



3/31/2015

Certified Mail

Matt Burch  
General Die Casters Inc  
2150 Highland Rd  
Twinsburg, OH 44087

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

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE  
Facility ID: 1677130105  
Permit Number: P0118577  
Permit Type: Initial Installation  
County: Summit

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. 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 PTIO 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](http://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](http://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](http://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 Akron Regional Air Quality Management District at (330)3752480 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Erica R. Engel-Ishida, Manager  
Permit Issuance and Data Management Section, DAPC

Cc: ARAQMD



**FINAL**

**Division of Air Pollution Control  
Permit-to-Install and Operate  
for  
General Die Casters Inc**

Facility ID:	1677130105
Permit Number:	P0118577
Permit Type:	Initial Installation
Issued:	3/31/2015
Effective:	3/31/2015
Expiration:	3/31/2025





**Division of Air Pollution Control**  
**Permit-to-Install and Operate**  
for  
General Die Casters Inc

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**Final Permit-to-Install and Operate**  
General Die Casters Inc  
**Permit Number:** P0118577  
**Facility ID:** 1677130105  
**Effective Date:** 3/31/2015

## Authorization

Facility ID: 1677130105  
Application Number(s): A0052984  
Permit Number: P0118577  
Permit Description: Initial permit to install and operate for eight natural gas-fired reverberatory aluminum melting furnaces and one natural gas-fired barrel aluminum remelting furnace. Only clean aluminum materials are charged to the units.  
Permit Type: Initial Installation  
Permit Fee: \$2,100.00  
Issue Date: 3/31/2015  
Effective Date: 3/31/2015  
Expiration Date: 3/31/2025  
Permit Evaluation Report (PER) Annual Date: Apr 1 - Mar 31, Due May 15

This document constitutes issuance to:

General Die Casters Inc  
2150 Highland Rd  
Twinsburg, OH 44087

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

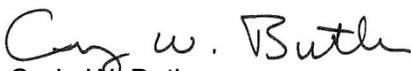
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Akron Regional Air Quality Management District  
1867 West Market St.  
Akron, OH 44313  
(330)375-2480

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s)) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

  
Craig W. Butler  
Director



## Authorization (continued)

Permit Number: P0118577  
 Permit Description: Initial permit to install and operate for eight natural gas-fired reverberatory aluminum melting furnaces and one natural gas-fired barrel aluminum remelting furnace. Only clean aluminum materials are charged to the units.

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

**Emissions Unit ID:** F010  
 Company Equipment ID: Andritz Barrel Furnace  
 Superseded Permit Number:  
 General Permit Category and Type: Not Applicable

**Group Name: Aluminum Reverberatory Furnaces**

<b>Emissions Unit ID:</b>	<b>F001</b>
Company Equipment ID:	Aluminum Reverb Furnace
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F002</b>
Company Equipment ID:	Aluminum Reverb Furnace
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F003</b>
Company Equipment ID:	Aluminum Reverb Furnace
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F004</b>
Company Equipment ID:	Aluminum Reverb Furnace
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F005</b>
Company Equipment ID:	Aluminum Reverb Furnace
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F006</b>
Company Equipment ID:	Aluminum Reverb Furnace
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F007</b>
Company Equipment ID:	Aluminum Reverb Furnace
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F008</b>
Company Equipment ID:	Aluminum Reverb Furnace
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



**Final Permit-to-Install and Operate**  
General Die Casters Inc  
**Permit Number:** P0118577  
**Facility ID:** 1677130105  
**Effective Date:** 3/31/2015

## **A. Standard Terms and Conditions**



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

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

**2. Who is responsible for complying with this permit?**

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

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

**3. What records must I keep under this permit?**

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

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

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

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

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

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

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

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is



very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

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

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

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

**7. What reports must I submit under this permit?**

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

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

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

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

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

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



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

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

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

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

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

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

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31.

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

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

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



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

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

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

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

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

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



**Final Permit-to-Install and Operate**  
General Die Casters Inc  
**Permit Number:** P0118577  
**Facility ID:** 1677130105  
**Effective Date:** 3/31/2015

## **B. Facility-Wide Terms and Conditions**



**Final Permit-to-Install and Operate**

General Die Casters Inc

**Permit Number:** P0118577

**Facility ID:** 1677130105

**Effective Date:** 3/31/2015

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - (1) None.
  - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - (1) None.



**Final Permit-to-Install and Operate**  
General Die Casters Inc  
**Permit Number:** P0118577  
**Facility ID:** 1677130105  
**Effective Date:** 3/31/2015

## **C. Emissions Unit Terms and Conditions**



**1. F010, Andritz Barrel Furnace**

**Operations, Property and/or Equipment Description:**

5.0 mmBtu/hr natural gas fired aluminum remelt furnace.

