance, and/or compressed air system maintenance (continued feed of lime to the catalyst embedded ceramic filter).

^c Operating Mode C = Catalyst embedded ceramic filter lime feed discontinued for rotary valve & screw feeder change, line/lance change, diverter gate maintenance, and/or compressed air system maintenance (continued feed of ammonia).

^d Mode Operating Time presents the hrs/yr for each mode that results in the greatest annual emissions for determining the PTE. Therefore, the maximum hours for operating under normal operations is not restricted to 8608 hours per year if the maximum number of hours operating under the alternate scenarios is not used, as this would not result in higher annual emissions.

^e Emissions Limitations (in tons per rolling 12-month period) represent the PTE and were calculated by summing the total annual emissions from each operating mode.



Annual emissions for each operating mode were calculated by multiplying the hours per year (for each mode operating time) by the hourly emissions limitations and dividing by 2000 lbs/ton.

- b. For CO and VOC emissions, the BAT requirements established pursuant to ORC rule 3704.03(T) have been determined to be compliance with the tons per month emission limitations. For NO_x, SO₂, PM₁₀ and PM_{2.5} emissions, the BAT requirements established pursuant to ORC rule 3704.03(T) have been determined to be compliance with the tons per rolling 12-month period emission limitations established pursuant to OAC rule 3745-31-05(D).
- c. BAT requirements under OAC rule 3745-31-05(A)(3) are not applicable to the PE, HCl and HF emitted from this emissions unit. BAT is only applicable to emissions of an air contaminant or precursor of an air contaminant for which a NAAQS has been adopted under the CAA. PE, HCl and HF are air contaminants that do not involve an established NAAQS.
- d. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).
- e. The emission limitation established pursuant to this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).
- f. Except as specified in this permit, the permittee shall demonstrate compliance with the applicable provisions of 40 CFR Part 60, Subpart CC in accordance with 40 CFR Part 60, Subpart A.
- g. Each continuous NO_x monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6. At least 45 days before commencing certification testing of the continuous NO_x monitoring system(s), the permittee shall develop and maintain a written quality assurance/quality control (QA/QC) plan for the continuous NO_x monitoring system, designed to ensure continuous valid and representative readings of NO_x emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The QA/QC plan and a logbook dedicated to the continuous NO_x monitoring system must be kept on site and available for inspection during regular office hours.

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

- h. Each continuous SO₂ monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6. At least 45 days before commencing certification testing of the continuous SO₂ monitoring system(s), the permittee shall develop and maintain a written QA/QC plan for the continuous SO₂ monitoring system, designed to ensure continuous valid and representative readings of SO₂ emissions in units of the applicable standard(s). The plan shall follow the

requirements of 40 CFR Part 60, Appendix F. The QA/QC plan and a logbook dedicated to the continuous SO₂ monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly CGAs or RAAs as required in 40 CFR Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

- i. Each continuous CO monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 4 or 4a. At least 45 days before commencing certification testing of the continuous CO monitoring system(s), the permittee shall develop and maintain a written QA/QC plan designed to ensure continuous valid and representative readings of CO emissions from the continuous monitor(s), in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The QA/QC plan and a log dedicated to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly CGAs or RAAs as required in 40 CFR Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

- j. Each CEMS consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

c) **Operational Restrictions**

- (1) The following operational restrictions have been included in this permit for the purpose of establishing federally enforceable requirements which limit PTE [See b)(2)a.):

- a. This emission unit shall be controlled by a catalyst embedded ceramic filter system equipped with ammonia injection and a hydrated lime feed system, with additional control provided by an SCR. The control system shall be designed to meet the following source design characteristics during normal operation:

- i. 1.85 lbs NO_x/ton glass draw;
- ii. 0.48 lb SO₂/ton glass draw;
- iii. 0.21 lb PM₁₀/ton glass draw;
- iv. 0.16 lb PM_{2.5}/ton glass draw;
- v. 0.0224 lb HCl/ton glass draw; and
- vi. 0.006 lb HF/ton glass draw.

