11/02/2026

No	TOXIC REVIEW
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MODELING SUBMITTED
Yes	SYNTHETIC MINOR TO AVOID TITLE V
Yes	FEDERALLY ENFORCABLE PTIO (FEPTIO)
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

Dave Arthurs
Humtown Pattern Co
44708 Columbiana-Waterford Rd.
Columbiana, OH 44408

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0215000242
Permit Number: P0141500
Permit Type: OAC Chapter 3745-31 Modification
County: Columbiana

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install and Operate (PTIO) 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 Weekly Review and Public Notices website, ***Weekly Review and Public Notices***. 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 | Ohio Environmental Protection Agency***. The permit can also be commented on and accessed electronically at: ***https://ohioepa.commentinput.com***. Search by entering the permit # (P0141500) in the "Search Projects" search box and selecting “Review Document” or “Draft Permit.” Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Written (paper) comments must be sent to the following:

Andrea Moore
Permit Review/Development Section
Ohio EPA, DAPC
50 West Town Street Suite 700
PO Box 1049
Columbus, Ohio 43216-1049

and

Ohio EPA DAPC, Northeast District Office
8957 Canyon Falls Blvd.
Twinsburg, OH 44087

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice appears on the Ohio EPA Weekly Review and Public Notices website, ***Weekly Review and Public Notices | Ohio Environmental Protection Agency***. You will be notified 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, Northeast District Office at (330)963-1200.

Sincerely,



Robert Hodanbosi
Chief, Division of Air Pollution Control

cc: U.S. EPA Region 5 Via E-Mail Notification
Ohio EPA-NEDO; Pennsylvania; West Virginia

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 and Operate OAC Chapter 3745-31 Modification

Humtown Pattern Co
44708 Columbiana-Waterford Rd.
Columbiana, OH 44408

ID#: P0141500
Date of Action: 11/02/2026
Permit Desc: Chapter 31 modification of FEPTIO for increasing P021 allowable due to installation of P028.

The permit can be accessed electronically and comments may be submitted at: https://ohioepa.commentinput.com - Search by entering the permit P0141500 in the "Search Projects" search box.

Environmental Protection Agency

Draft Permit-to-Install and Operate
HUMTOWN PATTERN CO
Permit Number: P0141500
Facility ID: 0215000242
Effective Date: To be entered upon final issuance

Permit Strategy Write-Up

1. Check all that apply:

   ☒ Synthetic Minor Determination

   ☐ Netting Determination

2. Source Description:

   Humtown Pattern Co (Humtown) makes molds and cores for foundry industry using phenolic urethane cold box process and phenolic urethane no bake process. This facility currently has an Airset mixer and mold/core station utilizing the phenolic urethane no bake process (P023), 2 phenolic urethane cold box mixers (P021 and P022), 12 mold core stations utilizing phenolic urethane cold box process (P001, P002, P007, P010, P012, P014, P015, P016, P018, P020, P026, and P028) with a control device, and a sand storage and handling system (P901) including silos 1, 2, 3, and 4, bucket elevators 1, 2, and 3, and a sand auger.

   This Chapter 31 modification for P021 increases both the allowable emission rates and the annual sand throughput. P021 is a phenolic urethane cold box mixing operation used to prepare mixed materials for mold core stations. These increases are due to operational changes in adding the planned installation of P028 (P0138754), which will require higher annual sand usage and increase allowable emissions for P021.

3. Facility Emissions and Attainment Status:

   Humtown is located at 44708 Columbiana-Waterford Road in Columbiana, Columbiana County, an area designated as "attainment" for sulfur dioxide, $PM_{2.5}$, carbon monoxide, ozone, and lead. Humtown is not a “Major Source” for each individual HAP and total combined HAPs emissions, and will not be a “Major Source” for PE and VOC emissions under the federally enforceable restrictions contained in this permit

4. Source Emissions:

   This permit will change the facility permitting status to synthetic minor including the following federally enforceable facility-wide emission limitations, based upon a rolling, 12-month summation, to avoid being a “Major Source”:

   a. 80 TPY of VOC emissions; and
   b. 80 TPY of PE.

   This permit is also required to track emissions, keep records, and submit reports.

5. Conclusion:

   The emission limitations contained in this FEPTIO are adequate to provide federally enforceable limitations to ensure that the Title V thresholds will not be exceeded.

