



10/09/2026

Mr. Eric Fedio
First Solar Inc.
28380 Tracy Rd
Walbridge, OH 43465

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL

Facility ID: 0387002043
Permit Number: P0141459
Permit Type: Initial Installation
County: Wood

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

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the permit. A public notice will appear in the Ohio Environmental Protection Agency (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 Initial Installation

First Solar Inc.
28380 Tracy Rd
Walbridge, OH 43465

ID#: P0141459

Date of Action: 10/09/2026

Permit Desc: Initial installation for 4 cure applicators and ovens (P197 through P200) in the PGT3 building and a 6,000 gallons-per-minute cooling tower (P201) at the PGT4 building.

The permit can be accessed electronically and comments may be submitted at: <https://ohioepa.commentinput.com> - Search by entering the permit P0141459 in the "Search Projects" search box.

Permit Strategy Write-Up

1. Check all that apply:

☒ Synthetic Minor Determination

☐ Netting Determination

2. Source Description:

First Solar Inc. (First Solar) is an existing photovoltaic cell manufacturing facility in Walbridge, Ohio which is in Wood County. This permitting action is an initial installation for the following emissions units:

- PGT3 Cure Applicator/Oven #1 (P197)
- PGT3 Cure Applicator/Oven #2 (P198)
- PGT3 Cure Applicator/Oven #3 (P199)
- PGT3 Cure Applicator/Oven #4 (P200)
- Non-contact cooling tower system 4c (6,000 gpm max flow rate) with drift eliminator (P201)

All the cure applicators and associated ovens will be installed in the PGT3 building. P197 and P198 will share a regenerative thermal oxidizer (RTO), as will P199 and P200. P201 will be installed in the PGT4 building and will be controlled by a drift eliminator.

3. Facility Emissions and Attainment Status:

Wood County is classified as attainment or unclassifiable for all NAAQS pollutants. First Solar is a Title V facility and is not major for Prevention of Significant Deterioration (PSD) nor Maximum Achievable Control Technology (MACT)

4. Source Emissions:

First Solar has requested federally enforceable requirements for the use of RTOs to limit VOC emissions for P197, P198, P199, and P200. The facility has also requested legally and practically enforceable restrictions for the use of a drift eliminator for P201.

5. Conclusion:

The federally enforceable emissions limitations are sufficient to ensure the facility's emissions will remain before PSD and MACT thresholds.

6. Please provide additional notes or comments as necessary:

None

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

Pollutant

Tons Per Year

VOC

6.20



**Environmental
Protection
Agency**

Draft Permit-to-Install

First Solar Inc.

Permit Number: P0141459

Facility ID: 0387002043

Effective Date: To be entered upon final issuance

Pollutant

Tons Per Year

PM₁₀

0.94

PM_{2.5}

0.57



DRAFT

Division of Air Pollution Control
Permit-to-Install
for
First Solar Inc.

Facility ID:	0387002043
Permit Number:	P0141459
Permit Type:	Initial Installation
Issued:	10/09/2026
Effective:	To be entered upon final issuance

Division of Air Pollution Control
Permit-to-Install

for
First Solar Inc.

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Authorization

Facility ID: 0387002043
Facility Description:
Application Number(s): A0082517, A0082798
Permit Number: P0141459
Permit Type: Permit-To-Install
Permit Fee: \$1,500.00 *DO NOT send payment at this time, subject to change before final issuance*
Issue Date: 10/09/2026
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:

First Solar Inc.
28380 Tracy Rd
Walbridge, OH 43465

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: P0141459

Permit Description: Initial installation for 4 cure applicators and ovens (P197 through P200) in the PGT3 building and a 6,000 gallons-per-minute cooling tower (P201) at the PGT4 building.

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

Emissions Unit ID:	P201
Company Equipment ID:	Cooling 4c
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

Group Name:PGT3 Cure Applicators 1 & 2

Emissions Unit ID:	P197
Company Equipment ID:	PGT3 Cure Applicator/Oven1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P198
Company Equipment ID:	PGT3 Cure Applicator/Oven2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

Group Name:PGT3 Cure Applicators 3 & 4

Emissions Unit ID:	P199
Company Equipment ID:	PGT3 Cure Applicator/Oven3
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P200
Company Equipment ID:	PGT3 Cure Applicator/Oven4
Superseded Permit Number:	
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. P201, Cooling 4c

Operations, Property and/or Equipment Description:

Non-contact cooling tower system 4c (6,000 gpm flow rate with drift eliminator)