All the emissions from this emission unit shall be captured and vented to the above referenced control equipment at all times this emissions unit is in operation, except as



specified in c)(1)b. and c)(1)c., including any maintenance periods on the furnace where emissions are being generated.

- b. The amount of scheduled downtime associated with a catalyst change of the SCR controlling this emissions unit shall not exceed 96 hours per year, based upon a rolling, 12-month summation of the downtime hours.

Note: The rolling, 12-month restrictions were previously established in PTI #P0125848, issued May 21, 2019. Since rolling throughput records exist from this previously issued PTI, it is not necessary to establish federally enforceable restrictions for the first 12 months of operation under the provisions of this permit.

- c. The amount of scheduled downtime associated with the discontinuation of the lime feed of the catalyst embedded ceramic filter system controlling this emissions unit shall not exceed 56 hours per year, based upon a rolling, 12-month summation of the downtime hours.

Note: The rolling, 12-month restrictions were previously established in PTI #P0125848, issued May 21, 2019. Since rolling throughput records exist from this previously issued PTI, it is not necessary to establish federally enforceable restrictions for the first 12 months of operation under the provisions of this permit.

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

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the following information for when this emissions unit is operating under mode "B" and mode "C" respectively, while the emission unit P001 continues to operate:

- a. the hours for each month, operating under mode "B" and "C" respectively; and
- b. the rolling, 12-month summation of the hours operating under mode "B" and "C" respectively.

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

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

- a. emissions of CO in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. emissions of CO in units of the applicable standard(s) in the appropriate averaging period;
- c. results of quarterly CGAs;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;



- e. results of RATAs, including results in units of the applicable standard(s);
- f. hours of operation of the emissions unit, continuous CO monitoring system, and control equipment;
- g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous CO monitoring system;
- h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous CO monitoring system; as well as,
- i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

- (3) Prior to the installation of the continuous CO monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 4 or 4a, as appropriate. Ohio EPA's Central Office shall approve the proposed sampling site and certify that the continuous CO monitoring system meets the requirements of Performance Specification 4 or 4a. Once received, the letter/document of certification shall be maintained on-site and shall be made available to the Ohio EPA NWDO upon request.
- (4) The permittee shall install, operate, and maintain equipment to continuously monitor and record NO_x emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

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

- a. emissions of NO_x in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. emissions of NO_x in pounds per hour and in units of the applicable standard(s) in the appropriate averaging period;
- c. results of quarterly cylinder gas audits;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
- f. hours of operation of the emissions unit, continuous NO_x monitoring system, and control equipment;
- g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous NO_x monitoring system;



- h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous NO_x monitoring system; as well as,
- i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

- (5) Prior to the installation of the continuous NO_x monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements* in 40 CFR, Part 60, Appendix B, Performance Specification 2. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous NO_x monitoring system meets the requirements of Performance Specifications 2 and 6. Once received, the letter(s)/document(s) of certification shall be maintain on-site and shall be mail available to the Ohio EPA, Northwest District Office (NWDO) upon request.

*Note: This is an administrative permit modification to PTI P0131096. As such, the siting requirements were submitted to Ohio EPA on January 30, 2020.

- (6) The permittee shall install, operate, and maintain equipment to continuously monitor and record SO₂ emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of all data obtained by the continuous SO₂ monitoring system including, but not limited to:

- a. emissions of SO₂ in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. emissions of SO₂ in pounds per hour and in units of the applicable standard(s) in the appropriate averaging period;
- c. results of quarterly cylinder gas audits;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
- f. hours of operation of the emissions unit, continuous SO₂ monitoring system, and control equipment;
- g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous SO₂ monitoring system;
- h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous SO₂ monitoring system; as well as,



- i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

- (7) Prior to the installation of the continuous SO₂ monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 2. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous SO₂ monitoring system meets the requirements of Performance Specifications 2 and 6. Once received, the letter(s)/document(s) of certification shall be maintained on-site and shall be made available to the Ohio EPA, NWDO upon request.