6. Please provide additional notes or comments as necessary:

   None

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

Pollutant	Tons Per Year
PE	80
VOC	80
VOC_{P021}	10.89

Ohio Environmental Protection Agency

DRAFT

Division of Air Pollution Control
Permit-to-Install and Operate

for

HUMTOWN PATTERN CO

Facility ID:	0215000242
Permit Number:	P0141500
Permit Type:	OAC Chapter 3745-31 Modification
Issued:	11/02/2026
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance

Ohio Environmental Protection Agency

Division of Air Pollution Control

Permit-to-Install and Operate

for

HUMTOWN PATTERN CO

Table of Contents

Authorization 7

List of Commonly Used Abbreviations 9

A. Standard Terms and Conditions 10

B. Facility-Wide Terms and Conditions 15

C. Emissions Unit Terms and Conditions 24

1. P021, Mixers #2 & #3 25

Authorization

Facility ID:	0215000242
Application Number(s):	A0082792A0082792
Permit Number:	P0141500
Permit Description:	Chapter 31 modification of FEPTIO for increasing P021 allowable due to installation of P028.
Permit Type:	OAC Chapter 3745-31 Modification
Permit Fee:	$1,500.00 *DO NOT send payment at this time, subject to change before final issuance*
Issue Date:	11/02/2026
Effective Date:	To be entered upon final issuance
Expiration Date:	To be entered upon final issuance
Permit Evaluation Report (PER) Annual Date:	To be entered upon final issuance

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

Humtown Pattern Co.
44708 Columbiana-Waterford Rd.
Columbiana, OH 44408

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

Ohio EPA DAPC, Northeast District Office
8957 Canyon Falls Blvd.
Twinsburg, OH 44087
(330)963-1200

The above-named entity is hereby granted this Permit-to-Install and Operate 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.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

John Logue
Director

Authorization (continued)

Permit Number: P0141500

Permit Description: Chapter 31 modification of FEPTIO for increasing P021 allowable due to installation of P028.

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

Emissions Unit ID:	**P021**
Company Equipment ID:	Mixers #2 & #3
Superseded Permit Number:	P0128423
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/m3 = 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/m3 = 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_2S = hydrogen sulfide	Ohio EPA = Ohio Environmental Protection Agency	TPY = ton(s) per year
H_2SO_4 = sulfuric acid	ORC = Ohio Revised Code	TSP = total suspended particulates
HAP = hazardous air pollutant	Pb = lead	VE = visible 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/m3 = micrograms per cubic meter

A. Standard Terms and Conditions

1. What does this permit-to-install and operate (PTIO) allow me to do?

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

2. Who is responsible for complying with this permit?

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

3. What records must I keep under this permit?

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

4. What are my permit fees and when do I pay them?

There are two fees associated with permitted air contaminant sources in Ohio:

a) PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11 or based on a time and materials charge for permit application review and permit processing if required by the Director.

You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

b) Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

5. When does my PTIO expire, and when do I need to submit my renewal application?

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is very important that you submit a complete renewal permit application (either electronically through Ohio EPA's eBusiness Center: Air Services web service or postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

6. What happens to this permit if my project is delayed or I do not install or modify my source?

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended once by 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

7. What reports must I submit under this permit?

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and permit evaluation report (PER) obligations under this permit?

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions of this permit will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.

10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the Ohio EPA DAPC, Northeast District Office in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?

Yes. Under Ohio law, the Director or his/her authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

12. What happens if one or more emissions units operated under this permit is/are shut down permanently?

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means 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.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emission unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shut down emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

13. Can I transfer this permit to a new owner or operator?

You can transfer this permit to a new owner or operator. If you transfer the permit, the new owner or operator must follow the procedures in OAC Chapter 3745-31-07, including notifying Ohio EPA or the local air agency of the change in ownership or operator within thirty days of the transfer date. Any transferee of this permit shall assume the responsibilities of the transferor permit holder.

14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

15. What happens if a portion of this permit is determined to be invalid?

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.

B. Facility-Wide Terms and Conditions

1. This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).

   a) For the purpose of a PTI document, the facility-wide T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

      (1) B.2.a)(1)c., B.2.c)(1), B.2.c)(2), B.2.c)(3), B.2.c)(4), and B.2.d)(3)a.

   b) For the purpose of a PTO document, the facility-wide T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

      (1) B.2.a)(1)a., B.2.c)(5), B.2.d)(4)a.i., and B.2.e)(1)a.