- 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)(a)(ii)	The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the emissions of PM ₁₀ and PM _{2.5} from this air contaminant source since the potential to emit is less than 10 tons per year taking into account the legally and practically enforceable emissions limitations in b)(1)b.
b.	OAC rule 3745-31-05(F)	PM ₁₀ emissions shall not exceed 0.22 lb/hr and 0.94 ton per year. PM _{2.5} emissions shall not exceed 0.13 lb/hr and 0.57 ton per year. Visible PE shall not exceed 10% opacity as a six-minute average. See b)(2)a.
c.	OAC rule 3745-17-11(B)	See b)(2)b.
d.	OAC rule 3745-17-07(A)	See b)(2)c.

- (2) Additional Terms and Conditions

- a. The legally and practically enforceable emission limitations in b)(1)b. are established for the purpose of limiting PTE. The legally and practically enforceable limitations are voluntary restrictions established under OAC rule 3745-31-05(F) and are based on the operational restrictions in c)(1).



- b. The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(F).
 - c. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(F).
 - c) Operational Restrictions
 - (1) The following operational restrictions have been included in this permit for the purpose of establishing legally and practically enforceable requirements which limit potential to emit [See b)(2)a.):
 - a. The permittee shall maintain the total dissolved solids (TDS) content of the circulating cooling water at 2,050 ppm or less; and
 - b. The use of a drift eliminator achieving “drift loss” equal to or less than 0.005 percent.
 - d) Monitoring and/or Recordkeeping Requirements
 - (1) Each month, the permittee shall collect and record the following information for this emissions unit:
 - a. The permittee shall test and record the TDS content in mg/l or ppm, of the cooling water at least once per month using USEPA approved test procedures or an equivalent method approved by the Ohio EPA, Northwest District Office (NWDO).
 - (2) Each month, the permittee shall calculate and record PM₁₀ and PM_{2.5} emissions, in lbs/hr, as a monthly average. The PM₁₀ and PM_{2.5} shall be calculated as follows:
$$\text{PM}_{10} \text{ and PM}_{2.5} \text{ in lbs/hr} = (6,000 \text{ gallons/min}) \times (0.00005) \times (\text{TDS ppm}/1,000,000) \times (60 \text{ min/hr}) \times (8.34 \text{ lbs/gal}) \times (F)$$

Where:

6,000 gallons per minute = the maximum water flow rate;

0.00005 = the maximum drift loss factor;

TDS = the TDS concentration, on a monthly average basis, if more than one measurement is taken in a month;

8.34 lbs/gal = conversion factor for pounds per gallon (density of water); and

F = Fraction of total PM*

F = 0.7 for emissions of PM₁₀*

F = 0.42 for emissions of PM_{2.5}*

*The PM₁₀ and PM_{2.5} fractions of total PM are from Table A of Appendix A in “Updated CEIDARS List with PM_{2.5} Fractions” published by *South Coast Air Quality Management District* (October 2006).
 - (3) Each month, the permittee shall use the information in d)(2) to calculate the year to date PM₁₀ and PM_{2.5} emissions, in tons, from January to December.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify any exceedances of the TDS content restriction of 2,050 ppm.
- (2) The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the standard terms and conditions of this permit.

f) Testing Requirements

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

a. Emissions LimitationPM₁₀- 0.22 lb/hrPM_{2.5}- 0.13 lb/hrApplicable Compliance Method

Compliance shall be based upon the recordkeeping requirements specified in d)(2) of the terms and conditions of this permit.

b. Emissions LimitationPM₁₀- 0.94 ton per yearPM_{2.5}- 0.57 ton per yearApplicable Compliance Method

Compliance shall be based upon the recordkeeping requirements specified in d)(3) of the terms and conditions of this permit.

c. Emissions Limitation

Visible PE shall not exceed 10% opacity, as a six-minute average.

Applicable Compliance Method

If required, compliance with the visible emission limitation shall be demonstrated in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

g) Miscellaneous Requirements

- (1) None.

2. Emissions Unit Group - PGT3 Cure Applicators 1 & 2: P197, P198

EU ID	Operations, Property and/or Equipment Description
P197	PGT3 Cure Applicator/Oven #1
P198	PGT3 Cure Applicator/Oven #2

- 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)d. and d)(7).