*Note: This is an administrative permit modification to PTI P0131096. As such, the siting requirements were submitted to Ohio EPA on January 30, 2020.

- (8) The permittee shall maintain on site, the document(s) of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous SO₂ monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6. The letter(s)/document(s) of certification shall be made available to the Director (Ohio EPA NWDO) upon request.
- (9) The continuous SO₂ monitoring system associated with this emissions unit is used as part of the process control system for the catalyst embedded ceramic filter system. The data from the monitor is used to adjust the hydrated lime feed rate for proper control of SO₂ emissions. The hydrated lime also acts as a reagent for control of both HCl and HF emissions. Based on the hydrated lime having a greater reactivity with HCl and HF as compared to SO₂, the monitoring of the SO₂ emissions will result in a feed rate providing proper control of both HCl and HF emissions as well. Therefore, the hydrated lime feed rate to the control system shall be determined and adjusted on a continuous basis by the continuous SO₂ monitoring system for the purpose of controlling HCl and HF emissions, in addition to SO₂ emissions. The results of the emission testing conducted in accordance with condition f)(1) shall provide further verification of the relationship between the SO₂, HCl, and HF emissions rates. Whenever the monitored values for SO₂ emissions at the discharge of the dry scrubber unit deviate from the applicable limitations contained within this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
- (10) In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable ranges, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the



deviation ended, the total period of time (in minutes) during which there was a deviation, the reagent injection rate immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph does not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

- (11) The permittee shall perform daily checks, when the emissions unit is in operation and, when the weather conditions allow, for any visible particulate emissions from the exhaust stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed from any points of capture and/or the stack, the permittee shall also note the following in the operations log:
- a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(11)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions or specify the corrective actions that were taken to eliminate abnormal visible emissions

- (12) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (13) The application for PTI P0125848 for emissions units P001 and P003 was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee. The *Toxic Air Contaminant Statute*, ORC 3704.03(F), was applied to these emissions units for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERSCREEN, AERMOD, or ISCST3, or other Ohio EPA approved model. The application for PTI P0141303 reevaluated the hydrogen chloride emission based on the new emissions rates. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions units, (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from the American Conference of Governmental Industrial Hygienists "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices" and in the following order of preference:
 - i. TLV shall be used, if the chemical is listed; or
 - ii. Short-term exposure limit (STEL) or the ceiling value; the STEL is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent eight-hour TLV.
- b. The TLV is divided by 10 to adjust the standard from the working population to the general public.
- c. This standard is adjusted to account for the duration of the exposure or the operating hours of the emissions units that is, X hours per day and Y days per week, from that of 8 hours per day and 5 days per week.
- d. The resulting calculation shall be used to determine the MAGLC:

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

- e. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):
 - i. Toxic Contaminant: Ammonia
 TLV (mg/m³): 17.41 (From ACGIH's "2020 TLVs and BEIs" Book)
 Maximum Hourly Emission Rate (lbs/hr): 1.50
 Predicted 1-Hour Maximum Ground Level Concentration (ug/m³): 0.84
 MAGLC (ug/m³): 414.6
 - ii. Toxic Contaminant: Sulfuric Acid
 TLV (mg/m³): 0.20 (From ACGIH's "2020 TLVs and BEIs" Book)
 Maximum Hourly Emission Rate (lbs/hr): 5.76
 Predicted 1-Hour Maximum Ground Level Concentration (ug/m³): 3.23
 MAGLC (ug/m³): 4.76
 - iii. Toxic Contaminant: Hydrogen Chloride
 TLV (mg/m³): 2.2 (From ACGIH's "2026 TLVs and BEIs" Book)
 Maximum Hourly Emission Rate (lbs/hr): 0.76
 Predicted 1-Hour Maximum Ground Level Concentration (ug/m³): 6.08
 MAGLC (ug/m³): 52.35
 - iv. Toxic Contaminant: Fluorides
 TLV (mg/m³): 2.5 (From ACGIH's "2020 TLVs and BEIs" Book)
 Maximum Hourly Emission Rate (lbs/hr): 0.265

Predicted 1-Hour Maximum Ground Level Concentration ($\mu\text{g}/\text{m}^3$): 4.01
MAGLC ($\mu\text{g}/\text{m}^3$): 59.52

The permittee has demonstrated that emissions of ammonia, sulfuric acid, hydrogen chloride, and fluorides from emissions units P001 and P003 are calculated to be less than eighty per cent of the MAGLC; any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F).

