



John R. Kasich, Governor
 Mary Taylor, Lt. Governor
 Craig W. Butler, Director

8/14/2015

Heather Rainwater
 McWane Ductile - Ohio
 P. O. Box 6001
 2266 South Sixth Street
 Coshocton, OH 43812-6001

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
 Facility ID: 0616010006
 Permit Number: P0118475
 Permit Type: Administrative Modification
 County: Coshocton

Certified Mail

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

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA)Air Pollution Permit-to-Install (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it carefully. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

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 Josh Mandel," 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
 77 South High Street, 17th Floor
 Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

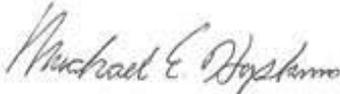
Please complete a survey at www.epa.ohio.gov/survey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Ohio EPA DAPC, Southeast District Office at (740)385-8501 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Michael E. Hopkins, P.E.
Assistant Chief, Permitting Section, DAPC

Cc: U.S. EPA
Ohio EPA-SEDO; West Virginia



Response to Comments

Facility ID:	0616010006
Facility Name:	McWane Ductile - Ohio
Facility Description:	Ductile Iron Pipe and Utility Poles
Facility Address:	2266 South Sixth Street P. O. Box 6001 Coshocton, OH 43812-6001 Coshocton County
Permit:	P0118475, Permit-To-Install - Administrative Modification
A public notice for the draft permit issuance was published in the Ohio EPA Weekly Review and appeared in the The Coshocton Tribune on 07/02/2015. The comment period ended on 08/01/2015.	
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



FINAL

**Division of Air Pollution Control
Permit-to-Install
for
McWane Ductile - Ohio**

Facility ID:	0616010006
Permit Number:	P0118475
Permit Type:	Administrative Modification
Issued:	8/14/2015
Effective:	8/14/2015



Division of Air Pollution Control
Permit-to-Install
for
McWane Ductile - Ohio

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Final Permit-to-Install
McWane Ductile - Ohio
Permit Number: P0118475
Facility ID: 0616010006
Effective Date: 8/14/2015

Authorization

Facility ID: 0616010006
Facility Description: Ductile Iron Pipe and Utility Poles
Application Number(s): M0003263, M0003264, A0053153, A0053635
Permit Number: P0118475
Permit Description: Administrative modification to correct PE and PM-10 emissions limitations established pursuant to OAC rule 3745-31-05(D). This administrative modification also adds modeling language for air toxics.
Permit Type: Administrative Modification
Permit Fee: \$1,125.00
Issue Date: 8/14/2015
Effective Date: 8/14/2015

This document constitutes issuance to:

McWane Ductile - Ohio
2266 South Sixth Street
P. O. Box 6001
Coshocton, OH 43812-6001

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

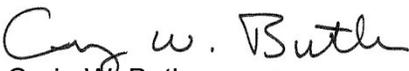
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Southeast District Office
2195 Front Street
Logan, OH 43138
(740)385-8501

The above named entity is hereby granted a Permit-to-Install for the 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 emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Craig W. Butler
Director



Final Permit-to-Install
McWane Ductile - Ohio
Permit Number: P0118475
Facility ID: 0616010006
Effective Date:8/14/2015

Authorization (continued)

Permit Number: P0118475
Permit Description: Administrative modification to correct PE and PM-10 emissions limitations established pursuant to OAC rule 3745-31-05(D). This administrative modification also adds modeling language for air toxics.

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

Emissions Unit ID:	F065
Company Equipment ID:	Specialty Shell Core Machine #7
Superseded Permit Number:	P0116276
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	F066
Company Equipment ID:	Specialty Shell Core Machine #8
Superseded Permit Number:	P0116810
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P034
Company Equipment ID:	Shell Core Machine No. 4 - Pipe
Superseded Permit Number:	P0116276
General Permit Category and Type:	Not Applicable



Final Permit-to-Install
McWane Ductile - Ohio
Permit Number: P0118475
Facility ID: 0616010006
Effective Date:8/14/2015

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
 - (1) Standard Term and Condition A.2.a), Severability Clause
 - (2) Standard Term and Condition A.3.c) through A. 3.e) General Requirements
 - (3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements
 - (4) Standard Term and Condition A.9., Reporting Requirements
 - (5) Standard Term and Condition A.10., Applicability
 - (6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
 - (7) Standard Term and Condition A.14., Public Disclosure
 - (8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
 - (9) Standard Term and Condition A.16., Fees
 - (10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

- a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. General Requirements

- a) Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification.

- b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d) This permit does not convey any property rights of any sort, or any exclusive privilege.
- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

4. Monitoring and Related Record Keeping and Reporting Requirements

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - (1) The date, place (as defined in the permit), and time of sampling or measurements.
 - (2) The date(s) analyses were performed.
 - (3) The company or entity that performed the analyses.
 - (4) The analytical techniques or methods used.
 - (5) The results of such analyses.
 - (6) The operating conditions existing at the time of sampling or measurement.
- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Southeast District Office.

- (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Ohio EPA DAPC, Southeast District Office. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.
 - (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the Ohio EPA DAPC, Southeast District Office every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
 - (4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

5. Scheduled Maintenance/Malfunction Reporting

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

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

6. Compliance Requirements

- a) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the appropriate Ohio EPA District Office or contracted

local air agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the electronic signature date shall constitute the date that the required application, notification or report is considered to be "submitted". Any document requiring signature may be represented by entry of the personal identification number (PIN) by responsible official as part of the electronic submission process or by the scanned attestation document signed by the Authorized Representative that is attached to the electronically submitted written report.

Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a Responsible Official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

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

7. Best Available Technology

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

8. Air Pollution Nuisance

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

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Southeast District Office.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA DAPC, Southeast District Office. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

10. Applicability

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

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

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the

Director within a reasonable time before the termination date and the permittee shows good cause for any such extension.

- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update electronically will constitute notifying the Director of the permanent shutdown of the affected emissions unit(s).
- d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

Unless otherwise exempted, no emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31 and OAC Chapter 3745-77 if the restarted operation is subject to one or more applicable requirements.

- e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a deviation report, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

12. Permit-To-Operate Application

The permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77. The permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if operation of the proposed new or modified source(s) as authorized by this permit would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d) must be obtained before operating the source in a manner that would violate the existing Title V permit requirements.

13. Construction Compliance Certification

The applicant shall identify the following dates in the "Air Services" facility profile for each new emissions unit identified in this permit.

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.
- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

16. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

17. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the "Owner/Contact Change" functionality in "Air Services" once the transfer is legally completed. The change must be submitted through "Air Services" within thirty days of the ownership transfer date.

18. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

19. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.



Final Permit-to-Install
McWane Ductile - Ohio
Permit Number: P0118475
Facility ID: 0616010006
Effective Date: 8/14/2015

B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

a) None.

2. Facility-Wide Emission Limitations

a) McWane Poles (0616015010) and McWane Ductile - Ohio (0616010006) have been determined to be one facility for permitting purposes under 40 CFR Part 52.21, OAC Chapter 3745-31, and OAC Chapter 3745-77.

The facility-wide (McWane Poles (0616015010) and McWane Ductile - Ohio (0616010006) combined) individual HAP and the facility-wide total combined HAP emissions shall not exceed 9.9 and 24.9 tons per year, respectively, based upon a rolling, 12-month summation of the emission rates from all HAP emitting emissions units at the facility.

(Authority for term: OAC rule 3745-31-05(D))

3. Operational Restrictions

a) The following annual operational restrictions are in place in PTI P0116276 to maintain facility-wide HAPs compliance for McWane Ductile - Ohio (0616010006):

(1) 275,000 tons of total metal melted.

(Authority for term: OAC rule 3745-31-05(D))

b) In order to maintain compliance with the facility-wide emission limitations established in PTI P0116276 on HAPS, only materials that contain no organic HAP are to be used at the following McWane Ductile - Ohio (0616010006) emissions units:

(1) Pipe Paint Operations (K006); and

(2) Pipe Painting Operation – Large Line (K015)

(Authority for term: OAC rule 3745-31-05(D))

c) The following annual operational restrictions are in place in PTI P0115154 to maintain compliance with the facility-wide emission limitations on HAPs for McWane Poles (0616015010):

(1) 2,190 gallons of coating (K022);

(2) 27,000 tons of poles (P902-P906);

(3) 19.5 tons of electrode (P907);

(4) 19.5 tons of electrode (P908);

(5) 180 tons of grit (P909);

- (6) 6,000 hours of operation for Cartridge Filter A, controlling emissions units P902-P904;
- (7) 6,000 hours of operation for Filter C, controlling emissions units P906 and P907;
- (8) 6,000 hours of operation and 54,000 million Btu of natural gas at drying oven (R008);
- (9) 108,000 gallons of coating and 250 gallons of cleanup material (R008).

(Authority for term: OAC rule 3745-31-05(D))

- d) In order to maintain compliance with the facility-wide emission limitations on HAPs, the facility, McWane Ductile – Ohio (0616010006), is limited to the following annual operational restrictions:

- (1) 14,000 gallons of coating and 250 gallons of cleanup (K024);
- (2) 400 gallons of coating (K025);
- (3) 4,000 tons of material blasted (P911);

(Authority for term: OAC rule 3745-31-05(D))

4. Facility-Wide Monitoring and/or Record Keeping Requirements

- a) The following information must be maintained each month for McWane Ductile - Ohio (0616010006):

- (1) the quantity of metal melted, in tons;
- (2) the rolling, 12-month summation of the quantity of metal melted, in tons; and
- (3) the rolling, 12-month summation of the facility-wide individual HAP and facility-wide total combined HAP emissions, in tons;
- (4) the throughput of coating and cleanup, in gallons, for each month (K024);
- (5) beginning after the first 12 calendar months of operation, the rolling 12-month summation of the throughput of coating and cleanup, in gallons (K024)
- (6) also during the first 12 calendar months of operation, the permittee shall record the cumulative throughput of coating and cleanup, in gallons for each calendar month (K024);
- (7) the throughput of coating, in gallons, for each month (K025);
- (8) beginning after the first 12 calendar months of operation, the rolling 12-month summation of the throughput of coating, in gallons (K025)
- (9) also during the first 12 calendar months of operation, the permittee shall record the cumulative throughput of coating, in gallons for each calendar month (K025);
- (10) the throughput of material blasted, in tons, for each month (P911);

- (11) beginning after the first 12 calendar months of operation, the rolling 12-month summation of the throughput of material blasted, in tons (P911);
- (12) also during the first 12 calendar months of operation, the permittee shall record the cumulative throughput of material blasted, in tons, for each calendar month (P911); and
- (13) the facility-wide individual HAP and facility-wide total combined HAP emissions, in tons.

(Authority for term: OAC rule 3745-31-05(D))

- b) As required by PTI P0116276, the following information shall be collected and recorded each month for each of the HAP emitting emissions units located at McWane Ductile - Ohio (0616010006):

- (1) For any month that a material containing organic HAP is used:
 - a. the company identification for each HAP-containing coating and cleanup material employed during the month;
 - b. the number of gallons of each HAP-containing coating or cleanup material employed during the month;
 - c. the organic HAP content of each coating and cleanup material, in pounds per gallon; and
 - d. the total organic HAP emission rate for all coatings and cleanup materials, in tons.