- 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)	0.46 lb VOC/hr and 2.01 ton VOC per rolling, 12-month period from P197 and P198, combined when vented to the regenerative thermal oxidizer (RTO). 9.12 lbs VOC/hr and 1.09 ton VOC per rolling, 12-month period from P197 and P198, combined during RTO downtime. See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)(a)(ii)	The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the emissions from these air contaminant sources since the PTE for VOC, NO _x , CO, SO ₂ , PM ₁₀ and PM _{2.5} is less than 10 tons per year.
c.	OAC rule 3745-21-07(M)	See b)(2)d.
d.	OAC rule 3745-114-01 ORC 3704.03(F)	See d)(7)



(2) Additional Terms and Conditions

- a. The federally enforceable emissions limitations in b)(1)a. have been established for the purpose of limiting PTE. The federally enforceable emissions limitations are based on the operational restrictions contained in c)(1).
- b. The permanent total enclosure shall be maintained under negative pressure whenever the emissions units are in operation and shall be designed and maintained to have an average facial velocity of air through each natural draft opening of at least 200 feet per minute (3,600 m/hr). Compliance with the average facial velocity shall be demonstrated during the compliance test, by either using an air flow monitor or a differential pressure gauge following Section 8.3 of Method 204 and maintaining the required facial velocity or the corresponding negative pressure. The permanent total enclosure shall meet all of the following criteria if the capture efficiency of the enclosure and control devices is to be assumed to be 100%:

- i. Any natural draft opening shall be at least four equivalent opening diameters, or 4 times the diameter of the opening, from each VOC emitting point. An equivalent diameter is the diameter of a circle that has the same area as the opening. For a circular or oval type opening, the equivalent diameter (ED) is calculated using the following equation:

$$ED = (4 \text{ area} / \pi)^{0.5}$$

For a square or rectangular type opening, the equivalent diameter is calculated using either the circular/oval equation above or the following equation:

$$ED = (2)(\text{Length})(\text{Width}) / (\text{Length} + \text{Width})$$

- (a) The total area of all natural draft openings (A_N) shall not exceed 5 percent of the total surface area of the enclosure (A_T), i.e., the four walls, floor, and ceiling. The natural draft opening to enclosure area ratio (NEAR) is calculated as follows:

$$NEAR = A_N / A_T$$

- ii. The direction of air flow through all natural draft opening shall be into the enclosure, with an average facial velocity of no less than 200 feet per minute (3,600 m/hr) or a pressure drop of 0.013 mm Hg (0.007 in. H₂O).
 - iii. All access doors and windows to the enclosure that do not meet the requirements of a natural draft opening and whose surface areas are not included in the 5 percent surface area determination in b)(2)b.i., shall be closed during routine operation of the process.
 - iv. All VOC emissions shall be captured and contained for discharge through the control device, except during downtime of the RTO.

- c. The permanent total enclosure serving these emissions units shall be maintained in such a manner as to meet the criteria established for a permanent total enclosure in 40 CFR, Part 51, Appendix M, Reference Method 204, and shall capture all of the VOC emissions from these emissions units, except during downtime of the RTO.
- d. These emissions units are not subject to the requirements of this rule because they do not meet all of the conditions outlined in OAC rule 3745-21-07(M)(3)(a).

c) Operational Restrictions

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

- a. Emissions units P197 and P198 shall be equipped with a total enclosure designed and operated to achieve 100% capture. A permanent total enclosure shall be constructed to totally enclose the emission units such that all VOC emissions are captured, contained, and directed to the control device.
- b. Emissions units P197 and P198 shall be equipped with an RTO designed and operated to achieve 95% destruction efficiency for VOC. All of the VOC emissions shall be vented to the RTO that shall meet the operational, monitoring, and recordkeeping requirements of this permit, when the emissions units are in operation, except during downtime of the RTO.
- c. The maximum annual hours of downtime for the RTO shall not exceed 240, based on a rolling, 12-month summation of the RTO downtime hours.

To ensure federal enforceability during the first 12 calendar months of operation under the provisions of this permit, the permittee shall not exceed the RTO downtime hours specified in the following table:

Maximum Cumulative RTO Downtime Hours

Month(s)	Maximum Allowable RTO Downtime Hours
1-3	80
1-6	160
1-12	240

After the first 12 months of operation following the issuance of this permit, compliance with the annual RTO downtime hours limitation shall be based on a rolling, 12-month summation.

