



Environmental
Protection Agency

Ted Strickland, Governor
Lee Fisher, Lt. Governor
Chris Korleski, Director

9/17/2010

GARY CALHOUN
ALCON INDUSTRIES, INC.
7990 BAKER AVE.
CLEVELAND, OH 44102

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

Facility ID: 1318007755
Permit Number: 13-04715
Permit Type: Initial Installation
County: Cuyahoga

Certified Mail

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

Dear Permit Holder:

Enclosed please find a final Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. Please complete a survey at www.epa.ohio.gov/dapc/permitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

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

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, OH 43215

If you have any questions, please contact Cleveland Division of Air Quality at (216)664-2297 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. This permit can be accessed electronically on the DAPC Web page, www.epa.ohio.gov/dapc, by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

Michael W. Ahern
Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: CDAQ



Response to Comments

Response to comments for: Permit-To-Install and Operate

Facility ID:	1318007755
Facility Name:	ALCON INDUSTRIES, INC.
Facility Description:	Non Ferrous foundry
Facility Address:	7990 BAKER AVE. CLEVELAND, OH 44102 Cuyahoga County
Permit #:	13-04715, Initial Installation
A public notice for the draft permit issuance was published in the Ohio EPA Weekly Review and appeared in the The Plain Dealer on 08/12/2010. The comment period ended on 09/11/2010.	
Hearing date (if held)	
Hearing Public Notice Date (if different from draft public notice)	

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

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

1. Topic: **None**
 - a. Comment: **None**
 - b. Response: **None**
2. Topic: **None**
 - a. Comment: **None**
 - b. Response: **None**



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
ALCON INDUSTRIES, INC.**

Facility ID: 1318007755
Permit Number: 13-04715
Permit Type: Initial Installation
Issued: 9/17/2010
Effective: 9/17/2010
Expiration: 9/17/2015



Division of Air Pollution Control
Permit-to-Install and Operate
for
ALCON INDUSTRIES, INC.

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Authorization

Facility ID: 1318007755

Application Number(s): A0009029, A0038646

Permit Number: 13-04715

Permit Description: Initial installations for P015 a SATB-30 Gaylord core making process, P016 a Palmer mold making unit, P017 a "cookie dough" bench core making process with Grieves natural gas oven and P020 a shakeout machine for the cores and molds.

Permit Type: Initial Installation

Permit Fee: \$2,600.00

Issue Date: 9/17/2010

Effective Date: 9/17/2010

Expiration Date: 9/17/2015

Permit Evaluation Report (PER) Annual Date: Oct 1 - Sept 30, Due Nov 15

This document constitutes issuance to:

ALCON INDUSTRIES, INC.
7990 BAKER AVE.
CLEVELAND, OH 44102

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

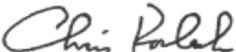
Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Cleveland Division of Air Quality
2nd Floor
75 Erievue Plaza
Cleveland, OH 44114
(216)664-2297

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


Chris Korleski
Director



Authorization (continued)

Permit Number: 13-04715
Permit Description: Initial installations for P015 a SATB-30 Gaylord core making process, P016 a Palmer mold making unit, P017 a "cookie dough" bench core making process with Grieves natural gas oven and P020 a shakeout machine for the cores and molds.

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

Emissions Unit ID:	P015
Company Equipment ID:	Gaylord SATB-30 (2005)
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P016
Company Equipment ID:	PALMER
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P017
Company Equipment ID:	COOKIE DOUGH
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P020
Company Equipment ID:	Shakeout
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

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:

- 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.

- 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. Unless otherwise specified, facilities subject to one or more synthetic minor restrictions must use Ohio EPA's "Air Services" to submit annual emissions associated with this permit requirement. 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 (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 by up to 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 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 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 Cleveland Division of Air Quality 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 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 submitting¹ 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 emissions 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 shutdown 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, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the change in ownership or operator. Any transferee of this permit must 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.

¹ Permittees that use Ohio EPA's "Air Services" can mark the affected emissions unit(s) as "permanently shutdown" in the facility profile along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).

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 permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) None.
 - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (1) None.
2. The Ohio EPA has determined that this facility is subject to the requirements of 40 CFR part 63 Subpart ZZZZZ, National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources. Although Ohio EPA has determined that this area source MACT (also known as the GACT) applies, at this time Ohio EPA does not have the authority to enforce this standard. Instead, U.S. EPA has the authority to enforce this standard. Please be advised, that all requirements associated with this rule are in effect and shall be enforced by U.S. EPA.

C. Emissions Unit Terms and Conditions



1. P015, Gaylord SATB-30 (2005)

Operations, Property and/or Equipment Description:

One SATB-30 Gaylord core making process located in the static foundry

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - a. See d)(6), d)(7), d)(8) and e)(4).
 - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. See b)(1)b., c)(1), c)(2), c)(3), d)(1), d)(2), d)(3), e)(1), f)(1)e., f)(1)f., and f)(1)g.
- b) Applicable Emissions Limitations and/or Control Requirements
 - (1) The specific operations(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. 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)	16.95 lb/day of particulate emissions from P002, P003 and P015 combined. 740 lbs/day of organic compound (OC) emissions from P002, P003 and P015 combined. 80.88 lbs/day of volatile organic compound (VOC) emissions from P002, P003 and P015 combined. Visible particulate emissions for the stack serving this emissions unit shall not exceed 10% opacity, as a 6-minute average. See b)(2)(a)
b.	OAC rule 3745-31-05(D) (Synthetic Minor to avoid Title V and NNSR for VOC)	0.43 TPY of particulate emissions from P002, P003 and P015 combined. 47.5 TPY of OC emissions from P002,



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		P003 and P015 combined. 5.15 TPY of VOC/HAPs emissions from P002, P003 and P015 combined. See b)(2)b., b)(2)c, c)(1), c)(2), and c)(3)
c.	OAC rule 3745-17-07(A)	The visible particulate emission limitation specified by this rule is less stringent than the visible particulate emission limitation established pursuant to the OAC rule 3745-31-05(A)(3)
d.	OAC rule 3745-17-11	The particulate emission limitation specified by this rule is less stringent than the particulate emission limitation established pursuant to the OAC rule 3745-31-05(A)(3)

(2) Additional Terms and Conditions

- a. The emissions from this emissions unit shall be vented to the baghouse at all times the emissions unit is in operation.
- b. The combined emissions from P002, P003 and P015 shall not exceed 0.43 tons particulate emissions and per year, based upon a rolling, 12-month summation of the particulate emissions.
- c. The combined emissions from P002, P003 and P015 shall not exceed 47.5 tons OC emissions and 5.15 tons VOC/HAP emissions per year, based upon a rolling, 12-month summation of the OC and VOC/HAP emissions.

c) Operational Restrictions

- (1) The maximum annual usage rate of resin for P002, P003 and P015 combined shall not exceed 23,000 pounds, based on a rolling 12-month summation of the usage rates.
- (2) The maximum annual usage rate of hardener for P002, P003 and P015 combined shall not exceed 100,000 pounds, based on a rolling 12-month summation of the usage rates.
- (3) The maximum annual usage rate of sand for P002, P003 and P015 combined shall not exceed 24,000,000 pounds based on a rolling 12-month summation of the usage rates.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall calculate and maintain monthly records of the particulate, OC and VOC emissions and the rolling 12-month emissions of particulate, OC and VOC/HAPs.
- (2) The permittee shall collect and record the following information each day when operating this emissions unit:
 - a. the number of sand cores produced by this emissions unit;

- b. the amount, in pounds, of sand used during each day;
 - c. the amount, in pounds, of resin used during each day;
 - d. the amount, in pounds, of hardener used during each day;
 - e. the number of hours of operation for each day;
 - f. the number of cycles performed each day;
 - g. the total particulate emission rate from all sand used in P002, P003 and P015, in pounds per day;
 - h. the total OC emission rate from all resin and hardener used in P002, P003 and P015, in pounds per day; and
 - i. the total VOC/HAPs emission rate from all resin and hardener used in P002, P003 and P015, in pounds per day.
- (3) The permittee shall collect and record the amount, in pounds, of sand, resin and hardener used on a monthly basis for the purpose of determining annual usage.
- (4) The acceptable range for the pressure drop across the baghouse shall be based upon the manufacturer's specifications, until such time as any required performance testing is conducted and an alternative pressure drop range and/or limit is established.
- (5) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily 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. The acceptable pressure drop shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range is established to demonstrate compliance.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range 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:

- a. a description of the corrective action;
- b. the date corrective action was completed;
- c. the date and time the deviation ended;
- d. the total period of time (in minutes) during which there was a deviation;
- e. the pressure drop readings immediately after the corrective action was implemented; and
- f. the name(s) of the personnel who performed the work.

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

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland Division of Air Quality (CDAQ). The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (6) The PTIO application for this/these emissions unit(s), P015, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
 - a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
 - c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., 24 hours per day and 7 days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Toxic Contaminant: 2-Phenoxy-Ethanol

TLV (mg/m³): 100

Maximum Hourly Emission Rate (lbs/hr): 1.14

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 351.23

MAGLC (ug/m³): 2381

Toxic Contaminant: Methanol

TLV (mg/m³): 262.09

Maximum Hourly Emission Rate (lbs/hr): 1.86

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 573.07

MAGLC (ug/m³): 6,240

The permittee, has demonstrated that emissions of 2-Phenoxy-Ethanol and Methanol from emissions unit(s) P015, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (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).

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

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

- (8) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
 - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
 - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination

that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all exceedances of the rolling 12-month emission limitation for particulate emissions;
 - b. all exceedances of the rolling 12-month emission limitation for VOC;
 - c. all exceedances of the rolling 12-month emission limitation for OC;
 - d. all exceedances of the rolling 12-month usage limitation of sand;
 - e. all exceedances of the rolling 12-month usage limitation of resin; and
 - f. all exceedances of the rolling 12-month usage limitation of hardener.
- (2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.
- (3) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the baghouse during the 12-month reporting period for this/these emissions unit(s):
 - a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the range specified by the manufacturer and outside of the acceptable range following any required compliance demonstration;
 - b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;
 - c. each incident of deviation described in "a" (above) where a prompt investigation was not conducted;
 - d. each incident of deviation described in "a" where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
 - e. each incident of deviation described in "a" where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

- (4) The permittee shall include 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 Permit Evaluation Report (PER). If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.
- f) Testing Requirements
- (1) Compliance with the emission limitations in section b)(1) of these terms and conditions shall be determined in accordance with the following methods:
- a. Emission Limitation:
16.56 lbs/day of particulate emissions
- Applicable Compliance Method:
Compliance shall be determined by multiplying the emission factor specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 12.10, Table 12.10-7 (1/95) for particulate emissions for the sand handling operation (3.6 lbs/ton of sand handled) by the max process weight rate for the sand handled per day.
- If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).
- b. Emission Limitation:
740 lbs/day of combined OC emissions from P002, P003 and P015
- Applicable Compliance Method:
Compliance shall be determined based on the recordkeeping from d)(1) and d)(2).
- c. Emission Limitation:
80.88 lbs/day of combined VOC emissions from P002, P003 and P015
- Applicable Compliance Method:
Compliance shall be determined based on the recordkeeping as specified in d)(1) and d)(2).
- d. Emission Limitation:
Visible particulate emissions from the stack serving this emissions unit shall not exceed 10% opacity, as a 6-minute average.
- Applicable Compliance Method:
Compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Method 9.
- e. Emission Limitation:
The combined annual particulate emissions for P002, P003 and P015 shall not exceed 0.43 tons/year as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be determined based on the recordkeeping from d)(1) - d)(3) and the following:

$$E = (3.6 \text{ lbs PE/ton sand used})(\text{tons sand used/month})(1 \text{ ton}/2,000 \text{ lbs})(1-.98 \text{ CE})$$

Where

$$E = \text{tons PE/month}$$

The permittee shall then sum the total monthly particulate emissions as a rolling, 12 month summation.

f. Emission Limitation:

The combined annual OC emissions for P002, P003 and P015 shall not exceed 47.5 tons/year as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be determined based on the recordkeeping from d)(1) - d)(3) and the following:

$$E = (0.95 \text{ lbs OC/ton hardener used})(\text{tons hardener used/month})(1 \text{ ton}/2,000 \text{ lbs})$$

Where

$$E = \text{tons OC/month}$$

The permittee shall then sum the total monthly OC emissions as a rolling, 12 month summation.

g. Emission Limitation:

The combined annual VOC emissions for P002, P003 and P015 shall not exceed 5.15 tons/year as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be determined based on the recordkeeping from d)(1) - d)(3) and the following:

$$E = [(23.0 \text{ lbs VOC/ton resin used})(\text{tons resin used/month}) + 0.05 \text{ lbs VOC/tons hardener})(\text{tons hardener used/month})](1 \text{ ton}/2,000 \text{ lbs})$$

Where

$$E = \text{tons VOC/month}$$

The permittee shall then sum the total monthly VOC emissions as a rolling, 12 month summation.

g) Miscellaneous Requirements

- (1) P015 was installed in 2005.



2. P016, PALMER

Operations, Property and/or Equipment Description:

Palmer mold making unit located in the static foundry

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - a. See d)(6), d)(7), d)(8) and e)(4).
 - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. See b)(1)b., b)(2)b., c)(1), d)(1), d)(2), d)(3), and f)(1)e.
- b) Applicable Emissions Limitations and/or Control Requirements
 - (1) The specific operations(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. 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)	0.60 lb/hr and 2.63 TPY of particulate emissions (stack emissions). 82 lbs/day of volatile organic emissions (VOC) Visible particulate emissions from the stack serving this emissions unit shall not exceed 10% opacity, as a 6-minute average. See b)(2)a.
b.	OAC rule 3745-31-05(D) (Synthetic Minor to avoid Title V)	VOC/HAP emissions shall not exceed and 2.9 TPY per rolling 12 months. See b)(2)b and c)(1).
c.	OAC rule 3745-17-07(A)	The visible particulate emission limitation specified by this rule is less stringent than the visible particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-17-11	The particulate emission limitation specified by this rule is less stringent than the particulate emission limitation established pursuant to the OAC rule 3745-31-05(A)(3)

(2) Additional Terms and Conditions

- a. The emissions from this emissions unit shall be vented to the baghouse during loading of sand into hopper.
- b. The emissions of VOC/HAP from this emissions unit shall not exceed 2.9 tons per year, based upon a rolling 12-month summation of the VOC emissions.

c) Operational Restrictions

- (1) The maximum annual usage rate of resin shall not exceed 95,000 pounds based on a rolling 12-month summation of usage rates.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall calculate and maintain monthly records of the VOC emissions and the rolling 12-month emissions of VOC.
- (2) The permittee shall collect and record the following information each day when operating this emissions unit:
 - a. the number of sand cores produced by this emissions unit;
 - b. the amount, in pounds, of sand used during each day;
 - c. the amount, in pounds, of resin used during each day;
 - d. the number of hours of operation for each day;
 - e. the number of cycles performed each day and;
 - f. the total VOC emission rate from resin used, in pounds per day.
- (3) The permittee shall collect and record the amount, in pounds, of resin used on a monthly basis for the purpose of determining annual usage.
- (4) The acceptable range for the pressure drop across the baghouse shall be based upon the manufacturer's specifications, until such time as any required performance testing is conducted and an alternative pressure drop range and/or limit is established.
- (5) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily 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. The acceptable pressure drop shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range is established to demonstrate compliance.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range 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:

- a. a description of the corrective action;
- b. the date corrective action was completed;
- c. the date and time the deviation ended;
- d. the total period of time (in minutes) during which there was a deviation;
- e. the pressure drop readings immediately after the corrective action was implemented; and
- f. the name(s) of the personnel who performed the work.

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

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland Division of Air Quality (CDAQ). The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit

will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (6) The PTIO application for this/these emissions unit(s), P016, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
 - b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
 - c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., 24 hours per day and 7 days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):
$$\text{TLV}/10 \times 8/X \times 5/Y = 4 \text{ TLV}/XY = \text{MAGLC}$$
 - d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Toxic Contaminant: Methanol

TLV (mg/m3): 262.9

Maximum Hourly Emission Rate (lbs/hr): 2.24

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 341.82

MAGLC (ug/m3): 6,240.14

The permittee, has demonstrated that emissions of Methanol from emissions unit(s) P016, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (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).

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

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

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

- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
 - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
- e) Reporting Requirements
- (1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all exceedances of the rolling 12-month emission limitation for VOC; and
 - b. all exceedances of the rolling 12-month usage limitation of resin.
 - (2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.
 - (3) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the baghouse during the 12-month reporting period for this/these emissions unit(s):
 - a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the range specified by the manufacturer and outside of the acceptable range following any required compliance demonstration;
 - b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;
 - c. each incident of deviation described in "a" (above) where a prompt investigation was not conducted;
 - d. each incident of deviation described in "a" where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

- e. each incident of deviation described in “a” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.
- (4) The permittee shall include 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 Permit Evaluation Report (PER). If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.
- f) Testing Requirements
- (1) Compliance with the emission limitations in section b)(1) of these terms and conditions shall be determined in accordance with the following methods:
- a. Emission Limitation:
0.60 lb/hr of particulate emissions
- Applicable Compliance Method:
Compliance shall be determined by multiplying the emission factor specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 12.10, Table 12.10-7 (1/95) for particulate emissions for the sand handling operation (3.6 lbs/ton of sand handled) by the max process weight rate for the sand handled per hour.
- If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).
- b. Emission Limitation:
2.63 TPY of particulate emissions
- Applicable Compliance Method:
Compliance shall be determined by multiplying the calculated emission rate for particulate emissions from section f)(1)a. above by the actual annual hours of operation and the factor (1 ton/2,000 lbs).
- c. Emission Limitation:
82.0 lbs/day of VOC emissions
- Applicable Compliance Method:
Compliance shall be determined from the record keeping as specified in d)(1) and d)(2).
- d. Emission Limitation:
Visible particulate emissions from the stack serving this emissions unit shall not exceed 10% opacity, as a 6-minute average.
- Applicable Compliance Method:
Compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Method 9.

e. Emission Limitation:

The annual VOC emissions shall not exceed 2.9 tons/year as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be determined based on the recordkeeping as specified in d)(1) and d)(2).

g) Miscellaneous Requirements

- (1) P016 was installed in 2000.



3. P017, COOKIE DOUGH

Operations, Property and/or Equipment Description:

Cookie dough bench core making process with Grieves natural gas oven located in the static foundry

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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)	0.81 lb/hr and 3.55 TPY of particulate emissions 2.73 TPY of volatile organic compounds (VOC) emissions Visible particulate emissions from any stack serving this emissions unit shall not exceed 10% opacity, as a 6-minute average. See b)(2)a.
b.	OAC rule 3745-17-07(A)	The visible particulate emission limitation specified by this rule is less stringent than the visible particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
c.	OAC rule 3745-17-11	The particulate emission limitation specified by this rule is less stringent than the particulate emission limitation



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		established pursuant to the OAC rule 3745-31-05(A)(3)
d.	OAC rule 3745-21-07(G)(1)	3 lbs/hr and 15 lbs/day of volatile organic compounds (VOC) emissions See b)(2)b.
e.	OAC rule 3745-21-07(M)(4)	See b)(2)b. and b)(2)c.

(2) Additional Terms and Conditions

- a. The emissions from this emissions unit shall be vented to the baghouse during all sand mixing and dispensing.
- b. On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. The following terms and conditions shall become void after U.S. EPA approves the rule revision:
 - b)(1)d.

The emission limitations and control requirements from the amended 21-07 rule, and the associated operational restrictions and the monitoring, record keeping, and reporting requirements contained in this permit, shall become federally enforceable on the date the U.S. EPA approves the revised OAC rule 3745-21-07 as a revision to the Ohio State Implementation Plan. The following terms shall become federally enforceable after U.S. EPA approves the rule revision:
 - b)(2)e.
 - c. The permittee shall not exceed 3 lbs/hr and 15 lbs/day of volatile organic compounds (VOC) emissions in accordance with OAC rule 3745-21-07(M)(4).

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information each day when operating this emissions unit:
 - a. the number of sand cores produced by this emissions unit;
 - b. the amount, in pounds, of sand used during each day;

- c. the amount, in pounds, of core oil used during each day;
 - d. the amount, in pounds, of kerosene used during each day;
 - e. the number of hours of operation for each day;
 - f. the number of cycles performed each day and;
 - g. the total VOC emission rate from core oil and kerosene, in pounds per day
- (2) The acceptable range for the pressure drop across the baghouse shall be based upon the manufacturer's specifications, until such time as any required performance testing is conducted and an alternative pressure drop range and/or limit is established.
- (3) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily 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. The acceptable pressure drop shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range is established to demonstrate compliance.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range 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:

- a. a description of the corrective action;
- b. the date corrective action was completed;
- c. the date and time the deviation ended;

- d. the total period of time (in minutes) during which there was a deviation;
- e. the pressure drop readings immediately after the corrective action was implemented; and
- f. the name(s) of the personnel who performed the work.

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

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland Division of Air Quality (CDAQ). The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

e) Reporting Requirements

- (1) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.
- (2) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the baghouse during the 12-month reporting period for this/these emissions unit(s):
 - a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the range specified by the manufacturer and outside of the acceptable range following any required compliance demonstration;
 - b. any period of time (start time and date, and end time and date) when the sand mixing and dispensing was in operation and the process emissions were not vented to the baghouse;
 - c. each incident of deviation described in "a" (above) where a prompt investigation was not conducted;
 - d. each incident of deviation described in "a" where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
 - e. each incident of deviation described in "a" where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

f) Testing Requirements

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

- a. Emission Limitation:
0.81 lb/hr of particulate emissions

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 12.10, Table 12.10-7 (1/95) for particulate emissions for the sand handling operation (3.6 lbs/ton of product produced) by the max process weight rate for the sand handled per hour.

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

- b. Emission Limitation:
3.55 TPY of particulate emissions

Applicable Compliance Method:

Compliance shall be determined by multiplying the calculated emission rate for particulate emissions from section f)(1)a. above by the actual annual hours of operation and the factor (1 ton/2,000 lbs).

- c. Emission Limitation:
2.73 TPY of VOC emissions

Applicable Compliance Method:

Compliance shall be determined based on the recordkeeping as specified in d)(1)

- d. Emission Limitation:
Visible particulate emissions from the stack serving this emissions unit shall not exceed 10% opacity, as a 6-minute average.

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Method 9.

- e. Emission Limitation:
VOC emissions shall not exceed 3 lbs/hr and 15 lbs/day.

Applicable Compliance Method:

Compliance shall be determined based on the recordkeeping as specified in d)(1).

g) Miscellaneous Requirements

(1) P017 was installed in 1998.



4. P020, Shakeout

Operations, Property and/or Equipment Description:

Shakeout associated with separation of product, core, sand from molds and recycling

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. See b)(1)b., c)(1), d)(1), e)(3), and f)(1)b.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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)	21.7 lb/hr of fugitive particulate matter.
b.	OAC rule 3745-31-05(D) (Synthetic minor to avoid Title V)	35.6 TPY of fugitive particulate matter, based on upon a rolling, 12-month summation. See c)(1).
c.	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust from this emissions unit shall not exceed 10% opacity, as a 3-minute average.
d.	OAC rule 3745-17-08(B)(3)	The permittee shall employ reasonably available control measures to minimize or eliminate visible particulate emissions of fugitive dust. See b)(2)a-d.

- (2) Additional Terms and Conditions
- (a) The permittee shall employ the following reasonably available control measures for the purpose of minimizing or eliminating visible emissions of fugitive dust from this emissions unit:
- Adequate moisture content
Minimal drop distance
- c) Operational Restrictions
- (1) The maximum annual operating hours for this emissions unit shall not exceed 3,276 hours, based upon a rolling, 12-month summation of the operating hours.
- d) Monitoring and/or Recordkeeping Requirements
- (1) The permittee shall maintain daily records of the following information:
- a. the number of hours this emissions unit was in operation for each day; and
- b. the rolling, 12-month summation of the operating hours.
- (2) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible fugitive emissions shall be noted in an operations log. If visible emissions are 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 visible emissions incident; and
- e. any corrective actions taken to minimize or eliminate the visible emissions.

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

e) Reporting Requirements

- (1) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.
- (3) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in term number d)(2) above:
 - a. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit; and
 - b. any corrective actions taken to minimize or eliminate the visible emissions.
- (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 potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
 - i. all exceedances of the rolling, 12-month restriction on the hours of operation for this emissions unit; and
 - ii. all exceedances of the rolling 12-month fugitive particulate matter emissions limit.
 - 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); and
 - 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 that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, 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 Director (the appropriate District Office or local air agency).

f) Testing Requirements

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

- a. Emission Limitation:
21.7 lb/hr of fugitive particulate matter

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 12.10, Table 12.10-7 (1/95) for particulate emissions for the shakeout operation (3.2 lbs/ton of product produced) by the max process weight rate for the shakeout operation.

- b. Emission Limitation:
The annual fugitive particulate matter emissions shall not exceed 35.6 TPY as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be determined by multiplying the hourly calculated emission rate by the actual annual hours of operation and dividing by 2,000 lbs.

- c. Emission Limitation:
Visible emissions of fugitive dust shall not exceed 10% opacity, as a 3-minute average.

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Method 9.

- g) Miscellaneous Requirements

- (1) P020 was installed December 1984.