2. Facility-Wide Requirements

   a) Applicable Emissions Limitations and/or Control Requirements

      (1) Facility-wide emissions 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) (Synthetic minor to avoid being subject to Title V requirements)	Facility-wide emissions, based upon a rolling, 12-month period, shall not exceed the following: • 80 TPY of VOC; and • 80 TPY of PE[1]. See B.2.a)(2)a. below
b.	OAC rule 3745-31-05(F) (Voluntary restrictions to avoid being subject to OAC rule 3745-21-07(M)(2) requirements and to limit PTE of all mold core stations)	See B.2.a)(2)b., B.2.a)(2)c., B.2.b)(1), B.2.b)(2), and B.2.b)(3) below.
c.	ORC 3704.03(F) and OAC rule 3745-114	See B.2.c)(1), B.2.c)(2), B.2.c)(3), B.2.c)(4), and B.2.d)(3)a. below.

      (2) Additional Terms and Conditions

         a. The facility has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling 12-month period facility-wide PE and VOC emissions, upon issuance of this permit.

[1] PE is equivalent to $PM_{10}/PM_{2.5}$.

b. The permittee shall interlock all mold core stations utilizing phenolic urethane cold box process to a sulfuric acid packed bed wet scrubber so that each mold core station cannot operate if the scrubber is not in operation. The mold core stations utilizing phenolic urethane cold box process at the facility are EUs P001, P002, P007, P010, P012, P014, P015, P016, P018, P020, P026, and P028.

c. The permittee shall vent emissions from all mold core stations utilizing phenolic urethane cold box process to a control device (a sulfuric acid packed bed wet scrubber) that is designed and operated to remove at least 98 percent (98%), by weight, of catalyst gas emissions or maintain a maximum catalyst gas outlet concentration of one ppmv on a dry basis, whichever is less stringent.

b) Operational Restrictions

(1) The building housing all mold core stations utilizing phenolic urethane cold box operations shall be maintained under negative pressure and at a minimum pressure differential that is not less than 0.01 inch of water, as to ensure that all emissions generated within the building are vented to the sulfuric acid packed bed wet scrubber whenever any of the mold core stations utilizing phenolic urethane cold box process are in operation.

(2) The emissions from all mold core stations utilizing phenolic urethane cold box process shall be vented to a sulfuric acid-packed bed wet scrubber when one or more of the mold core stations are in operation.

(3) An interlock system shall be employed at the loading dock doors so that the doors may not open unless a truck is parked at the opening, while any mold core station utilizing phenolic urethane cold box process is operating.

c) Monitoring and/or Recordkeeping Requirements

(1) The FEPTIO application A0002053 (received 1/14/2008; associated with PTI 02-22913), for EUs P001, P002, P007, P010, P012, P014 – P018, and P020 – P026 was evaluated based on the actual materials and the design parameters of the EUs' exhaust systems, as specified by the permittee. The *Toxic Air Contaminant Statute*, ORC 3704.03(F), was applied to these EUs for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant emitted using an air dispersion model such as AERSCREEN, AERMOD, ISCST3 or other Ohio EPA-approved model. The predicted one-hour maximum ground-level concentration results from the approved air dispersion model, were compared to the MAGLC, calculated as described in Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

a. The exposure limit, expressed as a time-weighted average concentration for a conventional eight-hour workday and a 40-hour workweek, for each toxic compound emitted from the EUs (as determined from the raw materials processed and/or coatings or other materials applied), has been documented from the American Conference of Governmental Industrial Hygienists "Threshold Limit Values for Chemical Substances

and Physical Agents Biological Exposure Indices" and in the following order of preference:

i. TLV shall be used, if the chemical is listed; or

ii. Short-term exposure limit (STEL) or the ceiling value; the STEL is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent eight-hour TLV.

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

c. This standard is adjusted to account for the duration of the exposure or the operating hours of the EUs, that is, *X* hours per day and *Y* days per week, from that of eight hours per day and five days per week.

d. The resulting calculation shall be used to determine the MAGLC:

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

e. The following summarizes the results of dispersion modeling for the significant toxic contaminant or *worst-case* scenario:

i. Toxic Contaminant: Naphthalene

TLV (mg/m^3): 52,430

Maximum Hourly Emissions Rate (lbs/hr): 1.55

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 20.14

MAGLC (ug/m^3): 1,248.3

The permittee has demonstrated that emissions of naphthalene, from EUs P001, P002, P007, P010, P012, P014 – P018, and P020 – P026, are calculated to be less than 80% of the MAGLC; any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "*Toxic Air Contaminant Statute*", ORC 3704.03(F).