- (14) Prior to making any physical changes to or changes in the method of operation of the emissions units, that could impact the parameters or values that were used in the predicted 1-hour maximum ground level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower TLV than the lowest TLV previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
 - c. physical changes to the emissions units or its/their exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the *Toxic Air Contaminant Statute* will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a *modification* under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a *modification*, the permittee shall apply for and obtain a final PTI prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

- (15) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F):
- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
 - b. the MAGLC for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F);



- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground level concentration that demonstrated the emissions unit(s) to be in compliance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
 - d. the documentation of the initial evaluation of compliance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
 - (16) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
- e) Reporting Requirements
 - (1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. All exceedances of the rolling, 12-month hours of operation restrictions specified in c)(1)b. and c)(1)c.; and
 - b. for the daily visible emissions checks;
 - i. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and
 - ii. any corrective actions taken to eliminate the visible emissions.

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

 - (2) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NO_x monitoring system:
 - a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northwest District Office, documenting all instances of NO_x emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapters 3745-14 and 3745-23, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).
 - b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:
 - i. the facility name and address;



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

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

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

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

- (3) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous SO₂ monitoring system:

- a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northwest District Office, documenting all instances of SO₂ emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 3745-18, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).
- b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:
 - i. the facility name and address;
 - ii. the manufacturer and model number of the continuous SO₂ and other associated monitors;
 - iii. a description of any change in the equipment that comprises the CEMS, including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;
 - iv. the EER*, i.e., a summary of any exceedances during the calendar quarter, as specified above;
 - v. the total SO₂ emissions for the calendar quarter (tons);
 - vi. the total operating time (hours) of the emissions unit;
 - vii. the total operating time of the continuous SO₂ monitoring system while the emissions unit was in operation;
 - viii. results and date of quarterly CGAs;
 - ix. unless previously submitted, results and date of the RATAs, including results in units of the applicable standard(s), (during appropriate quarter(s));
 - x. unless previously submitted, the results of any RATA showing the continuous SO₂ monitor out-of-control and the compliant results following any corrective actions;
 - xi. the date, time, and duration of any/each malfunction** of the continuous SO₂ monitoring system, emissions unit, and/or control equipment;



- xii. the date, time, and duration of any downtime** of the continuous SO₂ monitoring system and/or control equipment while the emissions unit was in operation; and
- xiii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (xii).

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

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

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

- (4) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous CO monitoring system:
 - a. Pursuant to the monitoring, recordkeeping, and reporting requirements for continuous monitoring systems contained in §60.7 and §60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA Northwest District Office documenting all instances of CO emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 3745-21, and any other applicable rule or regulation. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).
 - b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:
 - i. The facility name and address;
 - ii. The manufacturer and model number of the continuous CO and other associated monitors;
 - iii. A description of any change in the equipment that comprises the CEMS, including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;
 - iv. A summary of any exceedances* during the calendar quarter, as specified above;
 - v. The total CO emissions for the calendar quarter, in tons;
 - vi. The total operating time, in hours, of the emissions unit;
 - vii. The total operating time of the continuous CO monitoring system while the emissions unit was in operation;

- viii. Results and dates of quarterly CGAs;
- ix. Unless previously submitted, results and dates of the RATAs, including results in units of the applicable standard(s), (during appropriate quarter(s));
- x. Unless previously submitted, the results of any RATA showing the continuous CO monitor out-of-control and the compliant results following any corrective actions;
- xi. The date, time, and duration of any/each malfunction** of the continuous CO monitoring system, EU, and/or control equipment;
- xii. The date, time, and duration of any downtime** of the continuous CO monitoring system and/or control equipment while the emissions unit was in operation; and
- xiii. The reason (if known) and the corrective actions taken (if any) for each event in (xi) and (xii) above.

