



09/01/2026

Gary Strassell
The Shepherd Color Company
4539 Dues Drive
Cincinnati, OH 45246

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL

Facility ID: 1409000411
Permit Number: P0140727
Permit Type: Initial Installation
County: Butler

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

Dear Permit Holder:

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

Southwest Ohio Air Quality Agency
1701 Patricia McCollum Way
DEPT 56
Cincinnati, OH 45237

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 Southwest Ohio Air Quality Agency at (513)946-7777.

Sincerely,

Robert Hodanbosi
Chief, Division of Air Pollution Control

cc: U.S. EPA Region 5 - Via E-Mail Notification
SWOAQA; Indiana; Kentucky

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

The Shepherd Color Company
4539 DUES DRIVE

West Chester Twp., OH 45246

ID#: P0140727

Date of Action: 09/01/2026

Permit Desc: Initial installation of Heyl Patterson 51" Rotary Calciner, incorporated into existing Synthetic Minor for NOx Emissions.

The permit and complete instructions for requesting information or submitting comments may be obtained at: <https://ohioepa.commentinput.com> - Search by entering the permit #P0140727 in the "Search Projects" search box.

Permit Strategy Write-Up

1. Check all that apply:

☒ Synthetic Minor Determination

☒ Netting Determination

2. Source Description:

This permit action is a permittee requested PTI for a Heyl Patterson 51" Rotary Calciner, Emission Unit ID P085. It will be the 4th permitted calciner at the facility as of August 2026. A synthetic minor facility-wide NO_x emission limitation has been established for the purpose of avoiding Title V major source status for NO_x emissions. P085 will be subject to this respective NO_x limit. The facility will remain a Title V facility under the area source HAP rules in 40 CFR Part 63, Subpart VVVVV, which requires the facility to obtain/maintain a Title V permit.

3. Facility Emissions and Attainment Status:

Shepherd Color is located in Butler County, Ohio. As of August 2026, Butler County is in attainment for all NAAQS pollutants [ozone (2015 standard), PM_{2.5}, PM₁₀, CO, NO_x, and SO₂]. Previously, Butler County was in nonattainment for the NAAQS ozone standard.

Shepherd Color is an existing area source of HAP emissions and a source of NAAQS criteria pollutants. Under the federal area source rules for HAPs in 40 CFR Part 63, Subpart VVVVV for chemical manufacturing, the facility is subject to the Title V permitting program even though it is an area source. The maximum calculated potential to emit for HAPs, at 8,760 hours per year, is 4.35 tons for any single HAP and 19.8 tons for all combined HAPs. Actual reported facility-wide combined HAP emissions were 2.77 tons in CY2025. There is no change to the area source status at the facility as a result of this permit action.

The facility-wide potential to emit for the NAAQS criteria pollutants subject to regulation under the Title V program and NSR programs is currently less than the major source thresholds (i.e., 100 TPY, 250 TPY) for all pollutants except NO_x as shown below. The maximum calculated potential to emit for each pollutant listed below assumes 8,760 hours of operation per year for all air contaminant sources at the facility. The permittee is requesting that a facility-wide NO_x emission limitation of 99.0 TPY be established so that the facility would not be subject to the Title V program or NSR provisions (if the region returns to nonattainment) for major sources of NO_x emissions. The NO_x emissions at the facility are produced by various fuel combustion sources (e.g., dryers, kilns, process heaters, emergency engines) as well as from four process reactors. Actual reported facility-wide NO_x emissions were 29.0 tons in CY2024 and 39.14 tons in CY2025, well under the 100/250 TPY thresholds for Title V and NSR.