- (2) The permanent total enclosure shall be maintained under negative pressure, at a minimum pressure differential that is not less than 0.013 mm Hg (0.007 inches of water) or an average facial velocity of no less than 200 feet per minute (3,600 m/hr), whenever the emissions units are in operation, except during downtime of the RTO.



d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitations contained in this permit, the acceptable average combustion temperature within the RTO, for any 3-hour block of time when these emissions units are controlled by the RTO, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions units were in compliance. Until compliance testing has been conducted, the RTO shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manual.
- (2) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the RTO when the emissions units are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. In lieu of ongoing calibration, the thermocouple may be replaced per manufacturers' recommendations. The acceptable temperature setting shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate temperature range is established to demonstrate compliance. Following compliance testing, the permittee shall collect and record the following information each day each emissions unit is in operation:
 - a. All 3-hour blocks of time, when the emissions units are operating and controlled by the RTO, during which the average combustion temperature within the RTO was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions units were in compliance; and
 - b. A log (date and total time) of the downtime or bypass of the capture (collection) system and RTO, and/or downtime of the monitoring equipment, when the associated emissions units were in operation.

These records shall be maintained at the facility for a period of five years.
- (3) Whenever the monitored average combustion temperature within the RTO deviates from the range or limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:
 - a. the date and time the deviation began;
 - b. the magnitude of the deviation at that time;
 - c. the date the investigation was conducted;
 - d. the name(s) of the personnel who conducted the investigation; and



- e. the findings and recommendations.

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 range/limit specified in this permit, 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:

- f. a description of the corrective action;
- g. the date corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the temperature readings immediately after the corrective action was implemented;
and
- k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by Ohio EPA NWDO. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (4) The permittee shall measure, document/calculate, and maintain a permanent record of the following information for each permanent total enclosure, which may be the same record documented during the compliance test(s):
 - a. the measured equivalent diameter of each natural draft opening;
 - b. the distance measured from each natural draft opening to each VOC emitting point;
 - c. the total calculated surface area of all natural draft openings and the surface area of the enclosures' four walls, floor, and ceiling.
 - d. the calculation or demonstration that the distance from each VOC emitting point to each natural draft opening is at least 4 times the diameter of the opening; and
 - e. the calculation demonstrating that the sum of the surface areas of all of the natural draft openings to the enclosures is not more than 5 percent of the sum of the surface areas of the enclosures' four walls, floor, and ceiling.



- (5) The permittee shall install, operate, and maintain monitoring devices and a recorder that continuously monitor and record the differential pressure between the inside and outside of the permanent total enclosures when the emissions units are in operation and vented to the RTO. The monitoring and recording devices shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information each day for the RTO:

- a. all three-hour blocks of time during which the difference in pressure between the permanent total enclosure and the surrounding areas is not maintained at or above the minimum pressure differential of 0.007 inches of water or alternatively at or above the minimum facial velocity of 200 feet per minute, as a three-hour average; and
 - b. a log or record of downtime for the capture (collection) system when the emissions units were in operation and vented to the RTO.
- (6) The permittee shall collect and record the following information each month during downtime of the RTO:
- a. the operating hours for each month;
 - b. during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative hours operating during downtime for each calendar month and
 - c. beginning after the first 12 calendar months of operation or the first 12 months following the issuance of this permit, the rolling, 12-month summation of the operating hours during downtime;
 - d. monthly records of the VOC emissions (as calculated in Application #A0082798, received October 5, 2026), in tons; and
 - e. the rolling, 12-month VOC emissions, in tons.
- (7) Modeling to demonstrate compliance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F)(4)(b), was not necessary because the emissions units' maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than one ton per year. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified PTI prior to making a modification as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes, in the composition of the materials or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above one ton per year may require the permittee to apply for and obtain a new PTI.

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

Effective Date: To be entered upon final issuance

- a. all exceedances of the 1.09 ton VOC per rolling, 12-month period during downtime for the RTO;
 - b. all exceedances of the 240 hours of downtime for the RTO per rolling, 12-month period operational restriction;
 - c. each period of time (start time and date, and end time and date) when the average combustion temperature within the RTO was outside of the range specified by the manufacturer and/or outside of the acceptable range following any required compliance demonstration;
 - d. any period of time (start time and date, and end time and date) when the emissions units were in operation and the process emissions were not vented to the RTO and;
 - e. all three-hour blocks of time, when the emissions units were in operation, during which the permanent total enclosure was not maintained at the minimum pressure differential of 0.007 inches of water or alternatively at the minimum facial velocity of 200 feet per minute.
- (3) The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.
- f) Testing Requirements
- (1) The permittee shall conduct, or have conducted, emissions testing for these emissions units in accordance with the following requirements:
- a. The emission testing shall be conducted no later than 180 days after the initial startup of the emissions units. Testing timeframe(s) specified may be amended or waived for cause upon prior request of, and written approval of, the Ohio EPA.
 - b. The emission testing shall be conducted to demonstrate compliance with the following emission limitations:
 - i. 0.46 lb VOC/hr from P197 and P198, combined during periods of time when the emissions units are vented to the RTO;
 - ii. the 100% capture efficiency requirement for the permanent total enclosures during periods of time when the emissions units are vented to the RTO; and
 - iii. 95% destruction efficiency for VOC (the percent reduction in mass emissions between the inlet and outlet of the control system) during periods of time when the emissions units are vented to the RTO.
 - c. The following test methods shall be employed to demonstrate compliance with the following emission limitations allowable:



- i. for lb VOC/hr: Methods 1 through 4 and 18, 25, and/or 25A, as applicable, from 40 CFR, Part 60, Appendix A;
- ii. for capture efficiency: see f)(1)d. through f)(1)h.; and
- iii. for destruction efficiency: See f)(1)i.

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

- d. During the compliance demonstration for the permanent total enclosure, monitoring devices shall be installed to measure the average facial velocity of the air flow in accordance with Section 8.3 of Method 204.
- e. Method 2 from 40 CFR, Part 60, Appendix A shall be conducted to determine the volumetric flow rate of the exhaust stream(s) exiting the permanent total enclosure, corrected to standard conditions. If the building is being used as the permanent total enclosure, it may be necessary to measure the volumetric flow, corrected to standard conditions, of each gas stream entering the "enclosures" through a forced makeup air duct, using Method 2. The facial velocity (FV) shall be calculated using the following equation:

$$FV = (Q_o - Q_i) / A_n$$

where:

- Q_o is the sum of the volumetric flow from all gas streams exiting the enclosure through an exhaust duct or hood;
- Q_i is the sum of the volumetric flow from all gas streams into the enclosure through a forced makeup air duct, and is equal to zero if there is no forced makeup air into the enclosure; and
- A_n is the total area of all natural draft openings in the enclosure.

Alternatively, measure the pressure differential across the enclosure. A pressure drop of 0.013 mm Hg (0.007 in. H₂O) corresponds to an FV of 3,600 m/hr (200 fpm).

- f. If the average facial velocity is measured at greater than 500 feet per minute (9,000 m/hr), the direction of air flow shall be assumed to be inward at all times during the compliance demonstration. If the average facial velocity is measured at less than 500 feet per minute, the continuous inward flow of air shall be verified at least once every 10 minutes for a minimum of 1 hour during the compliance demonstration, either by checking the flow or pressure meter(s) or through the use of streamers, smoke tubes, or tracer gases. All closed access doors and windows that are not considered natural draft openings shall also be checked once during the compliance demonstration for leakage around their perimeters using smoke tubes or tracer gases.
- g. The permittee shall also measure and record the following information for the permanent total enclosure and each natural draft opening:



- i. the diameter of each natural draft opening;
 - ii. the distance measured from each natural draft opening to each VOC emitting point in the process;
 - iii. the total surface area of each natural draft opening and the surface area of the enclosures' four walls, floor, and ceiling; and
 - iv. the ratio of the total surface area (sum) of all natural draft openings to the total surface area of the permanent total enclosure.
- h. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR, Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.
- i. The destruction efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or an alternative test protocol approved by the Ohio EPA. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- j. During the emission testing, the emissions units shall be operated under operational conditions approved in advance by Ohio EPA NWDO. 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 units' 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 Ohio EPA NWDO 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.
- k. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an ITT notification to Ohio EPA NWDO. The ITT notification shall describe in detail the proposed test methods and procedures, the emissions units' operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA NWDO's refusal to accept the results of the emission test(s).



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c. Emissions Limitation

95% destruction efficiency for volatile organic compounds during periods of time when the emissions units are vented to the RTO

Applicable Compliance Method

Compliance shall be based on the emissions testing requirements as specified in f)(1).

d. Emissions Limitation

100% capture of VOC emissions

Applicable Compliance Method

Compliance shall be based on the emissions testing requirements as specified in f)(1).

g) Miscellaneous Requirements

(1) None.

3. Emissions Unit Group - PGT3 Cure Applicators 3 & 4: P199, P200,

EU ID	Operations, Property and/or Equipment Description
P199	PGT3 Cure Applicator/Oven #3
P200	PGT3 Cure Applicator/Oven #4

- 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)d. and d)(7).