(Authority for term: OAC rule 3745-31-05(D))

- (2) For any month that a material containing no organic HAP is used:
 - a. the company identification for each coating or cleanup material employed that contains no organic HAP employed during the month (a coating may be assumed to be employed during the month if it is purchased or released); and
 - b. the Material Safety Data Sheet or coating sheet for the coating or cleanup material identified in 4.b)(2)a.

(Authority for term: OAC rule 3745-31-05(D))

- c) As required by PTI P0115154, the following information shall be recorded each month for McWane Poles (0616015010):

- (1) the throughput of coating and cleanup material usage, in gallons, for each month (K022);
- (2) beginning after the first 12 calendar months of operation, the rolling, 12-month summation of the throughput of coating and cleanup material usage (K022);

- (3) also, during the first 12 calendar months of operation, the permittee shall record the cumulative throughput of coating and cleanup material usage, for each calendar month (K022);
- (4) the throughput of poles, in tons, for each month (P902-P906);
- (5) beginning after the first 12 calendar months of operation, the rolling, 12-month summation of the throughput of poles, in tons (P902-P906);
- (6) also, during the first 12 calendar months of operation, the permittee shall record the cumulative throughput of poles, in tons, for each calendar month (P902-P906);
- (7) the operating hours for Cartridge Filter A and Cartridge Filter C;
- (8) beginning after the first 12 calendar months of operation, the rolling, 12-month summation of the operating hours of Cartridge Filter A and Cartridge Filter C;
- (9) also, during the first 12 calendar months of operation, the permittee shall record the cumulative operating hours of Cartridge Filter A and Cartridge Filter C for each calendar month;
- (10) the throughput of electrode, in tons, for each month (P907 and P908);
- (11) beginning after the first 12 calendar months of operation, the rolling, 12-month summation of the throughput of electrode, in tons (P907 and P908);
- (12) also, during the first 12 calendar months of operation, the permittee shall record the cumulative throughput of electrode, in tons for each calendar month (P907 and P908);
- (13) the throughput of grit, in tons, for each month (P909);
- (14) beginning after the first 12 calendar months of operation, the rolling, 12-month summation of the throughput of grit, in tons (P909);
- (15) also, during the first 12 calendar months of operation, the permittee shall record the cumulative throughput of grit, in tons for each calendar month (P909);
- (16) the throughput of topcoat, in gallons, for each month (R008);
- (17) beginning after the first 12 calendar months of operation, the rolling, 12-month summation of the throughput of topcoat, in gallons (R008);
- (18) also, during the first 12 calendar months of operation, the permittee shall record the cumulative throughput of topcoat, in gallons, for each calendar month (R008);
- (19) the throughput of cleanup, in gallons for each month (R008);
- (20) beginning after the first 12 calendar months of operation, the rolling, 12-month summation of the throughput of cleanup, in gallons (R008);

- (21) also, during the first 12 calendar months of operation, the permittee shall record the cumulative throughput of cleanup, in gallons, for each calendar month (R008);
- (22) the maximum heat input of the drying oven, in million BTU, for each month (R008);
- (23) beginning after the first 12 calendar months of operation, the rolling 12-month summation of the maximum heat input of the drying oven, in million BTU (R008);
- (24) also during the first 12 calendar months of operation, the permittee shall record the cumulative maximum heat input of the drying oven, in million BTU, for each calendar month (R008); and,
- (25) the rolling, 12-month summation of the facility-wide individual HAP and facility-wide total combined HAP emissions, in tons.

(Authority for term: OAC rule 3745-31-05(D))

- d) The permittee shall maintain monthly records of the rolling, 12-month summation of the facility-wide, McWane Poles (0616015010) and McWane Ductile - Ohio (0616010006) combined, HAP and facility-wide total combined HAP emissions, in tons (Summation of 4.a)(4), 4.b)(1)d., and 4.c)(25)). The facility, McWane Ductile - Ohio (0616010006) combined with McWane Poles (0616015010), has sufficient records to begin calculating and tracking compliance with the rolling emissions limitations and operational restrictions upon issuance of this permit.

(Authority for term: OAC rule 3745-31-05(D))

5. Reporting Requirements

- a) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

(Authority for term: OAC rule 3745-15-03(B)(1)(a), OAC rule 3745-15-03(C), and OAC rule 3745-31-05(D))

- b) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month summations of facility-wide individual HAP and facility-wide total combined HAP emissions limitations in 2.a). The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

(Authority for term: OAC rule 3745-31-05(D))

- c) The permittee shall notify the Ohio EPA, Southeast District Office of any monthly record showing an exceedance of the rolling, 12-month operational restrictions in 3.a) and 3.c) or any deviation from the no organic HAP coating restrictions specified in 3.b). A copy of such record shall be sent to the Ohio EPA, Southeast District Office within 30 days following the end of the calendar month.

(Authority for term: OAC rule 3745-31-05(D))

6. Testing Requirements

- d) Compliance with the facility-wide (i.e. McWane Ductile - Ohio (0616010006) and McWane Poles (0616015010) combined) individual HAP and total combined HAP emission limitations shall be based upon a rolling, 12-month summation of the monthly emissions figures determined in accordance with the recordkeeping requirements in 4.a) and 4.b)(1)(d) for all HAP emitting emission units. Calculations shall follow the methodology presented in Attachment 2 of the amended permit-to-install application received on November 21, 2006, for McWane Ductile - Ohio (0616010006), and the methodology presented in the calculations attachment of the amended permit-to-install application received December 10, 2013, for McWane Poles (0616015010) and any subsequent revisions to that methodology approved by Ohio EPA.