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific 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)	Nitrogen oxides (NOx) emissions shall not exceed 0.18 tons per month averaged over a 12-month rolling period.  Carbon monoxide (CO) emissions shall not exceed 0.15 tons per month averaged over a 12-month rolling period.  Particulate emissions (PE <sup>1</sup> ) shall not exceed 0.42tons per month (from melting and fuel burning operations) averaged over a 12-month rolling period.  See b)(2)a. and b)(2)c. below
b.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)b. below

<sup>1</sup> In this permit, particulate emissions (PE) are being used as surrogate for both particulate matter 10 microns and less in diameter (PM<sub>10</sub>) and particulate matter 2.5 microns and less in diameter (PM<sub>2.5</sub>)



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-07(B)	This emissions unit is exempt from the visible emissions limitations for fugitive dust, specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e), because the emissions unit is not located within areas identified in "Appendix A" of OAC rule 3745-17-08.
d.	OAC rule 3745-17-08(B)	This emissions unit is not located within areas identified in "Appendix A" of OAC rule 3745-17-08, therefore, the requirements of OAC rule 3745-17-08(B), which requires the installation of reasonably available control measures to prevent fugitive dust, do not apply to this emissions unit pursuant to OAC rule 3745-17-08(A)(1).
e.	40 CFR, Part 63, Subpart RRR	See b)(2)d. and c(2) below
f.	OAC rule 3745-114-01	See g)(1) below

(2) Additional Terms and Conditions

- a. The Best Available Technology (BAT) emission limits apply until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- b. The following term applies once the 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.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE, NOx emissions, and CO emissions from this air contaminant source since the potential to emit is less than 10 tons per year.

- c. The emission limits established under OAC rule 3745-31-05(A)(3) reflect the emissions unit's potential to emit (PTE). Therefore, no recordkeeping or reporting is required to demonstrate compliance with these emission limits.
- d. The emission limitation required by 40 CFR, Part 63, Subpart RRR is not applicable to this unit because, for the purposes of this subpart, aluminum die casting facilities, aluminum foundries, and aluminum extrusion facilities are not considered to be secondary aluminum production facilities if the only materials they melt are clean charge, customer returns, or internal scrap, and if they do not operate sweat furnaces, thermal chip dryers, or scrap dryers/delacquering kilns/decoating kilns.



c) Operational Restrictions

- (1) The permittee shall only burn natural gas in this emissions unit.
- (2) The permittee shall charge this emissions unit with only clean aluminum materials (i.e., bar stock, ingots, and clean foundry returns). Aluminum scrap; aluminum contaminated with grease, oil, dirt or other materials; or contaminated foundry returns shall not be employed in this emissions unit.
- (3) Neither demagging nor degassing shall be performed in this emissions unit. Only fluxing, performed with the addition of dry powdered fluxes, for the sole purpose of preventing, reducing, and removing oxide impurities from the aluminum melt, shall be permitted in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall record and maintain each month the following information for this emissions unit:
  - a. all time periods when raw materials charged did not comply with the requirement in c)(2) above.
  - b. all time periods when a fuel other than natural gas was used in this emissions unit.
  - c. any time demagging or degassing was performed in this emissions unit.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (2) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (3) The permittee shall identify the following information in the annual PER in accordance with the monitoring requirements in d)(1) above:
  - a. each day when a fuel other than natural gas was burned in this emissions unit, the type and quantity of fuel burned, as well as the reason(s) the alternative fuel was burned; and
  - b. any instances when any materials other than clean and dry aluminum bar stock, ingots, and clean foundry returns were charged into this emissions unit.
  - c. each day demagging or degassing was performed in this emissions unit.



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 Limitations

NOx emissions shall not exceed 0.18 tons per month averaged over a 12-month rolling period.

CO emissions shall not exceed 0.15 tons per month averaged over a 12-month rolling period.

Applicable Compliance Method

The above emission limits reflect the potential to emit for this emissions unit. The limits were derived from the following calculations:

$$0.098 \frac{lb\ NOx}{mmBtu} * 5 \frac{mmBtu}{hr} * 8760 \frac{hr}{yr} * \frac{1\ ton}{2000\ lbs} * \frac{1\ yr}{12\ months} = 0.18 \frac{tons\ NOx}{month}$$

$$0.0824 \frac{lb\ CO}{mmBtu} * 5 \frac{mmBtu}{hr} * 8760 \frac{hr}{yr} * \frac{1\ ton}{2000\ lbs} * \frac{1\ yr}{12\ months} = 0.15 \frac{tons\ CO}{month}$$

\*Emission factors are taken from Table 1.4-1 & 1.4-2, Chapter 1 of AP-42

Because these emission limits above reflect the potential to emit for this emissions unit, there is no ongoing method to demonstrate compliance.

b. Emission Limitation

PE shall not exceed 0.42tons per month (from melting and fuel burning operations) averaged over a 12-month rolling period.