(2) Prior to making any physical changes to or changes in the method of operation of the EUs that could impact the parameters or values that were used in the predicted one-hour maximum ground-level concentration, the permittee shall re-model any change to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the one-hour maximum ground-level concentration include, but are not limited to, the following:

a. Changes in the composition of the materials used or the use of new materials, that would result in the emissions of a new toxic air contaminant with a lower TLV than the lowest TLV previously modeled.

b. Changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application.

c. Physical changes to the EUs or exhaust parameters (for example, increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

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

(3) The permittee shall collect, record and retain the following information for each toxic evaluation conducted to determine compliance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F):

a. A description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (for example, the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.).

b. The MAGLC for each significant toxic contaminant or worst-case contaminant, calculated per the *Toxic Air Contaminant Statute*, ORC 3704.03(F).

c. A copy of the computer model run(s), that established the predicted one-hour maximum ground-level concentration that demonstrated the **EU/EUs** to be in compliance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions.

d. The documentation of the initial evaluation of compliance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the **EU/EUs** or the materials applied.

(4) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "*Toxic Air Contaminant Statute*", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

(5) The permittee shall record and maintain the following facility-wide information each month:

a. The facility-wide VOC emissions, in tons/month;

b. The rolling, 12-month period facility-wide VOC emissions, in tons/12-month;

c. The facility-wide PE, in tons/month;

d. The rolling, 12-month period facility-wide PE, in tons/12-month.

(6) In order to maintain compliance with the applicable emissions limitation(s) contained in this permit, the following parameters shall be maintained at all times while any mold core station using the phenolic urethane cold box process is in operation:

a. The scrubber liquid flow rate shall not be less than 150 gallons per minute (gpm);

b. The fluid level in the scrubber solution holding tanks shall be maintained above 11 inches; and

c. The pH of the scrubber liquid shall be maintained at or below 4.5.

(7) The permittee shall properly install, operate, and maintain equipment to continuously monitor the scrubber liquid flow rate (in gpm), and the fluid level and scrubber liquid pH in the scrubber solution holding tanks during operation of any mold core station using the phenolic urethane cold box process. The permittee shall record the scrubber solution flow rate, and the fluid level and pH in the scrubber solution holding tanks on an hourly basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for any parameter deviates from the limits 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 control equipment parameters at or above the limits 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 the 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 flow rate, fluid level, and pH 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 a malfunction is determined to have occurred.

These limits for the liquid flow rate, fluid level, and pH are effective for the duration of this permit, unless the permittee requests revisions and they are approved in writing by the appropriate Ohio EPA DO/LAA. The permittee may request revisions to the permitted limit for the liquid flow rate, fluid level, or pH based upon information obtained during future performance tests that demonstrate compliance with the allowable VOC emissions rate for the EUs controlled by the scrubber. In addition, approved revisions to the limits will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of administrative modification.

(8) The permittee shall install, maintain and operate monitoring devices and a recorder which simultaneously measures and records the pressure inside and outside the building enclosure whenever any mold core station using the phenolic urethane cold box process is operating. The monitoring and recording device shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals. The following information shall be recorded each day an emissions unit using the phenolic urethane cold box process is operating:

a. The difference in pressure between the building enclosure and the surrounding area; and

b. A log or record of downtime for the capture (collection) system, control device, and monitoring equipment when the associated emissions units were in operation.

d) Reporting Requirements

(1) The reports required by this permit shall be submitted in accordance with the reporting requirements specified in Section A, Standard Terms and Conditions.

(2) All applications, notifications, or reports required in writing are to be submitted through Ohio EPA's eBusiness Center: Air Services online web portal. Hardcopy submissions will be accepted on an as-needed basis if the permittee cannot submit the required documents through Air Services. In the event of a hardcopy submission, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submittal of applications, notifications, or reports to Ohio EPA fulfills the requirement to submit information to the director, the appropriate Ohio EPA DO/LAA, and/or any other individual or organization identified as a recipient unless otherwise specified in this permit. Consistent with OAC rule 3745-15-03, the application, notification, or report is considered submitted on the date the submittal is successful using a valid electronic signature. Signatures by the signatory authority may be represented as provided through procedures established in Air Services.

