



Environmental Protection Agency

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

7/19/2012

Certified Mail

Mr. Todd Rouse
GM Defiance Casting Operations
26427 State Route 281 East
Defiance, OH 43512

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0320010001
Permit Number: P0110400
Permit Type: Administrative Modification
County: Defiance

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

The issuance of this PTI is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer 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
309 South Fourth Street, Room 222
Columbus, OH 43215

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. If you have any questions regarding this permit, please contact the Ohio EPA DAPC, Northwest District Office. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

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

Cc: U.S. EPA
Ohio EPA-NWDO; Michigan; Indiana



FINAL

**Division of Air Pollution Control
Permit-to-Install
for
GM Defiance Casting Operations**

Facility ID:	0320010001
Permit Number:	P0110400
Permit Type:	Administrative Modification
Issued:	7/19/2012
Effective:	7/19/2012



Division of Air Pollution Control
Permit-to-Install
for
GM Defiance Casting Operations

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Authorization

Facility ID: 0320010001
 Facility Description: Foundry.
 Application Number(s): M0001780
 Permit Number: P0110400
 Permit Description: Administrative Modification to clarify the use of the dust collector during charging, fluxing and drossing and allowing the dust collector to be inactive during holding periods for P544 (PSand Mod 3 Stack Melter 1) and P545 (PSand Mod 4 Stack Melter 2).
 Permit Type: Administrative Modification
 Permit Fee: \$200.00
 Issue Date: 7/19/2012
 Effective Date: 7/19/2012

This document constitutes issuance to:

GM Defiance Casting Operations
 State Route 281 East
 Defiance, OH 43512

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

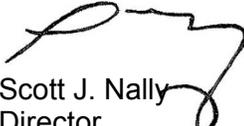
Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northwest District Office
 347 North Dunbridge Road
 Bowling Green, OH 43402
 (419)352-8461

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



Scott J. Nally
 Director



Authorization (continued)

Permit Number: P0110400

Permit Description: Administrative Modification to clarify the use of the dust collector during charging, fluxing and dressing and allowing the dust collector to be inactive during holding periods for P544 (PSand Mod 3 Stack Melter 1) and P545 (PSand Mod 4 Stack Melter 2).

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

Group Name: Precision Sand Stack Melters

Emissions Unit ID:	P544
Company Equipment ID:	PSand Mod 3 Stack Melter
Superseded Permit Number:	P0106622
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P545
Company Equipment ID:	PSand Mod 4 Stack Melter
Superseded Permit Number:	P0106622
General Permit Category and Type:	Not Applicable

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

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

4. Monitoring and Related Record Keeping and Reporting Requirements

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

- (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Ohio EPA DAPC, Northwest District Office. The written reports shall be submitted (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 (i.e., postmarked) to the Ohio EPA DAPC, Northwest District Office every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a 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, Northwest District Office in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

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

6. Compliance Requirements

- a) The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.
- b) 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.

- c) 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.
- d) The permittee shall submit progress reports to the Ohio EPA DAPC, Northwest District Office concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

7. Best Available Technology

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

8. Air Pollution Nuisance

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

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Northwest District Office.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have

been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA DAPC, Northwest District Office. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) 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).

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 party 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 Ohio EPA's "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).

- 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.

No emissions unit certified by the authorized official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

- 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 the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

13. Construction Compliance Certification

The applicant shall identify the following dates in the online 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 (i.e., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

16. Fees

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

17. Permit Transfers

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

18. Risk Management Plans

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

19. Title IV Provisions

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

B. Facility-Wide Terms and Conditions

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

a) 2.

2. The emissions units contained in this permit to install were evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee in the permit application. The Ohio EPA's "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, 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 emitted from the emissions units, (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. TEL (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).

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: formaldehyde

TLV (mg/m³): 0.368

Maximum Hourly Emission Rate (lbs/hr): 0.72

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 6.27

MAGLC (ug/m³): 6.46

Toxic contaminant: m,p-Xylene
TLV (mg/m3): 434
Maximum Hourly Emission Rate (lbs/hr): 4.62
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 61.19
MAGLC (ug/m3): 10,337

Toxic contaminant: phenol
TLV (mg/m3): 19
Maximum Hourly Emission Rate (lbs/hr): 4.92
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 53.73
MAGLC (ug/m3): 458.21

Toxic contaminant: naphthalene
TLV (mg/m3): 54
Maximum Hourly Emission Rate (lbs/hr): 2.17
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 28.49
MAGLC (ug/m3): 1,248.31