Pollutant	Potential to Emit @8760 (TPY)	Synthetic Minor Emission Limit PTI Admin Mod P0131944 (TPY)
NO _x	148	99.0
CO	41	N/A
VOC	13	N/A
SO ₂	76	N/A
PM ₁₀ /PM _{2.5}	63	N/A

4. Source Emissions:

The Calciner #4 in this permit action - emissions unit P085 – is a source of NO_x, CO, SO₂, VOC, and PM₁₀/PM_{2.5} from fuel combustion in the process heater, as well as a source of PM₁₀/PM_{2.5} emissions and SO₂ from the process operation itself. The potential emissions of CO, SO₂, VOC, NO_x, and PM₁₀/PM_{2.5} from this emissions unit, assuming 8760 hours of operation per year, are less than 10 TPY, therefore the emissions unit is exempt from the BAT provisions under OAC rule 3745-31-05(A)(3) for these pollutants. The emissions unit is a source of particulate emissions from raw material processing, calcining, and product processing and is subject to OAC rules 3745-17-07 and 3745-17-11 visible particulate emission limits and mass particulate emission limits. Particulate emissions are controlled by product nuisance collectors and HEPA filtration. The calciner will have two stacks for raw material and calciner emissions and calciner product processing respectively. It will have a separate stack for fuel combustion emissions.

As discussed in 3. above, this calciner will be subject to and incorporated into the facility-wide 99.0 TPY NO_x emission limitation, with operational restrictions on the fuel combustion and process production rate associated with these emissions units, as previously established in synthetic minor permit action, P0131944.

5. Conclusion:

Sufficient record keeping and quarterly reporting is contained in the facility-wide permit requirements to determine compliance with the facility-wide synthetic minor NO_x emission limitation and associated operational restrictions established in previous permitting action, P0131944. It is recommended that this permit be issued in Draft in order to incorporate this emissions unit, P085, into the previously established federal enforceability and to provide for public comment.

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>
NO _x	1.19
NO _x (facility-wide)	99.0



**Environmental
Protection
Agency**

DRAFT

Division of Air Pollution Control
Permit-to-Install
for
The Shepherd Color Company

Facility ID:	1409000411
Permit Number:	P0140727
Permit Type:	Initial Installation
Issued:	09/01/2026
Effective:	To be entered upon final issuance

Division of Air Pollution Control
Permit-to-Install
for
The Shepherd Color Company

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Authorization

Facility ID: 1409000411
Facility Description: Inorganic pigment manufacturing
Application Number(s): A0081963
Permit Number: P0140727
Permit Type: Permit-To-Install
Permit Fee: \$300.00 *DO NOT send payment at this time, subject to change before final issuance*
Issue Date: 09/01/2026
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:

The Shepherd Color Company
4539 DUES DRIVE
West Chester Twp., OH 45246

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

Southwest Ohio Air Quality Agency
1701 Patricia McCollum Way
DEPT 56
Cincinnati, OH 45237
(513)946-7777

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: P0140727

Permit Description: Initial installation of Heyl Patterson 51" Rotary Calciner, incorporated into existing Synthetic Minor for NOx Emissions.

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

Emissions Unit ID:	P085
Company Equipment ID:	Rotary Calciner 4 RX092
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 Southwest Ohio Air Quality Agency.
 - (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Southwest Ohio Air Quality Agency. The written reports shall be submitted quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.



- (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the Southwest Ohio Air Quality Agency every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a 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 Southwest Ohio Air Quality Agency in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

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

6. Compliance Requirements

- a) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the appropriate Ohio EPA District Office or contracted local air agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the electronic signature date shall constitute the date that the required application, notification or report is considered to be "submitted". Any document requiring signature may be represented by entry of the personal identification number (PIN) by responsible official as part of the electronic submission process or by the scanned attestation document signed by the Authorized Representative that is attached to the electronically submitted written report.

Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a Responsible Official that, based on



information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete

- b) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - (1) At reasonable times, enter upon the permittee's premises where a source is located, or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c) The permittee shall submit progress reports to the Southwest Ohio Air Quality Agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

7. Best Available Technology

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

8. Air Pollution Nuisance

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

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

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



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

10. Applicability

This permit-to-install is applicable only to the emissions unit(s) identified in the permit-to-install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s) not exempt from the requirement to obtain a permit-to-install.