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

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

**Each downtime and malfunction event shall be reported regardless of whether there is an exceedance of any applicable limit

- (5) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
- (6) The permittee shall submit annual reports that include any changes to any parameter or value entered in the dispersion model used to demonstrate compliance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F), through the predicted one-hour maximum ground-level concentration. The report shall include:
 - a. The original model input;
 - b. The updated model input;
 - c. The reason for any change to any input parameter;
 - d. A summary of the results of the updated modeling, including the input changes; and
 - e. A statement that the model results indicate that the one-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions units, or the exhaust stacks have been made during the reporting period, then the report shall include a statement to that effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

- (7) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 60, Subpart CC, including the following sections:

Reporting requirements	60.292(e)
	60.296(a)

f) Testing Requirements

- (1) The permittee has demonstrated compliance with the particulate matter standards in 40 CFR §60.292 and 60.293 by conducting emissions testing March 31, 2021.
- (2) Within 60 days of achieving the maximum production rate at which the EU will be operated, but not later than 180 days after initial startup, the permittee shall conduct certification tests of the continuous CO monitoring system in units of the applicable standard(s), to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specification 4 or 4a (as appropriate); and ORC section 3704.03(l).

Personnel from the Ohio EPA Central Office and the Ohio EPA Northwest District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the Ohio EPA Northwest District Office and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification of the continuous CO monitoring system shall be granted upon determination by the Ohio EPA Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 4 or 4a (as appropriate) and ORC section 3704.03(l).

Ongoing compliance with the CO emission limitations contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Recordkeeping Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

- (3) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- a. The emission testing shall be conducted as follows:
 - i. For HCl: Within 1 year from March 3, 2026; and
 - ii. For NO_x, PM₁₀/PM_{2.5}, SO₂, HF, CO and VOCs: 6 months prior to September 7, 2027.

Ohio EPA will determine whether additional testing is required in accordance with Engineering Guide #16.
 - b. The emission testing shall be conducted to demonstrate compliance with the lb/hr and lb/ton emission limitations for NO_x, PM₁₀/PM_{2.5}, SO₂, HCl and HF and the lb/ton emission limitations for VOC and CO.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates:

Pollutant	Testing Method(s)
NO _x	Methods 1-4 and 7 of 40 CFR Part 60, Appendix A;
PM ₁₀ and PM _{2.5}	Methods 1-4 of 40 CFR Part 60, Appendix A and Methods 201A and 202 of 40 CFR Part 51, Appendix M;
SO ₂	Methods 1-4 and 6 of 40 CFR Part 60, Appendix A;
CO	Methods 1-4 and 10 of 40 CFR Part 60, Appendix A;
HCl and HF	Methods 1-4 and 26 or 26A of 40 CFR Part 60, Appendix A;
VOC	Methods 1-4 and 18, 25, or 25A of 40 CFR Part 60, Appendix D.

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

- d. During the emissions testing, the emissions unit shall be operated under operational conditions approved in advance by the Ohio EPA Northwest District Office. Operational conditions that may need to be approved include, but are not limited to, the production rate, the type of material processed, material make-up (solvent content, etc.), or control equipment operational limitations (burner temperature, precipitator voltage, etc.). In general, testing shall be done under “worst case” conditions expected during the life of the permit. As part of the information provided in the “Intent to Test” (ITT) notification form described below, the permittee shall provide a description of the emissions unit operational conditions they will meet during the emissions testing and describe why they believe “worst case” operating conditions will be met. Prior to conducting the test(s), the permittee shall confirm with the Ohio EPA Northwest District Office that the proposed operating conditions constitute “worst case”. Failure to test under the approved conditions may result in Ohio EPA not accepting the test results as a demonstration of compliance.
- e. During emissions testing, the permittee shall record the glass draw rate, in tons/hr.
- f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an ITT notification to the Ohio EPA Northwest District Office. The ITT notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northwest District Office’s refusal to accept the results of the emission test(s).
- g. Personnel from the Ohio EPA Northwest District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.