Toxic contaminant: o-xylene
TLV (mg/m3): 434
Maximum Hourly Emission Rate (lbs/hr): 0.43
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 4.94
MAGLC (ug/m3): 10,337.90

Toxic contaminant: cumene
TLV (mg/m3): 245
Maximum Hourly Emission Rate (lbs/hr): 8.98
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 141.7
MAGLC (ug/m3): 5852.07

Toxic contaminant: acetophenone
TLV (mg/m3): 49.141
Maximum Hourly Emission Rate (lbs/hr): 1.04
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 17.82
MAGLC (ug/m3): 1,170.02

Toxic contaminant: alpha-Methylstyrene
TLV (mg/m3): 241
Maximum Hourly Emission Rate (lbs/hr): 1.28
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.21
MAGLC (ug/m3): 5754.21

The permittee, has demonstrated that emissions of m,p-xylene, phenol, naphthalene, o-xylene, cumene, acetophenone and alpha-Methylstyrene, from the emissions units contained in PTI P0106622, issued 12/20/10, are calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic contaminant in accordance with ORC 3704.03(F).

The permittee, having demonstrated that emissions of formaldehyde from the emissions units contained in PTI P0106622, issued 12/20/10 is estimated to be equal or greater than eighty per cent, but less than 100 per cent of the maximum acceptable ground level concentration (MAGLC), shall not operate the emissions unit(s) at a rate that would exceed the daily emissions rate, process weight rate, and/or restricted hours of operations, as allowed in this permit; and 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 ORC 3704.03(F), the statute, has been documented. If the change(s) meet(s) the definition of a "modification" or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then 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-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install 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":
- a) a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxics 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 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 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 ORC 3704.03(F) and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions units 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 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.
7. The permittee shall submit quarterly reports to the appropriate Ohio EPA District Office or local air agency, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect. These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

C. Emissions Unit Terms and Conditions

1. Emissions Unit Group -Precision Sand Stack Melters: P544,P545,

EU ID	Operations, Property and/or Equipment Description
P544	Precision Sand Mod #3 Stack Melter #1
P545	Precision Sand Mod #4 Stack Melter #2

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
- (1) None.
- b) Applicable Emissions Limitations and/or Control Requirements
- (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-10 through 31-20 (Administrative modification of PTI P0106622, issued 12/20/10)	<p><u>From each emissions unit individually:</u></p> <p>Volatile Organic Compounds (VOC) emissions shall not exceed 0.023 pound per ton of aluminum and 0.31 tons per year (tpy), based upon a rolling, 12-month summation of the monthly emissions</p> <p>Nitrogen Oxides (NOx) emissions shall not exceed 0.430 lb/ton of aluminum and 5.75 tpy, based upon a rolling, 12-month summation of the monthly emissions</p> <p>Sulfur Dioxide (SO2) emissions shall not exceed 0.003 lb/ton of aluminum and 0.04 tpy, based upon a rolling, 12-month summation of the monthly emissions</p> <p>See b)(2)a.</p>
b.	OAC rule 3745-31-05(D) (Administrative modification of PTI P0106622, issued 12/20/10)	<p><u>From each emissions unit individually:</u></p> <p>Particulate matter less than or equal to 10 microns in size (PM10) shall not exceed 17.96 lbs/day and 3.27 tpy (melting, fluxing and drossing)</p> <p>Carbon Monoxide (CO) emissions shall not exceed 0.361 lb/ton aluminum and</p>

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		4.83 tpy, based upon a rolling, 12-month summation of the monthly emissions See b)(2)b., b)(2)c. and b)(2)f.
c.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a six-minute average
d.	OAC rule 3745-17-11(B) OAC rule 3745-18-06(E)	The emission limitations specified by these rules are less stringent than the emission limitations established by OAC rule 3745-31-05(D)
e.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	See b)(2)c.
f.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)d.

(2) Additional Terms and Conditions

- a. Based on the “Prevention of Significant Deterioration” (PSD) analysis conducted to ensure the application of “Best Available Control Technology” (BACT), it has been determined that no control technologies for VOC, NOx and SO2 were cost effective.
- b. All emissions of PE are PM10.
- c. This permit establishes the following federally enforceable emission limitations for the purpose of limiting the potential to emit (PTE) for PM10. The PTE is being restricted such that emission increase for PM10 allowed for in permit action P0106622, issued 12/20/10, will be below the Prevention of Significant Deterioration (PSD) “significant threshold” applicability level of 15 tpy (for PM10). The federally enforceable emission limitations are based on the operational restrictions contained in c)(1), which requires control equipment:
 - i. PM10 emissions shall not exceed 17.96 lbs/day and 3.27 tpy.
- d. The requirements of this rule are equivalent to the requirements established pursuant to OAC rule 3745-31-05(D); therefore, the permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit.