11. Construction of New Sources(s) and Authorization to Install

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended 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.

2. The Ohio EPA has determined that this facility operates affected sources that are subject to the requirements of 40 CFR Part 63, Subpart VVVVV, the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Manufacturing Area Sources. Ohio EPA is not accepting the delegation authority to implement and enforce the area source NESHAP standard. The area source NESHAP standard is implemented and enforced by U.S. EPA, Region 5. The promulgated version of this NESHAP standard and the 40 CFR Part 63, General Provisions may be accessed via the Internet from the Electronic Code of Federal Regulations (e-CFR) website <http://www.ecfr.gov/> or by contacting the Ohio EPA, District Office or Local Air Agency.

The following affected sources are subject to the area source requirements of this NESHAP standard: Emissions units P029, P032, P036, P037, P041, P042, P048, P057, P072, P073, P077, P085, P301, P302, P303, and P304.

3. Facility-Wide Requirements:

- a) Applicable Emissions Limitations and/or Control Requirements

- (1) The specific operation(s), property, and/or equipment at this facility, along with the applicable rules and/or requirements with the applicable emissions limitations and/or control measures, are identified below. Emissions at this facility shall not exceed the listed limitations:

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) <i>Federally enforceable limitation on facility-wide NOx emissions to avoid major stationary source status for NOx</i>	See 3.a)(2)a. and 3.b)(1).

- (2) Additional Terms and Conditions

- a. The total allowable NOx emissions from emissions units P024, P029, P032, P036, P037, P038, P041, P042, P044, P048, P057, P064, P072, P073, P077, P080, P083, P085, P301, P302, P303, and P304, permit-by-rule emissions units P060, P061, P062, P076, and P081, all de minimis emissions units (as defined in OAC rule 3745-15-05), and other air contaminant sources exempt from the requirement to obtain a permit to install pursuant to OAC rules 3745-31-03 and 3745-31-30 installed prior to or subsequent to the issuance of this permit, combined, shall not exceed 99.0 TPY of NOx, based upon a rolling, 12-month summation of the monthly emissions.

The permittee has existing records to demonstrate compliance with this emissions limitation upon permit issuance.

- b) Operational Restrictions



- (1) The combination of the maximum total fuel usage and maximum production rates of the emissions units and air contaminant sources listed in 3.a)(2)a. shall not cause NOx emissions from the emissions units and air contaminant sources, combined, to exceed 99.0 tons, as a rolling, 12-month summation, based on the following equations:

- a. Emissions from the products of combustion from the fuel-burning sources:

$$X = \sum_{i=1}^n [(H_i)(EF)/2,000 \text{ lbs}] + [(H_2)(EF)/2,000 \text{ lbs}] + \dots [(H_n)(EF)/2000 \text{ lbs}]$$

Where:

X= tons of NOx emissions per month;

H = monthly fuel usage, for each fuel-burning unit, in MMscf or MMBtu of fuel/month;

EF = NOx emission factors* respectively, in lbs of pollutant emitted/MMscf or MMBtu of fuel; and

n = total number of fuel-burning units, if fuel is metered separately; if fuel is metered combined, or facility-wide, that monthly usage may be used instead, making the summation unnecessary.

*As provided in Application A0071310, submitted 4/5/2022, where the NOx emission factors are based on AP-42, Fifth Ed., Chpt. 1.4 Natural Gas Combustion, Chpt. 1.5 Propane Combustion, Chpt. 3.3 Diesel Industrial Engines, or vendor-specified emission factors, where applicable.

- b. Emissions from the production process (applicable to emissions units P038, P044, P064, and P083 only, with process reactions creating NOx emissions):

$$X = \sum [(H_{P038})(EF)/2,000 \text{ lbs}] + [(H_{P044})(EF)/2,000 \text{ lbs}] + [(H_{P064})(EF)/2000 \text{ lbs}] + [(H_{P083})(EF)/2,000 \text{ lbs}]$$

Where:

X = tons of NOx emissions per month;

H = monthly production rate, for each emissions unit, in lbs/month; and

EF = NOx emission factor**, in lbs of NOx emitted/lbs of product.