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

- (4) Within 60 days of achieving the maximum production rate at which the emissions unit(s) will be operated, but not later than 180 days after initial startup, the permittee shall conduct certification tests of the continuous NO_x monitoring system in units of the applicable standard(s), to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6; and ORC section 3704.03(I)*.

Personnel from the Ohio EPA Central Office and the Ohio EPA, Northwest District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the Ohio EPA, Northwest District Office and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification of the continuous NO_x monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6; and ORC section 3704.03(I).

Ongoing compliance with the NO_x emissions limitations contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with the QA/QC plan, which shall meet the testing and recertification requirements of 40 CFR Part 60.

*Note: This is an administrative permit modification to PTI P0131096. As such, the permittee fulfilled the initial certification testing requirements in f)(4) above through performance testing conducted April 2, 2021.

- (5) Within 60 days of achieving the maximum production rate at which the emissions unit(s) will be operated, but not later than 180 days after initial startup, the permittee shall conduct certification tests of the continuous SO₂ monitoring system in units of the applicable standard(s) to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6; and ORC section 3704.03(I)*.

Personnel from the Ohio EPA Central Office and the Ohio EPA, Northwest District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the Ohio EPA, Northwest District Office and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification of the continuous SO₂ monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6; and ORC section 3704.03(I).



Ongoing compliance with the SO₂ emission limitations contained in this permit, 40 CFR Part 60 and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with the QA/QC plan, which shall meet the testing and recertification requirements of 40 CFR Part 60.

*Note: This is an administrative permit modification to PTI P0131096. As such, the permittee fulfilled the initial certification testing requirements in f)(5) above through performance testing conducted April 2, 2021.

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

Operating Mode	Emissions Limitations (lbs/hr)					
	NO _x	SO ₂	PM ₁₀	PM _{2.5}	HCl	HF
A	46.20	12.00	5.25	4.00	0.56	0.15
B	198.00	12.00	5.25	4.00	0.56	0.15
C	46.20	60.25	5.25	4.00	5.60	1.50

Applicable Compliance Method

Compliance with the lbs/hr emission limitations while operating under mode “A” shall be based upon the results of the emissions testing conducted in accordance with f)(3).

Compliance with the lbs/hr emission limitation for NO_x while operating under mode “B” shall be based upon the emissions data obtained from the continuous NO_x emissions monitor. As no other pollutants are affected by this operating mode change, compliance with the lbs/hr emission limitations for PM₁₀, PM_{2.5}, SO₂, HCl, and HF while operating under operating mode “B” will be demonstrated based upon the results of emission testing conducted in accordance with condition f)(3).

Compliance with the lbs/hr emission limitation for SO₂ while operating under mode “C” shall be based upon the emissions data obtained from the continuous SO₂ emissions monitor.

The hourly emission limitations for HCl and HF were developed based on the emissions data provided by the permittee as part of PTI application #M0008896, dated 8/28/2026, using the controlled emission factors of 0.0224 lb HCl/ ton of glass draw and 0.006 lb HF/ton glass draw respectively. If required, the permittee shall demonstrate compliance with the hourly emission limitations in accordance with Methods 1-4 and 26 or 26A of 40 CFR, Part 60, Appendix A. As the remaining pollutants are not affected by this operating mode change, compliance with the lbs/hr emission limitations for PM₁₀,



PM_{2.5}, and NO_x, while operating under operating mode “C” shall be based upon the results of emission testing conducted in accordance with condition f)(3).

b. Emissions Limitations

- i. 1.85 lbs NO_x/ton glass draw;
- ii. 0.48 lb SO₂/ton glass draw;
- iii. 0.21 lb PM₁₀/ton glass draw;
- iv. 0.16 lb PM_{2.5}/ton glass draw;
- v. 0.0224 lb HCl/ton glass draw; and
- vi. 0.006 lb HF/ton glass draw.