On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 Changes), such that BAT is no longer required by State regulations for NAAQS pollutants less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio’s State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirements to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the

December 1, 2006 version of 3745-31-05, the requirements of 3745-31-05(A)(3) as effective November 30, 2001 will no longer apply.

It should be noted that the emission limitations and control requirements established pursuant to OAC rule 3745-31-05(D) will remain applicable after the above SIP revisions are approved by U.S. EPA.

- e. This paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3)(a), as effective December 1, 2006, do not apply to the PM10 emissions from this air contaminant source since the potential to emit is less than ten tons per year, taking into account the use of a baghouse.

Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3)(a), as effective December 1, 2006, do not apply to the SO₂, VOC, CO and NO_x emissions from this air contaminant source since the uncontrolled potential to emit for each is less than ten tons per year.

- f. Prevention of Significant Deterioration (PSD) requirements for particulate matter equal to or less than 2.5 microns in size (PM_{2.5}) are being implemented through the PM10 Surrogate Policy issued by EPA in 1997. For purposes of demonstrating that PM10 is a reasonable surrogate for PM_{2.5}, all emissions of PM10 will be considered PM_{2.5}.

c) Operational Restrictions

- (1) The permittee shall operate the baghouse at all times when this emissions unit charging, fluxing or drossing.
- (2) The maximum annual aluminum melted in these emissions units, individually, shall not exceed 26,762 tons, based upon a rolling, 12-month summation of the monthly quantities of aluminum melted.

To ensure federal enforceability during the first 12 calendar months of operation following the issuance of PTI P0106622, issued 12/20/10, the permittee shall not exceed the aluminum usage levels specified in the following table for these emissions units, individually:

Month(s)	Maximum Allowable Cumulative Aluminum Usage (tons)
1	2,680
1-2	5,360
1-3	8,040
1-4	10,720

Month(s)	Maximum Allowable Cumulative Aluminum Usage (tons)
1-5	13,400
1-6	16,080
1-7	18,760
1-8	21,440
1-9	24,120
1-10	25,013
1-11	25,907
1-12	26,762

After the first 12 calendar months of operation following the issuance of PTI P0106622, issued 12/20/10, compliance with the annual aluminum usage restriction shall be based upon a rolling, 12-month summation of the monthly quantity of aluminum melted in these emissions units, individually.

Note: This is an administrative modification and, as such, monthly usage records are currently being maintained by the permittee.

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

- (1) The permittee shall collect and record the following information each month for these emissions units individually:
 - a. The amount of aluminum processed, in tons;
 - b. For the first 12 months of operation following the issuance of PTI P0106622, issued 12/20/10, the cumulative quantity of aluminum processed, in tons; and
 - c. After the first 12 months of operation following the issuance of PTI P0106622, issued 12/20/10, the rolling, 12-month summation of the monthly amount of aluminum processed.

- (2) The permittee shall perform weekly* checks when these emissions units are in operation and when the weather conditions allow, for any visible particulate emissions from the stack(s) serving this emissions unit. The presence or absence of any visible emissions, excluding water vapor, 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 date and time of the visible emission observation;
 - b. The identification of the stack observed;

- c. The color of the emissions;
- d. The total duration of any visible emission observation; and
- e. The corrective actions, if any, taken to eliminate the visible emissions.

*Once during each normal calendar week.

- (3) The permittee shall maintain records documenting any time periods when these emissions units were charging, fluxing or drossing and the baghouses were not operating.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports, which identify all exceedances of the following, for these emissions units individually:
 - a. For the first 12 calendar months of operation following the issuance of PTI P0106622, issued 12/20/10, the maximum allowable cumulative usage restriction; and
 - b. After the first 12 calendar months of operation following the issuance of PTI P0106622, issued 12/20/10, the rolling, 12-month aluminum usage restriction.

These quarterly deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

- (2) The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions, excluding water vapor, were observed from the stacks serving these emissions units and (b) describe the corrective actions, if any, taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.
- (3) The permittee shall submit deviation (excursion) reports that identify any time periods when these emissions units were charging, fluxing or drossing and the baghouses were not operating. Each report shall be submitted within 30 days after the deviation occurs.

f) Testing Requirements

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

The amount of aluminum poured shall not exceed 26,762 tons per rolling, 12-month period for these emissions units, individually.