**As provided in Application A0071310, submitted 4/5/2022, where the NOx emission factor is based on 2018 stack test data.

- c. The total NOx emissions calculated in a. and b. above shall be summed in the following equation:

$$n=12$$

$\sum_{i=1}^n (X) \leq 99.0$ tons NO_x, as a rolling 12-month summation
 $i = 1$

Where:

X = total tons of NO_x emissions per month; and

n = months in the rolling 12-month summation.

The listed emissions units have been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation upon issuance of this permit.

c) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information each month for emissions units P024, P029, P032, P036, P037, P038, P041, P042, P044, P048, P057, P064, P072, P073, P077, P080, P083, P085 P301, P302, P303, and P304, permit-by-rule emissions units P060, P061, P062, P076, and P081, all de minimis emissions units (as defined in OAC rule 3745-15-05), and other air contaminant sources exempt from the requirement to obtain a permit to install pursuant to OAC rules 3745-31-03 and 3745-31-30 installed prior to or subsequent to the issuance of this permit, combined:
 - a. the total quantity of natural gas combusted in each fuel-burning unit, or the combined (facility-wide) usage (as provided in 3.b)(1)a. above), in MMscf or MMBtu;
 - b. the total production rate in each of the process reactors (emissions units P038, P044, P064, and P083), in pounds;
 - c. the total NO_x emissions from all fuel-burning sources combined, calculated as specified in 3.b)(1)a. above, in pounds or tons;
 - d. the total NO_x emissions from all production process reaction sources combined, calculated as specified in 3.b)(1)b. above, in pounds or tons; and
 - e. the updated facility-wide rolling, 12-month summation of NO_x emissions, calculated as specified in 3.b)(1)c. above, in tons. This shall include the information for the current month and the preceding eleven months.

d) 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:
 - a. all exceedances of the rolling, 12-month total maximum total fuel usage and production restrictions in 3.b)(1); and
 - b. all exceedances of the facility-wide rolling, 12-month emission limitation for NO_x emissions in 3.a)(2)a.

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



e) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in 3.a) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

99.0 TPY for NO_x, based on a rolling, 12-month summation for the emissions units and air contaminant sources listed in 3.a)(2)a.

Applicable Compliance Method:

Compliance with the rolling, 12-month emission limitation shall be demonstrated by the record keeping requirements specified in 3.c)(1).

f) Miscellaneous Requirements

- (1) None.

4. The following abbreviations are used throughout this permit:

MMcf millions of cubic feet
EF emission factor
Gal gallons

C. Emissions Unit Terms and Conditions

1. P085, Rotary Calciner 4 RX092

Operations, Property and/or Equipment Description:

Heyl Patterson 51" Rotary Calciner, Calciner #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) 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 PM ₁₀ , PM _{2.5} , VOC, SO ₂ , NO _x , and CO emissions from this air contaminant source since the uncontrolled PTE is less than 10 TPY each.
b.	OAC rule 3745-31-05(D) <i>Federally enforceable limitation on facility-wide NO_x Emissions</i>	See 3. of Section B.
c.	OAC rule 3745-17-07(A)(1)	VE from any stack serving this EU shall not exceed 20% opacity as a six-minute average, except as provided by rule.
Fuel Burning Applicable Rules/Requirements		
d.	OAC rule 3745-17-10(B)(1)	PE from this air contaminant source shall not exceed 0.020 pound per MMBtu of actual heat input when burning NG.
e.	OAC rule 3745-17-10(C)(1)	PE from this air contaminant source shall not exceed 0.4 pound per MMBtu of actual heat input when burning LPG.
f.	OAC rule 3745-18-06(A) <i>Natural gas combustion</i>	Fuel burning equipment is exempt from OAC rule 3745-18-06 during any calendar day in which natural gas is the only fuel burned.
g.	OAC rule 3745-18-06(B) <i>LPG combustion</i>	Fuel burning equipment which has a rated heat input capacity equal to, or less than, ten