- 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)	0.46 lb VOC/hr and 2.01 ton VOC per rolling, 12-month period from P199 and P200, combined when vented to the regenerative thermal oxidizer (RTO). 9.12 lbs VOC/hr and 1.09 ton VOC per rolling, 12-month period from P199 and P200, combined during RTO downtime. See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)(a)(ii)	The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the emissions from these air contaminant sources since the PTE for VOC, NO _x , CO, SO ₂ , PM ₁₀ and PM _{2.5} is less than 10 tons per year.
c.	OAC rule 3745-21-07(M)	See b)(2)d.
d.	OAC rule 3745-114-01 ORC 3704.03(F)	See d)(7)

(2) Additional Terms and Conditions

- a. The federally enforceable emissions limitations in b)(1)a. have been established for the purpose of limiting PTE. The federally enforceable emissions limitations are based on the operational restrictions contained in c)(1).
- b. The permanent total enclosure shall be maintained under negative pressure whenever the emissions units are in operation and shall be designed and maintained to have an average facial velocity of air through each natural draft opening of at least 200 feet per minute (3,600 m/hr). Compliance with the average facial velocity shall be demonstrated during the compliance test, by either using an air flow monitor or a differential pressure gauge following Section 8.3 of Method 204 and maintaining the required facial velocity or the corresponding negative pressure. The permanent total enclosure shall meet all of the following criteria if the capture efficiency of the enclosure and control devices is to be assumed to be 100%:

- i. Any natural draft opening shall be at least four equivalent opening diameters, or 4 times the diameter of the opening, from each VOC emitting point. An equivalent diameter is the diameter of a circle that has the same area as the opening. For a circular or oval type opening, the equivalent diameter (ED) is calculated using the following equation:

$$ED = (4 \text{ area} / \pi)^{0.5}$$

For a square or rectangular type opening, the equivalent diameter is calculated using either the circular/oval equation above or the following equation:

$$ED = (2)(\text{Length})(\text{Width}) / (\text{Length} + \text{Width})$$

- (a) The total area of all natural draft openings (A_N) shall not exceed 5 percent of the total surface area of the enclosure (A_T), i.e., the four walls, floor, and ceiling. The natural draft opening to enclosure area ratio (NEAR) is calculated as follows:

$$NEAR = A_N / A_T$$

- ii. The direction of air flow through all natural draft opening shall be into the enclosure, with an average facial velocity of no less than 200 feet per minute (3,600 m/hr) or a pressure drop of 0.013 mm Hg (0.007 in. H₂O).
- iii. All access doors and windows to the enclosure that do not meet the requirements of a natural draft opening and whose surface areas are not included in the 5 percent surface area determination in b)(2)b.i., shall be closed during routine operation of the process.
- iv. All VOC emissions shall be captured and contained for discharge through the control device, except during downtime of the RTO.

- c. The permanent total enclosure serving these emissions units shall be maintained in such a manner as to meet the criteria established for a permanent total enclosure in 40 CFR, Part 51, Appendix M, Reference Method 204, and shall capture all of the VOC emissions from these emissions units, except during downtime of the RTO.
- d. These emissions units are not subject to the requirements of this rule because they do not meet all of the conditions outlined in OAC rule 3745-21-07(M)(3)(a).

c) Operational Restrictions

- (1) The following operational restrictions have been included in this permit for establishing federally enforceable requirements which limit PTE [See b)(2)a.]:
 - a. Emissions units P199 and P200 shall be equipped with a total enclosure designed and operated to achieve 100% capture. A permanent total enclosure shall be constructed to totally enclose the emission units such that all VOC emissions are captured, contained, and directed to the control device.
 - b. Emissions units P199 and P200 shall be equipped with an RTO designed and operated to achieve 95% destruction efficiency for VOC. All of the VOC emissions shall be vented to the RTO that shall meet the operational, monitoring, and recordkeeping requirements of this permit, when the emissions units are in operation, except during downtime of the RTO.
 - c. The maximum annual hours of downtime for the RTO shall not exceed 240, based on a rolling, 12-month summation of the RTO downtime hours.

To ensure federal enforceability during the first 12 calendar months of operation under the provisions of this permit, the permittee shall not exceed the RTO downtime hours specified in the following table:

Maximum Cumulative RTO Downtime Hours

Month(s)	Maximum Allowable RTO Downtime Hours
1-3	80
1-6	160
1-12	240

After the first 12 months of operation following the issuance of this permit, compliance with the annual RTO downtime hours limitation shall be based on a rolling, 12-month summation.