Applicable Compliance Method

The above emission limit reflects the potential to emit for this emissions unit. The limit is derived from the following calculations:

From fuel burning operations:

$$0.0075 \frac{lb\ PE}{mmBtu} * 5 \frac{mmBtu}{hr} * 8760 \frac{hr}{yr} * \frac{1\ ton}{2000\ lbs} * \frac{1\ yr}{12\ month} = 0.014 \frac{tons\ PE}{month}$$

From aluminum melting operations:

$$1.10 \frac{lb\ PE}{tons\ Al} * 8760 \frac{tons\ Al}{yr} * \frac{1\ ton}{2000\ lbs} * \frac{1\ yr}{12\ month} = 0.402 \frac{ton\ PE}{month}$$



**Final Permit-to-Install and Operate**

General Die Casters Inc

**Permit Number:** P0118577

**Facility ID:** 1677130105

**Effective Date:** 3/31/2015

Total allowed emissions:

$$0.014 \frac{\text{tons (fuel burning)}}{\text{month}} + 0.402 \frac{\text{tons (melting)}}{\text{month}} = 0.416 \frac{\text{tons PE}}{\text{month}}$$

\*\*Emission factors are taken from Table 1.4-1 & 1.4-2, Chapter 1 of AP-42 and STAPPA/ALAPCO "Air Quality Permits", A Handbook for Regulators and Industry, Vol. 2, Section 11, Aluminum-Melting Reverberatory Furnaces.

Because these limits reflect the potential to emit for this emissions unit, there is no ongoing method to demonstrate compliance.

g) Miscellaneous Requirements

- (1) Modeling to demonstrate compliance with, the Toxic Air Contaminant Statute, ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit-to-install and operate (PTIO) prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTIO.



**2. Emissions Unit Group - Aluminum Reverberatory Furnaces: F001, F002, F003, F004, F005, F006, F007, F008**

EU ID	Operations, Property and/or Equipment Description
F001	1.2 mmBtu/hr natural gas fired aluminum melt & hold reverberatory furnace for die casting.
F002	1.2 mmBtu/hr natural gas fired aluminum melt & hold reverberatory furnace for die casting.
F003	1.2 mmBtu/hr natural gas fired aluminum melt & hold reverberatory furnace for die casting.
F004	1.2 mmBtu/hr natural gas fired aluminum melt & hold reverberatory furnace for die casting.
F005	1.2 mmBtu/hr natural gas fired aluminum melt & hold reverberatory furnace for die casting.
F006	1.2 mmBtu/hr natural gas fired aluminum melt & hold reverberatory furnace for die casting.
F007	1.2 mmBtu/hr natural gas fired aluminum melt & hold reverberatory furnace for die casting.
F008	1.2 mmBtu/hr natural gas fired aluminum melt & hold reverberatory furnace for die casting.

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific 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)	Particulate Emissions (PE <sup>2</sup> ) shall not exceed 0.084 tons per month (from melting and fuel burning operations), per emissions unit, averaged over a 12-month rolling period.  Nitrogen Oxides (NOx) emissions shall not exceed 0.044 tons per month, per

<sup>2</sup> In this permit, particulate emissions (PE) are being used as surrogate for both particulate matter 10 microns and less in diameter (PM<sub>10</sub>) and particulate matter 2.5 microns and less in diameter (PM<sub>2.5</sub>)



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		emissions unit, averaged over a 12-month rolling period.  Carbon Monoxide (CO) emissions shall not exceed 0.037 tons per month, per emissions unit, averaged over a 12-month rolling period.  See b)(2)a. and b)(2)c. below
b.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)b. below
c.	OAC rule 3745-17-07(B)	These emissions units are exempt from the visible emissions limitations for fugitive dust, specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e), because the emission units are not located within areas identified in "Appendix A" of OAC rule 3745-17-08.
d.	OAC rule 3745-17-08(B)	These emissions units are not located within areas identified in "Appendix A" of OAC rule 3745-17-08, therefore, the requirements of OAC rule 3745-17-08(B), which requires the installation of reasonably available control measures to prevent fugitive dust, do not apply to these emissions units pursuant to OAC rule 3745-17-08(A)(1).
e.	40 CFR, Part 63, Subpart RRR	See b)(2)d. and c(2) below.
f.	OAC rule 3745-114-01	See g)(1) below.

(2) Additional Terms and Conditions

- a. The Best Available Technology (BAT) emission limits apply until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- b. The following term applies once the 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.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE, NOx emissions, and CO emissions from these air



contaminant sources since their potential to emit is less than 10 tons per year per emissions unit.