(3) The permittee shall submit an annual PER to Ohio EPA by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit. The permittee shall identify the following information in the annual PER:

a. Any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual PER. If no changes to the emissions, EU(s), or the exhaust stack have been made, then the report shall include a statement about this effect.

(4) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. All deviations (excursions) of the following emission limitations, operational restrictions, and/or control device operating parameter limitations that restrict the PTE of any regulated air pollutant and have been detected by the monitoring, recordkeeping, and/or testing requirements in this permit:

i. Facility-wide emissions, based upon a rolling, 12-month period, shall not exceed the following:

(a) 80 TPY of VOC; and

(b) 80 TPY of PE.

ii. The building housing all mold core stations used for the phenolic urethane cold box operations shall be maintained under negative pressure and at a minimum pressure differential that is not less than 0.01 inch of water;

iii. The emissions from all mold core stations shall be vented to a control device (a sulfuric acid-packed bed wet scrubber) with the following operating parameter limitations:

(a) The scrubber liquid flow rate shall not be less than 150 gpm;

(b) The fluid level in the scrubber solution holding tanks shall be maintained above 11 inches; and

(c) The pH of the scrubber liquid shall be maintained at or below 4.5.

iv. All mold core stations shall be interlocked to the sulfuric acid packed bed wet scrubber such that each EU cannot operate if the scrubber is not in operation.

b. The probable cause of each deviation (excursion).

c. Any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions).

d. The magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the appropriate Ohio EPA DO/LAA.

e) Testing Requirements

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

a. Emissions Limitations:

Facility-wide emissions, based upon a rolling, 12-month period, shall not exceed the following:

i. 80 TPY of VOC; and

ii. 80 TPY of PE.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in B.2.c)(5).

f) Miscellaneous Requirements

(1) Controlled particulate and VOC emissions from all mold core stations utilizing phenolic urethane cold box process (EUs P001, P002, P007, P010, P012, P014, P015, P016, P018, P020, P026, and P028), combined, are less than 25 TPY for each pollutant; therefore, those mold core stations with PTE less than 10 lbs/day of any pollutant and 1 TPY of any HAP are exempt from permitting through the "*de minimis*" exemption per OAC rule 3745-15-05. The "*de minimis*" status of those EUs (EUs P002, P007, P010, P012, P014, P015, and P016) shall be re-evaluated prior to making any change(s) that can affect the "*de minimis*" status of the mold core stations. Changes that may result in the status change of "*de minimis*" mold core stations include, but are not limited to, the following:

a. The addition of any mold core station;

b. Failure to vent all emissions from the mold core stations to the sulfuric acid packed bed scrubber;

c. The removal of the interlock system from any EU;

d. The removal of the interlock system employed at the loading dock doors such that the doors may not open unless a truck is parked at the opening;

e. Failure to maintain negative pressure in the building housing the mold core stations; and/or

f. Failure to maintain the scrubber system according to manufacturer's specifications.

If the permittee determines that the "*de minimis*" status would no longer apply to one or all of the mold core stations, an enforceable permit application shall be submitted and a FEPTIO shall be issued, prior to making any change.

C. Emissions Unit Terms and Conditions

1. P021, Mixers #2 & #3

Operations, Property and/or Equipment Description:

Mixers #2 & #3

Phenolic Urethane Cold Box Process

a) This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).

(1) For the purpose of a PTI document, the EU T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. b)(1)h.

(2) For the purposes of a PTO document, the EU T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)c.

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)	VOC emissions, as propane, shall not exceed 10.89 TPY. See b)(2)a. and c)(1) below.
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 PE from this air contaminant source since the uncontrolled PTE is less than 10 TPY, taking into account the requirements under OAC rule 3745-31-05(E).
c.	OAC rule 3745-31-05(D)	See B.2.a)(1)a. above.
d.	OAC rule 3745-31-05(E) Voluntary restriction based upon bottle-neck maximum production rate.	See c)(1) below.
e.	OAC rule 3745-17-07(B)	VE of fugitive dust shall not exceed 20 percent (20%) opacity as a three-minute average.
f.	OAC rule 3745-17-11(B)(1)	PE shall not exceed 28.43 lbs/hr. See b)(2)b. below.

g.	OAC rule 3745-21-07(M)	Exempt pursuant to OAC rule 3745-21-07(M)(5)(j). See b)(2)c. below.
h.	ORC 3704.03(F) and OAC rule 3745-114	See B.2.a)(1)b. above