Applicable Compliance Method:

Compliance shall be demonstrated by the recordkeeping requirements specified in d)(1).

b. Emission Limitation:

VOC emissions shall not exceed 0.023 lb/ton of aluminum and 0.31 tpy, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

If required, compliance with the lb/ton emission limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 18, 25 or 25A (as applicable) of 40 CFR, Part 60, Appendix A or as amended. Alternative or equivalent methods can be used with approval of the director. The lb/ton was established based on the AP-42 emission factor of 5.5 lb/mmscf and the maximum burner rate of 13.125 mmBTU/hr.

The annual emission limitation was established by multiplying the lb/ton of aluminum emission limitation by the annual aluminum throughput restriction of 26,762 tons per rolling, 12-month period and dividing by 2000 lbs/ton. Therefore, as long as compliance is shown with the lb/ton emission limitation and the annual aluminum throughput restriction is demonstrated, compliance with the annual limitation shall be demonstrated.

c. Emission Limitation:

SO₂ emissions shall not exceed 0.003 lb/ton of aluminum and 0.04 tpy, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

If required, compliance with the lb/ton emission limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 6 of 40 CFR, Part 60, Appendix A or as amended. Alternative or equivalent methods can be used with approval of the director. The lb/ton was established based on AP-42 emission factor of 0.6 lb/mmscf and the maximum burner rate of 13.125 mmBTU/hr.

The annual emission limitation was established by multiplying the lb/ton of aluminum emission limitation by the annual aluminum throughput restriction of 26,762 tons per rolling, 12-month period and dividing by 2000 lbs/ton. Therefore, as long as compliance is shown with the lb/ton emission limitation and the annual aluminum throughput restriction is demonstrated, compliance with the annual limitation shall be demonstrated.

d. Emission Limitation:

PM₁₀ shall not exceed 17.96 lbs/day and 3.27 tpy, based on a rolling, 12-month summation of the daily emissions.

Applicable Compliance Method:

If required, compliance with the lb/day emission limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 201/201A and 202 of 40 CFR, Part 51, Appendix M to verify the emission rates for melting (0.58 lb/hr), fluxing (1.545 lb/hr) and drossing (3.655 lb/hr). The lb/day represents the potential to emit for this emissions unit based on the additive maximum lb/hr of the following operations and the maximum duration of the operation: melting (0.58 lb PM10/hr; 22 hrs/day), fluxing (1.545 lbs/hr, 1 hr/day), drossing (3.655 lbs PM10/hr, 1 hr/day).

The annual emission limitation was developed by multiplying the pounds per day limitation by a maximum operating schedule of 365 days per year and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the daily limitation, compliance with the annual limitation shall also be demonstrated.

e. Emission Limitation:

Visible PE from the baghouse stacks shall not exceed 10% opacity

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be demonstrated in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources").

f. Emission Limitation:

NOx emissions shall not exceed 0.430 lb/ton of aluminum and 5.75 tpy, based on a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

If required, compliance with the lb/ton emission limitation shall be demonstrated based on the results of the emission testing conducted in accordance with Methods 1-4 and 7 of 40 CFR, Part 60, Appendix A or as amended. Alternative or equivalent methods can be used with the approval of the director. The lb/ton was established based on AP-42 emission factor of 100 lb/mmSCF and the maximum burner rate of 13.125 mmBTU/hr.

The annual emission limitation was established by multiplying the lb/ton of aluminum emission limitation by the annual aluminum throughput restriction of 26,762 tons per rolling, 12-month period and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the lb/ton emission limitation and the annual aluminum throughput, compliance with the annual limitation shall be demonstrated.

g. Emission Limitation:

CO shall not exceed 0.361 lb/ton of aluminum and 4.83 tpy, based on a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

If required, compliance with the lb/ton emission limitation shall be demonstrated based on the results of the emission testing conducted in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A or as amended. Alternative or equivalent methods can be used with the approval of the director. The lb/ton was established based on AP-42 emission factor of 84 lb/mmscf and the maximum burner rate of 13.125 mmBTU/hr.

The annual emission limitation was established by multiplying the lb/ton of aluminum emission limitation by the annual aluminum throughput restriction of 26,762 tons per rolling, 12-month period and dividing by 2000 lbs/ton. Therefore provided compliance is shown with the lb/ton emission limitation and the annual aluminum throughput, compliance with the annual limitation shall be demonstrated.

- g) Miscellaneous Requirements
 - (1) None.