		MMBtu per hour is exempt from OAC rule 3745-18-06.
Process Equipment Applicable Rules/Requirements		
h.	OAC rule 3745-17-11(B)(1)	PE from this air contaminant source shall not exceed 1.62 pounds per hour based on Table I.
i.	OAC rule 3745-18-06(C)	Process equipment which has a rated capacity equal to, or less than, one thousand pounds per hour process weight input is exempt from paragraph (E) of OAC rule 3745-18-06.

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform weekly checks, when the EU is in operation and when the weather conditions allow, for any VE from the stack(s) serving this EU. The presence or absence of any VE shall be noted in an operations log. If VE are observed, 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 VE incident; and
- e. Any corrective actions taken to minimize or eliminate the VE.

If VE are present, a VE incident has occurred. The observer does not have to document the exact start and end times for the VE incident under d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the VE incident was continuous during the observation period (or, if known, continuous during the operation of the EU). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the VE were representative of normal operations or specify the corrective actions that were taken to minimize or eliminate abnormal VE.

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

- a. All days during which any VE were observed from the stack(s) serving this EU; and



- b. Any corrective actions taken to minimize or eliminate the VE.

These reports shall be submitted to the appropriate Ohio EPA DO/LAA by January 31st and July 31st of each year and shall cover the previous six-month period.

- (2) An exceedance of the VE limitations specified in OAC rule 3745-17-07(A)(1) that is caused by a malfunction is not a violation and does not need to be reported as a deviation if the permittee complies with the requirements of OAC rule 3745-15-06 and none of the conditions listed in OAC rule 3745-15-06(C) are applicable to the source.

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 Limitation:

VE from any stack serving this EU shall not exceed 20% opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method:

If required, compliance with the stack VE limitation shall be determined through VE observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A, and OAC rule 3745-17-03(B)(1)(a).

b. Emissions Limitation:

PE from this air contaminant source shall not exceed 0.020 pound per MMBtu of actual heat input when burning NG.

Applicable Compliance Method:

Compliance with the applicable PE limitation shall be demonstrated by the EF in AP-42, Fifth Ed., Chpt. 1.4, Natural Gas Combustion, Table 1.4-2, 4/26 with units converted using the NG heat content as supplied in Application A0081963:

$$7.6 \text{ lbs PE/MMcf NG} \times 1 \text{ MMcf NG/1020 MMBtu NG} = 0.0075 \text{ lb PE/MMBtu NG}$$

c. Emissions Limitation:

PE from this air contaminant source shall not exceed 0.4 pound per MMBtu of actual heat input when burning LPG.

Applicable Compliance Method:

Compliance with the applicable PE limitation shall be demonstrated by the EF in AP-42, Fifth Ed., Chpt. 1.5, Liquefied Petroleum Gas Combustion, Table 1.5-1, 5/25 with units converted using the LPG heat content as supplied in Application A0081963:

$$0.7 \text{ lb PE/1000 Gal LPG} \times 1000 \text{ Gal LPG/91.6 MMBtu} = 0.0076 \text{ lb PE/MMBtu LPG}$$

d. Emissions Limitation:

PE from this air contaminant source shall not exceed 1.62 pounds per hour based on Table I.



Applicable Compliance Method:

The applicable emissions limitation was established pursuant to OAC rule 3745-17-11(B)(1), Table I, where P is the Process Weight Rate (production) in tons per hour and E is allowable emissions:

for $0.05 < P \leq 30$, $E = 4.10(P)^{0.67}$

for $0.05 < P \leq 30$, $E = 4.10(500/2000)^{0.67}$

E = 1.62 pound PE per hour

If required, compliance with the pound per hour emission limitation shall be demonstrated by testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 – 5.

g) Miscellaneous Requirements

(1) None.