(Authority for term: OAC rule 3745-31-05(D))

- e) Compliance with the annual operational restrictions (throughputs, hours of operation, and input of the drying oven) shall be based upon a rolling, 12-month summation of the monthly usage figures determined in accordance with the recordkeeping requirements in 4.a) and 4.c).

(Authority for term: OAC rule 3745-31-05(D))

- f) Compliance with the no organic HAP coatings restrictions shall be demonstrated based upon the record keeping requirements specified in 4.b).

(Authority for term: OAC rule 3745-31-05(D))

C. Emissions Unit Terms and Conditions

1. F065, Specialty Shell Core Machine

Operations, Property and/or Equipment Description:

3.85 ton per hour uncontrolled core making machine processing resin-coated sand and equipped with a 3.0 million BTU/hour natural gas-fired process heater; maximum throughput rate of 5,500 tons of resin-coated sand per rolling, 12-month period; Administrative modification of PTI P0116276, issued final 12/12/2014

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

(1) d)(2)-(5) and e)(3)

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) (Synthetic minor to restrict federally enforceable potential to emit of this emissions unit to accommodate future projects)	<p>Volatile organic compound (VOC) emissions shall not exceed 0.89 tons per rolling, 12-month period.</p> <p>Particulate emissions (PE) shall not exceed 0.47 ton per rolling, 12-month period.</p> <p>PM₁₀ emissions shall not exceed 0.43 ton per rolling, 12-month period.</p> <p>See c)(1) below.</p>
b.	OAC rule 3745-31-05(A)(3) June 30, 2008	<p>The emissions limitations established pursuant to this rule for VOC, PE and PM₁₀ are equivalent to the emissions limitations established pursuant to OAC rule 3745-31-05(D).</p> <p>See b)(2)a. below.</p>
c.	OAC rule 3745-31-05(A)(3)(a)(ii) June 30, 2008	<p>The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE and PM₁₀ emissions from this air contaminant source since the potential to emit is less than 10 tons/year.</p>

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from this air contaminant source since the calculated annual emissions rate is less than 10 tons/year taking into account the restriction from OAC rule 3745-31-05(D).</p> <p>See b)(2)b. below.</p>
e.	OAC rules 3745-17-07(B) and 3745-17-08(B)	See b)(2)c. below.

(2) Additional Terms and Conditions

- a. This Best Available Control (BAT) emissions limit applies until U.S. EPA approves Ohio Administrative Code (OAC) rule 3745-31-05(A)(3)(a) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- b. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.
- c. This facility is located in Coshocton County, which is not identified in Appendix A of OAC rule 3745-17-08. Therefore, the fugitive dust emissions from this emissions unit are exempt from the fugitive dust control requirements and visible emission limitation established in OAC rules 3745-17-08(B) and 3745-17-07(B), respectively.

c) Operational Restrictions

- (1) The permittee has requested a federally enforceable limitation on resin-coated sand throughput for the purposes of limiting potential to emit of VOC, PE and PM₁₀. Therefore, the maximum throughput rate of resin-coated sand shall not exceed 5,500 tons as a rolling, 12-month summation. This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the throughput rate upon issuance of this permit.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the following information:
 - a. the total throughput of resin-coated sand, in tons, of this emissions unit;
 - b. the total throughput of core wash, in gallons, of this emissions unit;

- c. the rolling, 12-month summation of throughput of resin-coated sand, in tons (i.e., the throughput for the current month added to the throughput for the previous 11 calendar months);
 - d. the rolling, 12-month summation of throughput of core wash, in gallons (i.e., the throughput for the current month added to the throughput of the previous 11 calendar months);
 - e. beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the core wash throughput, in gallons; and.
 - f. the rolling, 12-month summation of the total VOC, PE and PM₁₀ emissions
- (2) The permit-to-install application for emissions units, F065, F066, and P034 was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to these emissions units for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminants 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., "X" hours per day and "Y" 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: Ammonia

TLV (mg/m³): 17

Maximum Hourly Emission Rate (lbs/hr): 13.89

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 126.3

MAGLC (ug/m³): 404.76

The permittee, has demonstrated that emissions of ammonia from emissions units F065, F066, and P034, are calculated to be less than eighty percent 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).

- (3) 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 permit-to-install 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.

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

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all exceedances of the rolling, 12-month resin-coated sand throughput limitation specified in c)(1); and
 - b. all exceedances of the rolling, 12-month VOC, PE and PM₁₀ emissions limitations specified in b)(1)a.

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

- (3) The permittee shall submit annual reports that include any changes to any 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 concentration. The report should include:
- a. the original model input;
 - b. the updated model input;
 - c. the reason for the change(s) to the input parameter(s); and
 - d. a summary of the results of the updated modeling, including the input changes; and
 - e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

f) Testing Requirements

- (1) Compliance with the emissions limitations and/or control requirements specified in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emissions Limitation:

VOC emissions shall not exceed 0.89 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the tons per rolling, 12-month period emissions limitation shall be demonstrated based on the following calculation:

VOC (tons/rolling, 12-month period) = [(actual tons of resin-coated sand used per rolling, 12-month period as determined pursuant to d)(1) X VOC emissions factor) + (0.033 lb/hr (hourly PTE of process heater) X 8,760 hours/yr)] X 1 ton/2,000 lbs

Where:

0.270 lbs VOC/ton of sand = VOC emissions factor for process (from permittee's application based on vendor-supplied emissions information).

If required, formulation data or USEPA Method 24 may be used to determine the VOC content of the resin-coated sand.



b. Emissions Limitation:

PE shall not exceed 0.47 ton per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the ton per rolling, 12-month period emissions limitation shall be demonstrated based on the following calculation:

$$\text{PE (tons/rolling, 12-month period)} = [(\text{actual tons of resin-coated sand used per rolling, 12-month period as determined pursuant to d)(1)} \times \text{PE emissions factor for resin-coated sand} \times (1 - \text{building settling factor})] + (0.021 \text{ lb/hr (hourly PTE of process heater)} \times 8,760 \text{ hours/yr}) + (\text{actual gallons of core wash used per rolling, 12-month period as determined pursuant to d)(1)} \times \text{PE emissions factor for core wash} \times (1 - \text{transfer efficiency}) \times (1 - \text{building settling factor})) \times 1 \text{ ton}/2,000 \text{ lbs}$$

Where:

PE emissions factor for resin-coated sand = 0.35 lb PE/ton of sand (RACM Table 2.7-1, 9/80);

Building settling factor = 70% (per permittee's application);

PE emissions factor for core wash = 0.38 lb PE/gallon of wash (Refcobar 7502 as applied emissions factor);

Transfer efficiency = 70% (per permittee's application).

c. Emissions Limitation:

PM₁₀ emissions shall not exceed 0.43 ton per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the ton per rolling, 12-month period emissions limitation shall be demonstrated based on the following calculation:

$$\text{PM}_{10} \text{ (tons/rolling, 12-month period)} = [(\text{actual tons of resin-coated sand used per rolling, 12-month period as determined pursuant to d)(1)} \times \text{PM}_{10} \text{ emissions factor for resin-coated sand} \times (1 - \text{building settling factor})] + (0.021 \text{ lb/hr (hourly PTE of process heater)} \times 8,760 \text{ hours/yr}) + (\text{actual gallons of core wash used per rolling, 12-month period as determined pursuant to d)(1)} \times \text{PE emissions factor for core wash} \times (1 - \text{transfer efficiency}) \times (1 - \text{building settling factor})) \times 1 \text{ ton}/2,000 \text{ lbs}$$

Where:

PM₁₀ emissions factor for resin-coated sand = 0.30 lb PE/ton of sand (RACM Table 2.7-1, 9/80);



Building settling factor = 70% (per permittee's application);

PM₁₀ emissions factor for core wash = 0.38 lb PE/gallon of wash (Refcobar 7502 as applied emissions factor);

Transfer efficiency = 70% (per permittee's application).

g) Miscellaneous Requirements

- (1) None.

2. F066, Specialty Shell Core Machine #8

Operations, Property and/or Equipment Description:

3.85 ton per hour uncontrolled core making machine processing resin-coated sand and equipped with a 3.0 million BTU/hour natural gas-fired process heater; maximum throughput rate of 5,500 tons of resin-coated sand per rolling, 12-month period; Administrative Modification of PTI P0116810, issued final 12/12/2014

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

(1) d)(2)-(5) and e)(3)

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) (Synthetic minor to restrict federally enforceable potential to emit of this emissions unit to accommodate future projects)	<p>Volatile organic compound (VOC) emissions shall not exceed 0.89 tons per rolling, 12-month period.</p> <p>Particulate emissions (PE) shall not exceed 0.47 ton per rolling, 12-month period.</p> <p>PM₁₀ emissions shall not exceed 0.43 ton per rolling, 12-month period.</p> <p>See c)(1) below.</p>
b.	OAC rule 3745-31-05(A)(3) June 30, 2008	<p>The emissions limitations established pursuant to this rule for VOC, PE and PM₁₀ are equivalent to the emissions limitations established pursuant to OAC rule 3745-31-05(D).</p> <p>See b)(2)a. below.</p>
c.	OAC rule 3745-31-05(A)(3)(a)(ii) June 30, 2008	<p>The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE and PM₁₀ emissions from this air contaminant source since the potential to emit is less than 10 tons/year.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from this air contaminant source since the calculated annual emissions rate is less than 10 tons/year taking into account the restriction from OAC rule 3745-31-05(D). See b)(2)b. below.
e.	OAC rules 3745-17-07(B) and 3745-17-08(B)	See b)(2)c. below.

(2) Additional Terms and Conditions

- a. This Best Available Control (BAT) emissions limit applies until U.S. EPA approves Ohio Administrative Code (OAC) rule 3745-31-05(A)(3)(a) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- b. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.
- c. This facility is located in Coshocton County, which is not identified in Appendix A of OAC rule 3745-17-08. Therefore, the fugitive dust emissions from this emissions unit are exempt from the fugitive dust control requirements and visible emission limitation established in OAC rules 3745-17-08(B) and 3745-17-07(B), respectively.

c) Operational Restrictions

- (1) The permittee has requested a federally enforceable limitation on resin-coated sand throughput for the purposes of limiting potential to emit of VOC, PE and PM₁₀. Therefore, the maximum throughput rate of resin-coated sand shall not exceed 5,500 tons as a rolling, 12-month summation. To ensure compliance during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the throughput levels specified in the following table:

Months(s):	Maximum Cumulative Throughput Rate (Tons):
1-1	458
1-2	917

Months(s):	Maximum Cumulative Throughput Rate (Tons):
1-3	1,375
1-4	1,833
1-5	2,291
1-6	2,749
1-7	3,207
1-8	3,665
1-9	4,123
1-10	4,581
1-11	5,039
1-12	5,500

After the first 12 calendar months of operation following the startup of emissions unit F066, compliance with the annual resin-coated sand throughput limitation shall be based upon a rolling, 12-month summation of the resin-coated sand throughput.

d) **Monitoring and/or Recordkeeping Requirements**

- (1) The permittee shall maintain monthly records of the following information:
 - a. the total throughput of resin-coated sand, in tons, of this emissions unit;
 - b. the total throughput of core wash, in gallons, of this emissions unit;
 - c. beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the core wash throughput, in gallons;
 - d. during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative core wash throughput, in gallons, for each calendar month;
 - e. beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the resin-coated sand throughput, in tons;
 - f. during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative resin-coated sand throughput, in tons, for each calendar month; and

- g. the rolling, 12-month summation of the total VOC, PE and PM₁₀ emissions.
- (2) The permit-to-install application for emissions units, F065, F066, and P034 was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to these emissions units for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminants 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., "X" hours per day and "Y" 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: Ammonia

TLV (mg/m³): 17

Maximum Hourly Emission Rate (lbs/hr): 13.89

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 126.3

MAGLC (ug/m³): 404.76

The permittee, has demonstrated that emissions of ammonia from emissions units F065, F066, and P034, are calculated to be less than eighty percent 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).

- (3) 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 permit-to-install 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.

- (4) 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.
- (5) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
- e) Reporting Requirements
- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
 - (2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all exceedances of the rolling, 12-month resin-coated sand throughput limitation; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative resin-coated sand throughput rates;
 - b. all exceedances of the rolling, 12-month VOC, PE and PM₁₀ emissions limitations specified in b)(1)a.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.
 - (3) The permittee shall submit annual reports that include any changes to any 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 concentration. The report should include:

- a. the original model input;
- b. the updated model input;
- c. the reason for the change(s) to the input parameter(s); and
- d. a summary of the results of the updated modeling, including the input changes; and
- e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

f) **Testing Requirements**

(1) Compliance with the emissions limitations and/or control requirements specified in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. **Emissions Limitation:**

VOC emissions shall not exceed 0.89 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the tons per rolling, 12-month period emissions limitation shall be demonstrated based on the following calculation:

$$\text{VOC (tons/rolling, 12-month period)} = [(\text{actual tons of resin-coated sand used per rolling, 12-month period as determined pursuant to d)(1)} \times \text{VOC emissions factor} + (0.033 \text{ lb/hr (hourly PTE of process heater)} \times 8,760 \text{ hours/yr})] \times 1 \text{ ton}/2,000 \text{ lbs}$$

Where:

0.270 lbs VOC/ton of sand = VOC emissions factor for process (from permittee's application based on vendor-supplied emissions information).

If required, formulation data or USEPA Method 24 may be used to determine the VOC content of the resin-coated sand.

b. **Emissions Limitation:**

PE shall not exceed 0.47 ton per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the ton per rolling, 12-month period emissions limitation shall be demonstrated based on the following calculation:



PE (tons/rolling, 12-month period) = [(actual tons of resin-coated sand used per rolling, 12-month period as determined pursuant to d)(1) X PE emissions factor for resin-coated sand X (1-building settling factor)) + (0.021 lb/hr (hourly PTE of process heater) X 8,760 hours/yr) + (actual gallons of core wash used per rolling, 12-month period as determined pursuant to d)(1) X PE emissions factor for core wash X (1 – transfer efficiency) X (1 – building settling factor))] X 1 ton/2,000 lbs

Where:

PE emissions factor for resin-coated sand = 0.35 lb PE/ton of sand (RACM Table 2.7-1, 9/80);

Building settling factor = 70% (per permittee’s application);

PE emissions factor for core wash = 0.38 lb PE/gallon of wash (Refcobar 7502 as applied emissions factor);

Transfer efficiency = 70% (per permittee’s application).

c. Emissions Limitation:

PM₁₀ emissions shall not exceed 0.43 ton per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the ton per rolling, 12-month period emissions limitation shall be demonstrated based on the following calculation:

PM₁₀ (tons/rolling, 12-month period) = [(actual tons of resin-coated sand used per rolling, 12-month period as determined pursuant to d)(1) X PM₁₀ emissions factor for resin-coated sand X (1-building settling factor)) + (0.021 lb/hr (hourly PTE of process heater) X 8,760 hours/yr) + (actual gallons of core wash used per rolling, 12-month period as determined pursuant to d)(1) X PE emissions factor for core wash X (1 – transfer efficiency) X (1 – building settling factor))] X 1 ton/2,000 lbs

Where:

PM₁₀ emissions factor for resin-coated sand = 0.30 lb PE/ton of sand (RACM Table 2.7-1, 9/80);

Building settling factor = 70% (per permittee’s application);

PM₁₀ emissions factor for core wash = 0.38 lb PE/gallon of wash (Refcobar 7502 as applied emissions factor);

Transfer efficiency = 70% (per permittee’s application).



Final Permit-to-Install
McWane Ductile - Ohio
Permit Number: P0118475
Facility ID: 0616010006
Effective Date: 8/14/2015

g) Miscellaneous Requirements

(1) None.

3. P034, Shell core machine number 4

Operations, Property and/or Equipment Description:

3.85 ton per hour uncontrolled core making machine processing resin-coated sand and equipped with a 3.0 million BTU/hour natural gas-fired process heater; maximum throughput rate of 5,333 tons of resin-coated sand per rolling, 12-month period; federally enforceable restrictions to limit potential VOC emissions; (uncontrolled); Administrative modification of PTI P0116276, issued final 12/12/2014

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

(1) d)(3)-(6) and e)(4)

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)	<p>Volatile organic compound (VOC) emissions shall not exceed 1.07 pounds per hour.</p> <p>Particulate emissions (PE) shall not exceed 0.44 pound per hour.</p> <p>Emissions of particulate matter of 10 microns or less (PM₁₀) shall not exceed 0.39 pound per hour.</p> <p>For each building or structure housing any emissions source, the permittee shall not discharge any fugitive emissions to the atmosphere that exhibit opacity greater than 20 percent (6-minute average), except for one 6-minute average per hour that does not exceed 27 percent opacity.</p> <p>The requirements of this rule include compliance with OAC rule 3745-31-05(D).</p>
b.	OAC rule 3745-31-05(D) (Synthetic minor to restrict federally enforceable potential to emit of this	VOC emissions shall not exceed 2.17 tons per rolling, 12-month period.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	emissions unit to accommodate future projects)	PE shall not exceed 0.48 ton per rolling, 12-month period. PM ₁₀ emissions shall not exceed 0.44 ton per rolling, 12-month period. See c)(1) below.
c.	OAC rules 3745-17-07(B) and 3745-17-08(B)	See b)(2)a. below.

(2) Additional Terms and Conditions

a. This facility is located in Coshocton County, which is not identified in Appendix A of OAC rule 3745-17-08. Therefore, the fugitive dust emissions from this emissions unit are exempt from the fugitive dust control requirements and visible emission limitation established in OAC rules 3745-17-08(B) and 3745-17-07(B), respectively.

c) Operational Restrictions

(1) The maximum throughput of this emissions unit shall not exceed 5,333 tons of resin-coated sand based on a rolling, 12-month summation. This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the throughput rate upon issuance of this permit.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall collect and record the following information each month for this emissions unit:

- a. the total throughput of resin-coated sand (in tons) of this emissions unit;
- b. the rolling, 12-month summation of throughput of resin-coated sand, in tons (i.e., the throughput for the current month added to the throughput for the previous 11 calendar months);
- c. the rolling, 12-month summation of throughput of core wash, in gallons (i.e., the throughput for the current month added to the throughput of the previous 11 calendar months);
- d. beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the core wash throughput, in gallons; and.
- e. the rolling, 12-month summation of the total VOC, PE and PM₁₀ emissions.

This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the production rates upon issuance of this permit.

- (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 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.

- (3) The permit-to-install application for emissions units, F065, F066, and P034 was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to these emissions units for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminants 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., "X" hours per day and "Y" 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: Ammonia

TLV (mg/m3): 17

Maximum Hourly Emission Rate (lbs/hr): 13.89

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 126.3

MAGLC (ug/m3): 404.76

The permittee, has demonstrated that emissions of ammonia from emissions units F065, F066, and P034, are calculated to be less than eighty percent 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).

- (4) 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 permit-to-install 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.

- (5) 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.

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

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all exceedances of the rolling, 12-month resin-coated sand throughput limitation specified in c)(1); and
 - b. all exceedances of the rolling, 12-month VOC, PE and PM₁₀ emissions limitations specified in b)(1)b.

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

- (3) The permittee shall submit semiannual written reports that identify:
 - 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. all corrective actions taken to minimize or eliminate the visible emissions.

These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

- (4) The permittee shall submit annual reports that include any changes to any 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 concentration. The report should include:
 - a. the original model input;
 - b. the updated model input;
 - c. the reason for the change(s) to the input parameter(s); and
 - d. a summary of the results of the updated modeling, including the input changes; and



- e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

f) Testing Requirements

- (1) Compliance with the emissions limitations and/or control requirements specified in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emissions Limitations:

VOC emissions shall not exceed 1.07 pounds per hour.

VOC emissions shall not exceed 2.17 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the pounds per hour emissions limitation shall be demonstrated based on the following calculation:

VOC (lbs/hr) = [(VOC emissions factor (lbs VOC/ton of sand) X maximum hourly throughput capacity of core machine (tons/hr)) + (VOC emissions factor for fuel burning (lbs VOC/million BTU) X maximum fuel input capacity of process heater (million BTU/hr))]

$$= [(0.270 \text{ lbs VOC/ton of sand} \times 3.85 \text{ tons sand/hr}) + (0.011 \text{ lbs VOC/million BTU} \times 3.0 \text{ million BTU/hr})]$$

$$= 1.07 \text{ pounds VOC per hour}$$

Where:

0.270 lbs VOC/ton of sand = VOC emissions factor for process (from permittee's application based on vendor-supplied emissions information);

3.85 tons per hour = maximum capacity of core machine;

0.011 lb VOC/million BTU = VOC emissions factor for natural gas fuel burning from AP-42 Table 1.4-2, 7/98 converted from lb/million CF to lb/million BTU; and

3.0 million BTU per hour = maximum natural gas fuel input capacity of process heater

If required, formulation data or USEPA Method 24 may be used to determine the VOC content of the resin-coated sand.

Compliance with the tons per rolling, 12-month period emissions limitation shall be demonstrated based on the following calculation:



VOC (tons/rolling, 12-month period) = [(actual tons of resin-coated sand used per rolling, 12-month period as determined pursuant to d)(1)b. X VOC emissions factor) + (0.033 lb/hr(hourly PTE of process heater) X 8,760 hours/yr)] X 1 ton/2,000 lbs

b. Emissions Limitations:

PE shall not exceed 0.44 pound per hour.

PE shall not exceed 0.48 ton per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the pound per hour emissions limitation shall be demonstrated based on the following calculation:

$$\begin{aligned}
 \text{PE (lbs/hr)} &= [(\text{PE emissions factor (lb PE/ton of sand)} \times \text{maximum hourly throughput capacity of core machine (tons/hr)} \times (1 - \text{building settling factor}) + (\text{particulate emissions factor for fuel burning (lbs PE/million BTU)} \times \text{maximum fuel input capacity of process heater (million BTU/hr)}) + [\text{PE lb/gal for core wash} \times \text{maximum hourly wash usage in gallons} \times (1 - \text{transfer efficiency}) \times (1 - \text{building settling factor})] \\
 &= [(0.35 \text{ lb PE/ton of sand} \times 3.85 \text{ tons sand/hr} \times (1 - 0.70)) + (0.007 \text{ lbs PE/million BTU} \times 3.0 \text{ million BTU/hr}) + [0.38 \text{ lb/gal} \times 0.59 \text{ gal/hr} \times (1 - 0.70) \times (1 - 0.70)] \\
 &= 0.44 \text{ pound PE per hour}
 \end{aligned}$$

Where:

0.35 lb PE/ton of sand = PE emissions factor for process (RACM Table 2.7-1, 9/80);

3.85 tons per hour = maximum capacity of core machine;

70% = control efficiency of building that houses core machine;

0.007 lb PE/million BTU = particulate emissions factor for natural gas fuel burning from AP-42 Table 1.4-2, 7/98 converted from lb/million CF to lb/million BTU;

3.0 million BTU per hour = maximum natural gas fuel input capacity of process heater;

0.38 lb PE/gallon of wash = Refcobar 7502 as applied emissions factor;

0.59 gal/hr = maximum capacity of core wash;

70% = transfer efficiency of core wash; and

70% = control efficiency of building that houses core wash.

Compliance with the ton per rolling, 12-month period emissions limitation shall be demonstrated based on the following calculation:

$$\text{PE (tons/rolling, 12-month period)} = [(\text{actual tons of resin-coated sand used per rolling, 12-month period as determined pursuant to d)(1)b.} \times \text{PE emissions factor} \times (1\text{-building settling factor})] + [(0.021 \text{ lb/hr (hourly PTE of process heater)} \times 8,760 \text{ hours/yr}) \times 1 \text{ ton}/2,000 \text{ lbs}] + [0.38 \text{ lb PE/gal} \times 5,197 \text{ gallons (maximum annual wash)} \times (1\text{- transfer efficiency})] \times (1\text{- building settling factor}]$$

c. Emissions Limitations:

PM₁₀ emissions shall not exceed 0.39 pound per hour.

PM₁₀ emissions shall not exceed 0.44 ton per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the pound per hour emissions limitation shall be demonstrated based on the following calculation:

$$\begin{aligned} \text{PM}_{10} \text{ (lbs/hr)} &= [(\text{PM}_{10} \text{ emissions factor (lb PM}_{10}\text{/ton of sand)} \times \text{maximum hourly throughput capacity of core machine (tons/hr)} \times (1\text{-building settling factor}) + (\text{particulate emissions factor for fuel burning (lbs PM}_{10}\text{/million BTU)} \times \text{maximum fuel input capacity of process heater (million BTU/hr)}) + [\text{PM}_{10}\text{lb/gal for core wash} \times \text{maximum hourly wash usage in gallons} \times (1\text{- transfer efficiency}) \times (1\text{-building settling factor})] \\ &= [(0.30 \text{ lb PM}_{10}\text{/ton of sand} \times 3.85 \text{ tons sand/hr} \times (1\text{-}0.70)) + (0.007 \text{ lbs PM}_{10}\text{/million BTU} \times 3.0 \text{ million BTU/hr}) + [0.38 \text{ lb/gal} \times 0.59 \text{ gal/hr} \times (1\text{-}0.70) \times (1\text{-}0.70)] \\ &= 0.39 \text{ pound PM}_{10} \text{ per hour} \end{aligned}$$

Where:

0.30 lb PM₁₀/ton of sand = PM₁₀ emissions factor for process (RACM Table 2.7-1, 9/80 and PM calculator);

3.85 tons per hour = maximum capacity of core machine;

70% = control efficiency of building that houses core machine;



0.007 lb PM₁₀/million BTU = particulate emissions factor for natural gas fuel burning from AP-42 Table 1.4-2, 7/98 converted from lb/million CF to lb/million BTU;

3.0 million BTU per hour = maximum natural gas fuel input capacity of process heater;

0.38 lb PE/gallon of wash = Refcoar 7502 as applied emissions factor;

0.59 gal/hr = maximum capacity of core wash;

70% = transfer efficiency of core wash; and

70% = control efficiency of building that houses core wash.

Compliance with the ton per rolling, 12-month period emissions limitation shall be demonstrated based on the following calculation:

$$\text{PM}_{10} \text{ (tons/rolling, 12-month period)} = [(\text{actual tons of resin-coated sand used per rolling, 12-month period as determined pursuant to d)(1)b.} \times \text{PM}_{10} \text{ emissions factor} \times (1\text{-building settling factor}) + (0.021 \text{ lb/hr (hourly PTE of process heater)} \times 8,760 \text{ hours/yr})] + [\text{PM}_{10} \text{ lb/gal for core wash} \times 5,197 \text{ gallons (maximum annual wash usage)} \times (1\text{- transfer efficiency}) \times (1\text{- building settling factor})] \times 1 \text{ ton}/2,000 \text{ lbs}$$

d. Emissions Limitation:

For each building or structure housing any emissions source, the permittee shall not discharge any fugitive emissions to the atmosphere that exhibit opacity greater than 20 percent (6-minute average), except for one 6-minute average per hour that does not exceed 27 percent opacity.

Applicable Compliance Method:

If required, visible particulate emissions shall be determined according to USEPA Method 9.

g) Miscellaneous Requirements

(1) None.