(2) Additional Terms and Conditions

a. The VOC emissions limitation was derived using restricted sand usage specified in section c)(1) below. In accordance with Application A0082420, submitted on 08/19/2026, the maximum annual production rate for EU P021 is limited by the capacity of the mold core stations. Mixers #2 and #3 (P021) feed P018, P020, P026, and P028.

b. The PE allowable emission rate is determined based upon OAC rule 3745-17-11 Table I. In accordance with OAC rule 3745-17-11(A)(2)(a), Figure II in the appendix to OAC rule 3745-17-11 for the PE restriction requirement is not applicable to EU P021 because the uncontrolled emission rate for this EU cannot be ascertained

c. Emissions from these mixers are not required to be controlled by the sulfuric acid packed bed wet scrubber because they do not use or emit catalyst gas.

c) Operational Restrictions

(1) The maximum annual sand usage rate for EU P021 shall not exceed 37,862 TPY.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform daily checks. when this EU is in operation and when the weather conditions allow. for any VE of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving EU P021. The presence or absence of any fugitive VE shall be noted in an operations log. If VE is observed, the permittee shall also note the following in the operations log:

a. The location and 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 action(s) taken to minimize or eliminate the VE.

If VE is 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)(2)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 was representative of normal operations or specify the minor corrective actions that were taken to ensure that the EU continued to operate under normal conditions or specify the corrective actions that were taken to eliminate abnormal VE.

If no VE is noted for each daily VE check for one month, then the frequency may become weekly. If VE is noted during a weekly inspection, the permittee shall revert to daily VE checks until no VE is documented for an entire month, at which time the permittee may again perform checks on a weekly basis.

If no VE is noted for each weekly VE check for a three-month period, then the frequency may become monthly. If VE is noted during a monthly inspection, the permittee shall revert to weekly VE checks until no VE is documented for a three-month period, at which time the permittee may again perform checks on a monthly basis.

(2) The permittee shall maintain and calculate the following monthly information for EU P021:

a. The monthly sand usage, in tons;

b. The monthly PE rate, in tons, shall be calculated as follows:

E_{PE} = S x EF x 0.9 x 8760 hrs/yr x 1 ton/2000 lbs

Where:

E_{PE} = monthly PE rate, in tons;

S = monthly sand usage, in tons, as recorded in section d)(2)a. above;

EF = emission factor of 0.35 lb PE/ton of sand; taken from table 2.8-1 of Ohio EPA's RACM guideline; and

0.9= it is assumed that 90% of PE is released at the mixers and 10% is released from the mold core stations.

c. The monthly VOC emissions rate, in tons, shall be calculated as follows:

E_{VOC} = S x EF x 0.5 x 8760 hrs/yr x 1 ton/2000 lbs

Where:

E_{VOC} = monthly emissions of VOC, as propane, in tons;

S = monthly sand usage, in tons, as recorded in section d)(2)a. above;

EF = emission factor of 1.15 lbs VOC/ton of sand, as propane; derived from stack testing at the facility on September 21, 2006; and

0.5 = it is assumed that 50% of VOC emissions are released at the mixers and 50% are released from the mold core stations.

e) Reporting Requirements

(1) The permittee shall identify the following information in the annual PER:

a. Any exceedance of the sand usage rate for EU P021;

b. All days during which VE of fugitive dust was observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving EU P021; and

c. Any corrective action(s) taken to minimize or eliminate the VE.

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 Limitations:

VOC emissions, as propane, shall not exceed 10.89 TPY.

Applicable Compliance Method:

Compliance with the annual VOC limitations is based on the record keeping requirements specified in section d)(2)c. above and shall be the sum of the year.

b. Emissions Limitations:

PE shall not exceed 28.43 lbs/hr.

Applicable Compliance Method:

If required, compliance with the hourly PE limitation shall be demonstrated in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 – 5.

c. Operational Restrictions:

The maximum annual sand usage rate for EU P021 shall not exceed 37,862 TPY.

Applicable Compliance Method:

Compliance shall be demonstrated based on the record keeping requirements specified in section d)(2)a. above and shall be the sum of the year.

d. Emissions Limitation:

VE of fugitive dust shall not exceed 20 percent (20%) opacity as a three-minute average from each EU.

Applicable Compliance Method:

If required, compliance with the stack VE limitation shall be demonstrated through VE observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

g) Miscellaneous Requirements

(1) None.