- (2) The permanent total enclosure shall be maintained under negative pressure, at a minimum pressure differential that is not less than 0.013 mm Hg (0.007 inches of water) or an average facial velocity of no less than 200 feet per minute (3,600 m/hr), whenever the emissions units are in operation, except during downtime of the RTO.



d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitations contained in this permit, the acceptable average combustion temperature within the RTO, for any 3-hour block of time when these emissions units are controlled by the RTO, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions units were in compliance. Until compliance testing has been conducted, the RTO shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manual.
- (2) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the RTO when the emissions units are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. In lieu of ongoing calibration, the thermocouple may be replaced per manufacturers' recommendations. The acceptable temperature setting shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate temperature range is established to demonstrate compliance. Following compliance testing, the permittee shall collect and record the following information each day each emissions unit is in operation:
 - a. All 3-hour blocks of time, when the emissions units are operating and controlled by the RTO, during which the average combustion temperature within the RTO was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions units were in compliance; and
 - b. A log (date and total time) of the downtime or bypass of the capture (collection) system and RTO, and/or downtime of the monitoring equipment, when the associated emissions units were in operation.

These records shall be maintained at the facility for a period of five years.
- (3) Whenever the monitored average combustion temperature within the RTO deviates from the range or limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:
 - a. the date and time the deviation began;
 - b. the magnitude of the deviation at that time;
 - c. the date the investigation was conducted;
 - d. the name(s) of the personnel who conducted the investigation; and



- e. the findings and recommendations.

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 range/limit specified in this permit, 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:

- f. a description of the corrective action;
- g. the date corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the temperature readings immediately after the corrective action was implemented;
and
- k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by Ohio EPA NWDO. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (4) The permittee shall measure, document/calculate, and maintain a permanent record of the following information for each permanent total enclosure, which may be the same record documented during the compliance test(s):
 - a. the measured equivalent diameter of each natural draft opening;
 - b. the distance measured from each natural draft opening to each VOC emitting point;
 - c. the total calculated surface area of all natural draft openings and the surface area of the enclosures' four walls, floor, and ceiling.
 - d. the calculation or demonstration that the distance from each VOC emitting point to each natural draft opening is at least 4 times the diameter of the opening; and
 - e. the calculation demonstrating that the sum of the surface areas of all of the natural draft openings to the enclosures is not more than 5 percent of the sum of the surface areas of the enclosures' four walls, floor, and ceiling.

- (5) The permittee shall install, operate, and maintain monitoring devices and a recorder that continuously monitor and record the differential pressure between the inside and outside of the permanent total enclosures when the emissions units are in operation and vented to the RTO. The monitoring and recording devices shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information each day for the RTO:

- a. all three-hour blocks of time during which the difference in pressure between the permanent total enclosure and the surrounding areas is not maintained at or above the minimum pressure differential of 0.007 inches of water or alternatively at or above the minimum facial velocity of 200 feet per minute, as a three-hour average; and
 - b. a log or record of downtime for the capture (collection) system when the emissions units were in operation and vented to the RTO.
- (6) The permittee shall collect and record the following information each month during downtime of the RTO:
- a. the operating hours for each month;
 - b. during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative hours operating during downtime for each calendar month and
 - c. beginning after the first 12 calendar months of operation or the first 12 months following the issuance of this permit, the rolling, 12-month summation of the operating hours during downtime;
 - d. monthly records of the VOC emissions (as calculated in Application #A0082798, received October 5, 2026), in tons; and
 - e. the rolling, 12-month VOC emissions, in tons.
- (7) Modeling to demonstrate compliance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F)(4)(b), was not necessary because the emissions units' maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than one ton per year. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified PTI prior to making a modification as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes, in the composition of the materials or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above one ton per year may require the permittee to apply for and obtain a new PTI.

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:



- a. all exceedances of the 1.09 ton VOC per rolling, 12-month period during downtime for the RTO;
 - b. all exceedances of the 240 hours of downtime for the RTO per rolling, 12-month period operational restriction;
 - c. each period of time (start time and date, and end time and date) when the average combustion temperature within the RTO was outside of the range specified by the manufacturer and/or outside of the acceptable range following any required compliance demonstration;
 - d. any period of time (start time and date, and end time and date) when the emissions units were in operation and the process emissions were not vented to the RTO and;
 - e. all three-hour blocks of time, when the emissions units were in operation, during which the permanent total enclosure was not maintained at the minimum pressure differential of 0.007 inches of water or alternatively at the minimum facial velocity of 200 feet per minute.
- (3) The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.
- f) Testing Requirements
- (1) The permittee shall conduct, or have conducted, emissions testing for these emissions units in accordance with the following requirements:
- a. The emission testing shall be conducted no later than 180 days after the initial startup of the emissions units. Testing timeframe(s) specified may be amended or waived for cause upon prior request of, and written approval of, the Ohio EPA.
 - b. The emission testing shall be conducted to demonstrate compliance with the following emission limitations:
 - i. 0.46 lb VOC/hr from P199 and P200, combined during periods of time when the emissions units are vented to the RTO;
 - ii. the 100% capture efficiency requirement for the permanent total enclosures during periods of time when the emissions units are vented to the RTO; and
 - iii. 95% destruction efficiency for VOC (the percent reduction in mass emissions between the inlet and outlet of the control system) during periods of time when the emissions units are vented to the RTO.
 - c. The following test methods shall be employed to demonstrate compliance with the following emission limitations allowable:
 - i. for lb VOC/hr: Methods 1 through 4 and 18, 25, and/or 25A, as applicable, from 40 CFR, Part 60, Appendix A;



- ii. for capture efficiency: see f)(1)d. through f)(1)h.; and
- iii. for destruction efficiency: See f)(1)i.

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

- d. During the compliance demonstration for the permanent total enclosure, monitoring devices shall be installed to measure the average facial velocity of the air flow in accordance with Section 8.3 of Method 204.
- e. Method 2 from 40 CFR, Part 60, Appendix A shall be conducted to determine the volumetric flow rate of the exhaust stream(s) exiting the permanent total enclosure, corrected to standard conditions. If the building is being used as the permanent total enclosure, it may be necessary to measure the volumetric flow, corrected to standard conditions, of each gas stream entering the “enclosures” through a forced makeup air duct, using Method 2. The facial velocity (FV) shall be calculated using the following equation:

$$FV = (Q_o - Q_i) / A_n$$

where:

- Q_o is the sum of the volumetric flow from all gas streams exiting the enclosure through an exhaust duct or hood;
- Q_i is the sum of the volumetric flow from all gas streams into the enclosure through a forced makeup air duct, and is equal to zero if there is no forced makeup air into the enclosure; and
- A_n is the total area of all natural draft openings in the enclosure.

Alternatively, measure the pressure differential across the enclosure. A pressure drop of 0.013 mm Hg (0.007 in. H₂O) corresponds to an FV of 3,600 m/hr (200 fpm).

- f. If the average facial velocity is measured at greater than 500 feet per minute (9,000 m/hr), the direction of air flow shall be assumed to be inward at all times during the compliance demonstration. If the average facial velocity is measured at less than 500 feet per minute, the continuous inward flow of air shall be verified at least once every 10 minutes for a minimum of 1 hour during the compliance demonstration, either by checking the flow or pressure meter(s) or through the use of streamers, smoke tubes, or tracer gases. All closed access doors and windows that are not considered natural draft openings shall also be checked once during the compliance demonstration for leakage around their perimeters using smoke tubes or tracer gases.
- g. The permittee shall also measure and record the following information for the permanent total enclosure and each natural draft opening:
 - i. the diameter of each natural draft opening;



- ii. the distance measured from each natural draft opening to each VOC emitting point in the process;
 - iii. the total surface area of each natural draft opening and the surface area of the enclosures' four walls, floor, and ceiling; and
 - iv. the ratio of the total surface area (sum) of all natural draft openings to the total surface area of the permanent total enclosure.
- h. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR, Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.
- i. The destruction efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or an alternative test protocol approved by the Ohio EPA. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- j. During the emission testing, the emissions units shall be operated under operational conditions approved in advance by Ohio EPA NWDO. 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 ITT notification form described below, the permittee shall provide a description of the emissions units' 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 Ohio EPA NWDO 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.
- k. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an ITT notification to Ohio EPA NWDO. The ITT notification shall describe in detail the proposed test methods and procedures, the emissions units' operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA NWDO's refusal to accept the results of the emission test(s).



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c. Emissions Limitation

95% destruction efficiency for volatile organic compounds during periods of time when the emissions units are vented to the RTO

Applicable Compliance Method

Compliance shall be based on the emissions testing requirements as specified in f)(1).

d. Emissions Limitation

100% capture of VOC emissions

Applicable Compliance Method

Compliance shall be based on the emissions testing requirements as specified in f)(1).

g) Miscellaneous Requirements

(1) None.