Applicable Compliance Method

Compliance with the lb/ton emissions limitations shall be based upon the results of the emissions testing conducted in accordance with f)(3).

c. Emission Limitation

0.225 grams of particulate matter per kilogram of glass produced (0.45 lb PE/ton glass produced)

Applicable Compliance Method

Compliance with the emissions limitation above has been demonstrated with the emissions testing conducted March 31, 2021.

d. Emissions Limitations

- i. Emissions of NO_x shall not exceed 209.64 tons per rolling, 12-month period
- ii. Emissions of SO₂ shall not exceed 54.07 tons per rolling, 12-month period
- iii. Emissions of PM₁₀ shall not exceed 23.0 tons per rolling, 12-month period
- iv. Emissions of PM_{2.5} shall not exceed 17.52 tons per rolling, 12-month period
- v. Emissions of HCl shall not exceed 2.59 tons per rolling, 12-month period
- vi. Emissions of HF shall not exceed 0.69 ton per rolling, 12-month period

Applicable Compliance Method

The rolling, 12-month emission limitations represent the potential to emit and are based on the federally enforceable requirements specified in condition b)(2)a. The potential to emit was calculated by summing the total annual emissions from each operating mode that represents the worst-case emissions. Annual emissions for each operating mode were calculated by multiplying the hours per year (for each mode operating time) by the hourly emissions limitations and dividing by 2000 lbs/ton. Therefore, if compliance is demonstrated with the maximum hourly emission rates and the maximum rolling 12-month hourly restrictions, compliance with the rolling, 12-month emission limitation shall also be demonstrated.



e. Emission Limitation

Emissions of VOC shall not exceed 0.91 ton/month, averaged over a rolling 12-month period.

Applicable Compliance Method

The monthly emissions limitation represents the PTE* of this emissions unit, therefore no monitoring, recordkeeping, or reporting are necessary to demonstrate compliance.

*The emissions limitation is based on calculations provided by the permittee as part of PTI application #A0063225, received 3/20/2019, using the emissions factor of 0.1 lb/ton glass draw in conjunction with the maximum production rate of 25 tons of glass draw/hr, operating at 8760 hrs/yr and dividing by 12 months of operation. The lbs/ton emissions factor will be verified as part of the testing requirements specified in f)(3).

f. Emission Limitation

Emissions of CO shall not exceed 0.91 ton/month, averaged over a rolling, 12-month period.

Applicable Compliance Method

The emissions limitation is based on calculations provided by the permittee as part of PTI application #A0063226, received 3/20/2019, using an emissions factor of 0.1 lb/ton glass draw in conjunction with the maximum production rate of 25 tons of glass draw/hr, operating at 8760 hrs/yr and dividing by 12 months of operation. Compliance with the lbs/ton emissions factor and the monthly emissions limitation shall be based upon the emissions data obtained from the continuous CO emissions monitor and the recordkeeping in d)(2) above.

g. Emission Limitation

Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.

Appliance Compliance Method

If required, the permittee shall demonstrate compliance with the visible emission limitation in accordance with the testing requirements specified in OAC rule 3745-17-03(B)(1).

g) **Miscellaneous Requirements**

- (1) As part the certification tests that are to be conducted for the NO_x and SO₂ CEMS that will be installed on this emissions unit, the permittee shall establish parameters that can be monitored for the purpose of accurately quantifying NO_x and SO₂ emissions during CEMS downtime. The parameters shall be established within 60 days of achieving the maximum production rate at which the emissions unit(s) will be operated, but not later than 180 days after initial startup. These process and/or control equipment parameters shall become part of the quality assurance/quality control plans that are to be developed for the NO_x and SO₂ CEMS and when



**Environmental
Protection
Agency**

Draft Permit-to-Install

NSG Glass North America, Inc.

Permit Number: P0141303

Facility ID: 0387002042

Effective Date: To be entered upon final issuance

appropriate, used to demonstrate compliance with the applicable NO_x and SO₂ emission limits established in this permit.

*Note: This is an administrative permit modification to PTI P0131096. As such, the permittee fulfilled the requirements in g)(1) above through performance testing conducted April 2, 2021.