- c. The emission limits established under OAC rule 3745-31-05(A)(3) reflect the emissions units' potential to emit (PTE). Therefore, no recordkeeping or reporting is required to demonstrate compliance with these emission limits.
- d. The emission limitation required by 40 CFR, Part 63, Subpart RRR is not applicable to this unit because, for the purposes of this subpart, aluminum die casting facilities, aluminum foundries, and aluminum extrusion facilities are not considered to be secondary aluminum production facilities if the only materials they melt are clean charge, customer returns, or internal scrap, and if they do not operate sweat furnaces, thermal chip dryers, or scrap dryers/delacquering kilns/decoating kilns.

c) Operational Restrictions

- (1) The permittee shall only burn natural gas in these emissions units.
- (2) The permittee shall charge these emissions units with only clean aluminum materials (i.e., bar stock, ingots, and clean foundry returns). Aluminum scrap; aluminum contaminated with grease, oil, dirt or other materials; or contaminated foundry returns shall not be employed in these emissions units.
- (3) Neither demagging nor degassing shall be performed in these emissions units. Only fluxing, performed with the addition of dry powdered fluxes, for the sole purpose of preventing, reducing, and removing oxide impurities from the aluminum melt, shall be permitted in these emissions units.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall record and maintain each month the following information for these emissions units:
  - a. all time periods when raw materials charged did not comply with the requirement in c)(2) above;
  - b. all time periods when a fuel other than natural gas was used in these emissions units; and
  - c. any time demagging or degassing was performed in these emissions units.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.



- (2) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (3) The permittee shall identify the following information in the annual PER in accordance with the monitoring environments in d)(1) above:
  - a. each day when a fuel other than natural gas was burned in these emissions units, the type and quantity of fuel burned, as well as the reason(s) the alternative fuel was burned;
  - b. any instances when any materials other than clean and dry aluminum bar stock, ingots, and clean foundry returns were charged into these emissions units; and
  - c. any day when demagging or degassing was performed in these emissions units.

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 Limitations

NOx emissions shall not exceed 0.044 tons per month, per emissions unit, averaged over a 12-month rolling period.

CO emissions shall not exceed 0.037 tons per month, per emissions unit, averaged over a 12-month rolling period.

Applicable Compliance Method

The above emission limits reflect the potential to emit for these emissions units. The limits are derived from the following calculations:

$$0.098 \frac{lb\ NOx}{mmBtu} * 1.2 \frac{mmBtu}{hr} * 8760 \frac{hr}{yr} * \frac{1\ ton}{2000\ lbs} * \frac{1\ yr}{12\ months} = 0.044 \frac{tons\ NOx}{month}$$

$$0.0824 \frac{lb\ CO}{mmBtu} * 1.2 \frac{mmBtu}{hr} * 8760 \frac{hr}{yr} * \frac{1\ ton}{2000\ lbs} * \frac{1\ yr}{12\ months} = 0.037 \frac{tons\ CO}{month}$$

\*Emission factors are taken from Table 1.4-1 & 1.4-2, Chapter 1 of AP-42

Because these limits reflect the potential to emit for these emissions units, there is no ongoing method to demonstrate compliance.

b. Emission Limitation

PE shall not exceed 0.084tons per month (from melting and fuel burning operations), per emissions unit, averaged over a 12-month rolling period.



Applicable Compliance Method

The above emission limit reflects the potential to emit for these emissions units. The limit is derived from the following calculations:

From fuel burning operations:

$$0.0075 \frac{lb PE}{mmBtu} * 1.2 \frac{mmBtu}{hr} * 8760 \frac{hr}{yr} * \frac{1 ton}{2000 lbs} * \frac{1 yr}{12 months} = 0.003 \frac{tons PE}{month}$$

From aluminum melting operations:

$$1.10 \frac{lb PE}{tons Al} * 1752 \frac{tons Al}{yr} * \frac{1 ton}{2000 lbs} * \frac{1 yr}{12 months} = 0.081 \frac{ton PE}{month}$$

Total allowed emissions:

$$0.003 \frac{tons (fuel burning)}{month} + 0.081 \frac{tons (melting)}{month} = 0.084 \frac{tons PE}{month}$$

\*\*Emission factors are taken from Table 1.4-1 & 1.4-2, Chapter 1 of AP-42 and STAPPA/ALAPCO "Air Quality Permits", A Handbook for Regulators and Industry, Vol. 2, Section 11, Aluminum-Melting Reverberatory Furnaces.

Because this limit reflects the potential to emit for these emissions units, there is no ongoing method to demonstrate compliance.

g) Miscellaneous Requirements

- (1) Modeling to demonstrate compliance with, the Toxic Air Contaminant Statute, ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit-to-install and operate (PTIO) prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTIO.