

Facility ID: 1576050177 Issuance type: Draft State Permit To Operate

This version of facility specific terms and conditions was converted from a database format to an HTML file during an upgrade of the Ohio EPA, Division of Air Pollution Control's permitting software. Every attempt has been made to convert the terms and conditions to look and substantively conform to the permit issued or being drafted in STARS. However, the format of the terms may vary slightly from the original. In addition, although it is not expected, there is a slight possibility that a term and condition may have been inadvertently "left out" of this reproduction during the conversion process. Therefore, if this version is to be used as a starting point in drafting a new version of a permit, it is imperative that the entire set of terms and conditions be reviewed to ensure they substantively mimic the issued permit. The official version of any permit issued final by Ohio EPA is kept in the Agency's Legal section. The Legal section may be contacted at (614) 644-3037.

In addition to the terms and conditions, hyperlinks have been inserted into the document so you may more readily access the section of the document you wish to review.

Finally, the term language under "Part II" and before "A. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

- [Go to Part II for Emissions Unit F004](#)
- [Go to Part II for Emissions Unit F005](#)
- [Go to Part II for Emissions Unit P003](#)
- [Go to Part II for Emissions Unit P027](#)
- [Go to Part II for Emissions Unit P034](#)
- [Go to Part II for Emissions Unit P035](#)
- [Go to Part II for Emissions Unit P036](#)
- [Go to Part II for Emissions Unit P041](#)
- [Go to Part II for Emissions Unit P042](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1576050177 Emissions Unit ID: F004 Issuance type: Draft State Permit To Operate

[Go to the top of this document](#)

Part II - Special Terms and Conditions

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.

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
pouring/casting with capacity of 20 tons of metal poured/cast per hour (without a control device)	OAC rule 3745-17-07(B)(1)	See section A.2.b below.
	OAC rule 3745-17-08(B)	See section A.2.c below.
	OAC rule 3745-35-07	The fugitive dust emissions from this emissions unit shall not exceed 21.07 tons of PM10 and 42.96 tons of PM per rolling, 12-month period.
		See section A.2.a below.

2. Additional Terms and Conditions

- (a) By request of the applicant and pursuant to OAC rule 3745-35-07, the following Special Terms & Conditions are federally enforceable and incorporated into this permit to limit the potential to emit for this emissions unit: A-F.
 Visible emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average. For purposes of verifying compliance with this requirement, the visible emissions shall be observed at any non-stack egress point from the building housing this emissions unit. These egress points shall include, but not be limited to, doorways, windows, and roof monitors.
 The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM).

 At a minimum, the permittee's employment of RACM for this emissions unit shall include the following: at least ninety percent of the total iron cast shall be cast in permanent molds.

B. Operational Restrictions

1. No less than 90% of the total iron cast shall be cast in permanent molds.
2. The maximum annual metal melting rate of iron cast shall be less than 37,200 tons of metal, based upon a rolling, 12-month summation.
3. The maximum annual metal melting rate of iron cast in permanent molds shall be less than 33,480 tons of metal, based upon a rolling, 12-month summation.
4. The maximum annual metal melting rate of iron cast in non-permanent molds shall be less than 3,720 tons of metal, based upon a rolling, 12-month summation.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the monthly and rolling, 12-month summation amounts (in tons) of metal cast in permanent molds and in all other molds.
 2. The permittee shall perform weekly checks when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from any non-stack egress point (e.g. windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the location and color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.
 3. The permittee shall calculate and maintain monthly records of the following information for this emissions unit:
 - a. the fugitive PM10 and PM emissions, in tons; and
 - b. the rolling, 12-month summations of the PM10 and PM emissions.
- D. Reporting Requirements**
1. The permittee shall submit quarterly deviation reports that identify all deviations of the limitations on the iron cast in permanent molds and in all other molds.
 2. The permittee shall submit semiannual written reports which:
 - a. identify all days during which any visible emissions of fugitive dust were observed from any non-stack egress point serving this emissions unit; and
 - b. describe any corrective actions taken to eliminate the visible emissions.

These reports shall be submitted by January 31 and July 31 of each year and shall cover the previous 6-month period.
 3. The permittee shall submit quarterly deviation reports that identify all exceedances of the rolling, 12-month emission limitations for PM10 and PM emissions.
 4. The permittee shall submit annual reports that specify the total PM10 and PM emissions from this emissions unit during the previous calendar year. Each report shall be submitted by January 31 of each year and shall include the calculations for the PM10 and PM emissions.
- E. Testing Requirements**
1. Compliance with the emission limitations in section A.I. of these terms and conditions shall be determined in accordance with the following methods:
Emissions Limitation:

Visible emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation for visible emissions shall include any non-stack egress points serving this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.
Emissions Limitation:

The fugitive emissions from this emissions unit shall be less than 21.07 tons of PM10 per rolling, 12-month period.

Applicable Compliance Method:

An emission factor of 2.06 lbs of filterable PM10/ton metal is specified in FIRE 6.24 for SCC 3-04-003-20. It is assumed that the PM10 emission factor is equal to the filterable PM10 emission factor. The emission factor may be reduced by 50% (an estimate) when iron is poured in permanent molds.

The emissions from this emissions unit are inherently restricted by the amount of metal processed in the induction furnaces. The maximum annual metal melting rate for the five electric induction furnaces (P003, P034, P035, P041, and P042) shall not exceed a total of 37,200 tons, based upon a rolling, 12-month summation of the metal melting rates. No less than 90% of the total iron cast shall be cast in permanent molds. At most 33,480 tons of the iron poured shall be cast in permanent molds. At most 3,720 tons shall be cast in non-permanent molds.

PM10 emissions shall be calculated in accordance with the following:

i. The rolling, 12-month PM10 emissions from casting in permanent molds, in tons = 1.03 lbs PM10/ton of metal x the rolling, 12-month summation of the tons of molds cast in permanent molds x 1 ton/2000 lbs.

ii. The rolling, 12-month PM10 emissions from casting in all non-permanent molds, in tons = 2.06 lbs PM10/ton of metal x the rolling, 12-month summation of the tons of metal cast in all non-permanent molds x 1 ton/2000 lbs.

iii. The total rolling, 12-month summation of the PM10 emissions is equal to the sum of the PM10 emissions from casting in permanent molds and the PM10 emissions from casting in all non-permanent molds.
Emissions Limitation:

The fugitive emissions from this emissions unit shall be less than 42.96 tons of PM per rolling, 12-month period.

Applicable Compliance Method:

An emission factor of 4.2 lbs of filterable PE/ton metal is specified in FIRE 6.24 for SCC 3-04-003-20. It is assumed that the particulate emission factor is equal to the filterable particulate emission factor. The emission factor may be reduced by 50% (an estimate) when iron is poured in permanent molds.

The emissions from this emissions unit are inherently restricted by the amount of metal processed in the induction furnaces. The maximum annual metal melting rate for the five electric induction furnaces (P003, P034, P035, P041, and P042) shall not exceed a total of 37,200 tons, based upon a rolling, 12-month summation of the metal melting rates. No less than 90% of the total iron cast shall be cast in permanent molds. At most 33,480 tons of the iron poured shall be cast in permanent molds. At most 3,720 tons shall be cast in non-permanent molds.

PM10 emissions shall be calculated in accordance with the following:

- i. The rolling, 12-month PM10 emissions from casting in permanent molds, in tons = 2.1 lbs PE/ton of metal x the rolling, 12-month summation of the tons of molds cast in permanent molds x 1 ton/2000 lbs.
- ii. The rolling, 12-month particulate emissions from casting in all non-permanent molds, in tons = 4.2 lbs PE/ton of metal x the rolling, 12-month summation of the tons of metal cast in all non-permanent molds x 1 ton/2000 lbs.
- iii. The total rolling, 12-month summation of the particulate emissions is equal to the sum of the particulate emissions from casting in permanent molds and the particulate emissions from casting in all non-permanent molds.

F. Miscellaneous Requirements

- 1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1576050177 Emissions Unit ID: F005 Issuance type: Draft State Permit To Operate

[Go to the top of this document](#)

Part II - Special Terms and Conditions

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.

A. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
casting/cooling (without a control device)	OAC rule 3745-17-07(B)(1)	See section A.2.b below.
	OAC rule 3745-17-08(B)	See section A.2.c below.
	OAC rule 3745-35-07	The fugitive dust emissions from this emissions unit shall not exceed 14.32 tons of PM10 and 14.32 tons of PM per rolling, 12-month period.

See section A.2.a below.

2. Additional Terms and Conditions

- (a) By request of the applicant and pursuant to OAC rule 3745-35-07, the following Special Terms & Conditions are federally enforceable and incorporated into this permit to limit the potential to emit for this emissions unit: A-F.
 Visible emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average. For purposes of verifying compliance with this requirement, the visible emissions shall be observed at any non-stack egress point from the building housing this emissions unit. These egress points shall include, but not be limited to, doorways, windows, and roof monitors.
 The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM).

At a minimum, the permittee's employment of RACM for this emissions unit shall include the following:

at least ninety percent of the total iron cast shall be cast in permanent molds.

B. Operational Restrictions

1. No less than 90% of the total iron cast shall be cast in permanent molds.
2. The maximum annual metal melting rate of iron cast shall be less than 37,200 tons of metal, based upon a rolling, 12-month summation.
3. The maximum annual metal melting rate of iron cast in permanent molds shall be less than 33,480 tons of metal, based upon a rolling, 12-month summation.
4. The maximum annual metal melting rate of iron cast in non-permanent molds shall be less than 3,720 tons of metal, based upon a rolling, 12-month summation.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the monthly and rolling, 12-month summation amounts (in tons) of metal cast in permanent molds and in all other molds.

The permittee shall calculate and record the percentage of iron cast in permanent molds for each month.

The permittee shall calculate and record the percentage of iron cast in non-permanent molds and the tons of iron cast in permanent molds for each month.
2. The permittee shall perform weekly checks when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from any non-stack egress point (e.g. windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the location and color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.
3. The permittee shall calculate and maintain monthly records of the following information for this emissions unit:
 - a. the fugitive PM10 and PM emissions, in tons; and
 - b. the rolling, 12-month summations of the PM10, and PM emissions, in tons.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation reports that identify all deviations of the limitations on the iron cast in permanent molds and in all other molds.
2. The permittee shall submit semiannual written reports which:
 - a. identify all days during which any visible emissions of fugitive dust were observed from any non-stack egress point serving this emissions unit; and
 - b. describe any corrective actions taken to eliminate the visible emissions.

These reports shall be submitted by January 31 and July 31 of each year and shall cover the previous 6-month period.
3. The permittee shall submit quarterly deviation reports that identify all exceedances of the rolling, 12-month emission limitations for PM10 and PM emissions.
4. The permittee shall submit annual reports that specify the total PM10 and PM emissions during the previous calendar year. Each report shall be submitted by January 31 of each year and shall include the calculations for the PM10 and PM emissions.

E. Testing Requirements

1. Compliance with the emission limitations in section A.I. of these terms and conditions shall be determined in accordance with the following methods:
Emissions Limitation:

Visible emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation for visible emissions shall include any non-stack egress points serving this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.
Emissions Limitation:

The fugitive emissions from this emissions unit shall not exceed 14.32 tons of PM10 per rolling, 12-month period.

Applicable Compliance Method:

An emission factor of 1.4 lbs of filterable PM10/ton metal is specified in FIRE 6.24 for SCC 3-04-003-25. It is assumed that the PM10 emission factor is equal to the filterable PM10 emission factor. The emission factor may be reduced by 50% (an estimate) when iron is poured in permanent molds.

The emissions from this emissions unit are inherently restricted by the amount of metal processed in the

induction furnaces. The maximum annual metal melting rate for the five electric induction furnaces (P003, P034, P035, P041, and P042) shall not exceed a total of 37,200 tons, based upon a rolling, 12-month summation of the metal melting rates. No less than 90% of the total iron cast shall be cast in permanent molds. At most 33,480 tons of the iron poured shall be cast in permanent molds. At most 3,720 tons shall be cast in non-permanent molds.

PM10 emissions shall be calculated in accordance with the following:

- i. The rolling, 12-month PM10 emissions from casting in permanent molds, in tons = 0.7 lb PM10/ton of metal x the rolling, 12-month summation of the tons of molds cast in permanent molds x 1 ton/2000 lbs.
 - ii. The rolling, 12-month summation of the tons of PM10 emissions from casting in all non-permanent molds, in tons = 1.4 lbs PM10/ton of metal x the rolling, 12-month summation of the tons of metal cast in all non-permanent molds x 1 ton/2000 lbs.
 - iii. The total rolling, 12-month summation of the PM10 emissions is equal to the sum of the PM10 emissions from casting in permanent molds and the PM10 emissions from casting in all non-permanent molds.
- Emissions Limitation:

The fugitive emissions from this emissions unit shall not exceed 14.32 tons of PM per rolling, 12-month period.

Applicable Compliance Method:

An emission factor of 1.4 lbs of filterable PM10/ton metal is specified in Fire 6.24 for SCC 3-04-003-25. It is assumed that the particulate emission factor is equal to the filterable PM10 emission factor. The emission factor may be reduced by 50% (an estimate) when iron is poured in permanent molds.

The emissions from this emissions unit are inherently restricted by the amount of metal processed in the induction furnaces. The maximum annual metal melting rate for the five electric induction furnaces (P003, P034, P035, P041, and P042) shall not exceed a total of 37,200 tons, based upon a rolling, 12-month summation of the metal melting rates. No less than 90% of the total iron cast shall be cast in permanent molds. At most 33,480 tons of the iron poured shall be cast in permanent molds. At most 3,720 tons shall be cast in non-permanent molds.

PM10 emissions shall be calculated in accordance with the following:

- i. The rolling, 12-month particulate emissions from casting in permanent molds, in tons = 0.7 lb PE/ton of metal x the rolling, 12-month summation of the tons of molds cast in permanent molds x 1 ton/2000 lbs.
- ii. The rolling, 12-month summation of the tons of particulate emissions from casting in all non-permanent molds, in tons = 1.4 lbs PE/ton of metal x the rolling, 12-month summation of the tons of metal cast in all non-permanent molds x 1 ton/2000 lbs.
- iii. The total rolling, 12-month summation of the particulate emissions is equal to the sum of the particulate emissions from casting in permanent molds and the annual particulate emissions from casting in all non-permanent molds.

F. Miscellaneous Requirements

- 1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1576050177 Emissions Unit ID: P003 Issuance type: Draft State Permit To Operate

[Go to the top of this document](#)

Part II - Special Terms and Conditions

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.

A. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
6 tons/hr electric induction furnace	OAC rule 3745-17-07(B)(1)	See section A.2.b below.

controlled by the Melt Department baghouse
(No. 3 induction furnace)

OAC rule 3745-17-08(B)(3)

See section A.2.c below for the required control measures.

OAC rule 3745-35-07

See sections A.2.a and B.1 below.

2. Additional Terms and Conditions

- (a) By request of the applicant and pursuant to OAC rule 3745-35-07, the following Special Terms & Conditions are federally enforceable and incorporated into this permit to limit the potential to emit for this emissions unit: A-F.
- Visible emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average. For purposes of verifying compliance with this requirement, the visible emissions shall be observed at any non-stack egress point from the building housing this emissions unit. These egress points shall include, but not be limited to, doorways, windows, and roof monitors.
- The permittee shall minimize or eliminate visible emissions through the employment of reasonably available control measures (RACM).

At a minimum, the permittee's employment of RACM for this emissions unit shall include the following:

i. the use of ductwork, hoods, fans, etc. to capture emissions of fugitive dust [the capture efficiency shall be sufficient to minimize or eliminate visible emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design]; and

ii. the control of the captured fugitive dust emissions using a baghouse that achieves and maintains an outlet emission rate of not greater than 0.010 gr/dscf and no visible particulate emissions. This facility has five electric induction furnaces (P003, P034, P035, P041, and P042). All of these furnaces are vented to a common baghouse. At least 95% of the emissions from charging, melting, and tapping operations associated with these furnaces shall be captured and vented to this baghouse. In addition, emissions units P036 (Ductile Iron Inoculation) and P027 (Sand Shakeout) shall be vented to this same baghouse.

The baghouse shall have two separate collection chambers which allow for the continuous use of the baghouse in the event that one of the collection chambers has a malfunction. The dust control system shall also have damper controls so that when a furnace is operating or inoculation is taking place, the damper is open to that furnace and/or the inoculation area. When a furnace is being tapped, the damper shall be opened over the tapping area.

The emissions unit was installed in 1971 and the baghouse was installed in 1995. The control device was installed after the installation of the fugitive emissions unit and after February 15, 1972. This emissions unit is a fugitive dust source.

B. Operational Restrictions

1. The maximum annual metal melting rate for the five electric induction furnaces (P003, P034, P035, P041, and P042) shall be less than 37,200 tons of metal, based upon a rolling, 12-month summation of the metal melting rates.
2. The pressure drop across the baghouse shall be maintained within the range of 2 to 4 inches of water while any emissions unit vented to this control device is in operation.

The permittee may petition the Canton City Health Department, Air Pollution Control Division (CCHD, APCD) for reestablishment of the pressure drop range provided the permittee can demonstrate to the CCHD, APCD's satisfaction that the operating conditions upon which the pressure drop range was previously established are no longer applicable.
3. When ductile iron inoculation is occurring in one furnace, all other furnaces shall be idled. Being idled means that no melting or pouring is taking place, i.e., hot standby.
4. No more than two furnaces shall be tapped simultaneously.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the total weight of metal melted in the five electric induction furnaces (P003, P034, P035, P041, and P042). Individual records for each furnace do not have to be maintained. In addition, the permittee shall maintain monthly records of the rolling, 12-month summation of the total weight of metal melted in the five electric induction furnaces.
2. The dust control system described in section A.2.c above shall be monitored by programmable logic control (PLC) with a panel view monitor that shall continuously monitor the dust collection system's operation. This system shall constantly monitor the following parameters:
 - a. the pressure differential across the baghouse and an alarm shall sound when the pressure differential goes outside the range of 2 to 4 inches of water;
 - b. air stream temperature, and an alarm shall sound when temperature nears the upper limit of the baghouse filter media; and
 - c. the flow rate, in cubic feet per minute (CFM), of the system.

The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record all periods of time when the pressure drop across the baghouse was outside the range specified in B.2.
3. The permittee shall maintain daily records of the hours of operation and the operating scenarios of each of the five induction furnaces to ensure compliance with sections B.3 and B.4 above. The records shall identify all periods of time when inoculation occurred at one furnace and all other furnaces were not being idled and all periods of time when more than two furnaces were tapped simultaneously.

4. The permittee shall perform daily checks when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse stack and any non-stack egress point (e.g., windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible particulate emissions shall be noted in an operations log. If visible particulate emissions are observed, the permittee shall also note the following in the operations log:
 - a. the location and color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible particulate emission incident; and
 - e. any corrective actions taken to eliminate the visible particulate emissions.
- D. Reporting Requirements**
1. The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.
 2. The permittee shall submit quarterly deviation (excursion) reports that identify all deviations of the operating scenarios outlined in sections B.3 and B.4 above and include an explanation of why the deviations occurred.
 3. The permittee shall submit semiannual written reports which:
 - a. identify all days during which any visible particulate emissions were observed from the baghouse and/or any non-stack egress point serving this emissions unit; and
 - b. describe any corrective actions taken to eliminate the visible emissions.

These reports shall be submitted by January 31 and July 31 of each year and shall cover the previous 6-month period.
 4. The permittee shall submit quarterly deviation (excursion) reports that identify each monthly record showing that the limit of 37,200 tons of metal melted per rolling, 12-month period for all five furnaces (P003, P034, P035, P041 and P042) was exceeded.
- E. Testing Requirements**
1. Compliance with the emission limitations in section A.I. of these terms and conditions shall be determined in accordance with the following methods:
Emissions Limitation:

At a minimum, the permittee's employment of RACM for this emissions unit shall include the control of the captured fugitive dust emissions using a baghouse that achieves and maintains no visible particulate emissions.

Applicable Compliance Method:

Compliance shall be determined using the requirements established in 40 CFR Part 60, Appendix A, Method 22.
Emissions Limitation:

At a minimum, the permittee's employment of RACM for this emissions unit shall include the control of the captured fugitive dust emissions using a baghouse that achieves and maintains an outlet emission rate of not greater than 0.010 gr/dscf.

Applicable Compliance Method:

Compliance shall be determined through stack testing performed in accordance with the requirements established in 40 CFR Part 60, Appendix A, Methods 1-5 and the procedures specified in OAC rule 3745-17-03 (B)(10).
Emissions Limitation:

Visible emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation for visible emissions shall include any non-stack egress points serving this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.
 2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
The emission testing shall be conducted within 6 months after issuance of this permit and within 6 months prior to permit expiration.
The emission testing shall be conducted to demonstrate compliance with the allowable visible emission limitations in sections A.2.b and A.2.c.ii and the allowable mass emission rate for particulates from the baghouse in section A.2.c.ii.
The following parameters also shall be monitored and recorded during the emissions testing: the process weight rate (in tons per hour); the pressure drop across the baghouse; air stream temperature; and the flow rate in cubic feet per minute.
The following test method(s) shall be employed to demonstrate compliance:
 - i. for the visible emissions of fugitive dust, Method 9 of 40 CFR Part 60, Appendix A;
 - ii. for the visible particulate emissions from the baghouse, Method 22 of 40 CFR Part 60, Appendix A; and
 - iii. for the mass emission rate for particulates and the particulate grain loading, Methods 1-5 of 40 CFR Part 60, Appendix A.
The test(s) shall be conducted while five induction furnaces, inoculation (P036), and the sand shakeout (P027)

are being operated at or near their maximum capacities, unless otherwise approved by the CCHD, APCD.
 Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the CCHD, APCD. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit's operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the CCHD, APCD's refusal to accept the results of the emission test(s).

Personnel from the CCHD, APCD shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the CCHD, APCD within 30 days following completion of the test(s).

F. Miscellaneous Requirements

- 1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1576050177 Emissions Unit ID: P027 Issuance type: Draft State Permit To Operate

[Go to the top of this document](#)

Part II - Special Terms and Conditions

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.

A. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
sand shakeout machine with a capacity of 20 tons per hour, controlled by the Melt Department baghouse	OAC rule 3745-17-07(B)(1)	See section A.2.b below.
	OAC rule 3745-17-08(B)(3)	The particulate emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-35-07. See section A.2.c below for the required control measures.
	OAC rule 3745-35-07	During the operation of the Melt Department baghouse, while any combination of the emissions units served by the baghouse are in operation, the PE and PM10 emission rates from the baghouse shall not exceed 0.010 grain/dscf and there shall be no visible particulate emissions from the baghouse. The annual stack emissions from this emissions unit shall not exceed 0.187 ton of PM10 and 0.268 ton of PE per rolling, 12-month period. The annual fugitive emissions from this emissions unit shall not exceed 0.417 ton of fugitive PM10 and 0.595 ton of fugitive PM per rolling, 12-month period. The hourly VOC emissions from this emissions unit shall not exceed 24.0 lbs/hr. The annual VOC emissions from this emissions unit shall not exceed 2.23 tons per rolling, 12-month period. See sections A.2.a and A.2.c below.

2. Additional Terms and Conditions

- (a) By request of the applicant and pursuant to OAC rule 3745-35-07, the following Special Terms & Conditions are federally enforceable and incorporated into this permit to limit the potential to emit for this emissions unit: A-F.
- Visible emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average. For purposes of verifying compliance with this requirement, the visible emissions shall be observed at any non-stack egress point from the building housing this emissions unit. These egress points shall include, but not be limited to, doorways, windows, and roof monitors.
- The permittee shall minimize or eliminate visible emissions of fugitive dust through the employment of reasonably available control measures (RACM).

At a minimum, the permittee's employment of RACM for this emissions unit shall include the following:

- i. the use of ductwork, hoods, fans, etc. to capture emissions of fugitive dust [the capture efficiency shall be sufficient to minimize or eliminate visible emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design]; and
- ii. the control of captured fugitive dust emissions using a baghouse that achieves and maintains an outlet emission rate of not greater than 0.010 gram/dscf and no visible particulate emissions.

This facility has five electric induction furnaces (P003, P034, P035, P041, and P042). All of these furnaces are vented to the Melt Department baghouse. In addition, emissions units P036 (Ductile Iron Inoculation) and P027 (Sand Shakeout) shall be vented to this same baghouse. At least 90% of the emissions from emissions unit P027 shall be captured and vented to this baghouse. The maximum flowrate through the baghouse is 60,000 dscf/min.

The baghouse shall have two separate collection chambers which allow for the continuous use of the baghouse in the event that one of the collection chambers has a malfunction. This system shall also have damper controls so that when a furnace is operating or inoculation is taking place, the damper is open to that furnace and/or the inoculation area. When a furnace is being tapped, the damper shall be opened over the tapping area.

The emissions unit was installed in 1973 and the scrubber was installed in 1976 (later replaced by a baghouse in 1995). Consequently, this emissions unit is subject to the fugitive dust control requirements of OAC rule 3745-17-08(B)(3) because the control device was installed after the installation of the fugitive emissions unit and after February 15, 1972.

B. Operational Restrictions

1. This emissions unit is inherently restricted by the amount of metal processed in the induction furnaces. The maximum annual metal melting rate for the five electric induction furnaces (P003, P034, P035, P041, and P042) shall not exceed a total of 37,200 tons, based upon a rolling, 12-month summation of the metal melting rates.
2. The pressure drop across the baghouse shall be maintained within the range of 2 to 4 inches of water while the emissions unit is in operation.

The permittee may petition the Canton City Health Department, Air Pollution Control Division (CCHD, APCD) for reestablishment of the pressure drop range provided the permittee can demonstrate to the CCHD, APCD's satisfaction that the operating conditions upon which the pressure drop range was previously established are no longer applicable.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the total weight of metal melted in the five electric induction furnaces (P003, P034, P035, P041, and P042). Individual records for each furnace do not have to be maintained. In addition, the permittee shall maintain monthly records of the rolling, 12-month summation of the total weight of metal melted in the five electric induction furnaces.
2. The dust control system described in condition A.2.c above shall be monitored by programmable logic control (PLC) with a panel view monitor which shall continuously monitor the dust collection system's operation. This system shall constantly monitor the following parameters: across the baghouse on a daily basis:
 - the pressure differential across the baghouse and an alarm shall sound when the pressure differential goes outside the range of 2 to 4 inches of water;
 - air stream temperature, and an alarm shall sound when the temperature nears the upper limit of the baghouse filter media; and
 - the flow rate, in cubic feet per minute (CFM), of the system.

The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record all periods of time when the pressure drop across the baghouse was outside the range specified in B.2.
3. The permittee shall perform daily checks when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse and any non-stack egress point (e.g., windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - the location and color of the emissions;
 - whether the emissions are representative of normal operations;
 - if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - the total duration of any visible emission incident; and
 - any corrective actions taken to eliminate the visible emissions.
4. The permittee shall calculate and maintain monthly records of the following information for this emissions unit:
 - the monthly and rolling, 12-month PM10 fugitive emissions, in tons;
 - the monthly and rolling, 12-month fugitive PM emissions, in tons;
 - the monthly and rolling, 12-month PM10 emissions from the baghouse, in tons;
 - the monthly and rolling, 12-month PE from the baghouse, in tons; and
 - the monthly and rolling, 12-month VOC emissions, in tons.

5. The permittee shall maintain monthly records of the hours of operation and the rolling, 12-month hours of operation for this emissions unit.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify each monthly record showing that the limit of 37,200 tons of metal melted per rolling, 12-month period, was exceeded.
2. The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.
3. The permittee shall submit semiannual written reports which:
 - identify all days during which any visible particulate emissions were observed from the baghouse and/or any non-stack egress point serving this emissions unit; and
 - describe any corrective actions taken to eliminate the visible particulate emissions.

These reports shall be submitted by January 31 and July 31 of each year and shall cover the previous 6-month period.
4. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the following emissions limitation for this emissions unit:
 - .268 ton of PE per rolling, 12-month period from the baghouse;
 - .187 ton of PM10 per rolling, 12-month period from the baghouse;
 - .595 ton of fugitive PM per rolling, 12-month period;
 - .417 ton of fugitive PM10 per rolling, 12-month period; and
 - 2.23 tons of VOC per rolling, 12-month period.
5. The permittee shall submit annual reports that specify the fugitive PM emissions, fugitive PM10 emissions, PE from the baghouse, PM10 emissions from the baghouse, and total VOC emissions, in tons, for this emissions unit.

These reports shall be submitted by January 31 of each year, shall cover the previous 12-month period, January 1 through December 31, and, and shall include the calculations of the emission rates.

E. Testing Requirements

1. Compliance with the emission limitations in section A.I. of these terms and conditions shall be determined in accordance with the following methods:
Emissions Limitation:

During the operation of the Melt Department baghouse, while any combination of the emissions units served by the baghouse are in operation, the PE and PM10 emission rates from the baghouse shall not exceed 0.010 grain/dscf.

Applicable Compliance Method:

Compliance with the PE limitation shall be determined through stack testing performed in accordance with the requirements established in 40 CFR Part 60, Appendix A, Methods 1-5 and the procedures specified in OAC rule 3745-17-03(B)(10).

Compliance with the PM10 limitation shall be determined through stack testing performed using the requirements established in 40 CFR Part 51, Appendix M, Methods 201 and 202.
Emissions Limitation:

During the operation of the Melt Department baghouse, while any combination of the emissions units served by the baghouse are in operation, there shall be no visible particulate emissions from the baghouse.

Applicable Compliance Method:

Compliance shall be determined using the requirements established in 40 CFR Part 60, Appendix A, Method 22.
Emissions Limitation:

The annual stack emissions from this emissions unit shall not exceed 0.187 ton of PM10 per rolling, 12-month period.

Applicable Compliance Method:

The PM10 emission factor = 2.24 lbs PM10/ ton of metal, SCC 3-04-003-31, FIRE 6.24, for PM10 filterable emissions. PM10 emissions are assumed to be the same as the PM10 filterable emissions. In SCC 3-04-003-31 the PE emission factor is equal to the PE filterable emission factor.

Assumed capture efficiency = 90%
Assumed control efficiency = 95%

Only 3,720 tons (10% of 37,200) of the molds are sand molds which emit particulates. Therefore, the rolling, 12-month emissions may be calculated using the following equation:

tons of metal poured during rolling, 12-month period for all non-permanent molds x 2.24 lbs PM10/ton x 0.90 x 0.05 x 1 ton/2000 lbs = ton PM10/yr

After emission testing is performed for this emissions unit, the permittee shall calculate the rolling, 12-month PE by multiplying the actual emission rate, in lbs/hr, for this emissions unit [from the latest emission test] by the rolling, 12-month hours of operation, and then dividing by 2000.
Emissions Limitation:

The annual stack emissions from this emissions unit shall not exceed 0.268 ton of PE per rolling, 12-month

period.

Applicable Compliance Method:

The PE emission factor = 3.2 lbs PE/ ton of metal, SCC 3-04-003-31, FIRE 6.24.

Assumed capture efficiency = 90%

Assumed control efficiency = 95%

Only 3,720 tons (10% of 37,200) of the molds are sand molds which emit particulates. Therefore, the rolling, 12-month emissions may be calculated using the following equation:

tons of metal poured during rolling, 12-month period for all non-permanent molds x 3.2 lbs PE/ton x 0.90 x 0.05 x 1 ton/2000 lbs = ton PE/yr

After emission testing is performed for this emissions unit, the permittee shall calculate the rolling, 12-month PE by multiplying the actual emission rate, in lbs/hr, for this emissions unit [from the latest emission test] by the rolling, 12-month hours of operation, and then dividing by 2000.

Emissions Limitation:

The annual fugitive emissions from this emissions unit shall not exceed 0.417 ton of fugitive PM10 per rolling, 12-month period.

Applicable Compliance Method:

The PM10 emission factor = 2.24 lbs PM10/ ton of metal, SCC 3-04-003-31, FIRE 6.24, for PM10 filterable emissions. PM10 emissions are assumed to be the same as the PM10 filterable emissions. In SCC 3-04-003-31 the PE emission factor is equal to the PE filterable emission factor.

Assumed capture efficiency = 90%

Only 3,720 tons (10% of 37,200) of the molds are sand molds which emit particulates. Therefore, the rolling, 12-month emissions may be calculated using the following equation:

tons of metal poured during rolling, 12-month period for all non-permanent molds x 2.24 lbs PM10/ton x 0.10 x 1 ton/2000 lbs = ton PM10/yr .

Emissions Limitation:

The annual fugitive emissions from this emissions unit shall not exceed 0.595 ton of fugitive PE per rolling, 12-month period.

Applicable Compliance Method:

The PE emission factor = 3.2 lbs PE/ ton of metal, SCC 3-04-003-31, FIRE 6.24.

Assumed capture efficiency = 90%

Only 3,720 tons (10% of 37,200) of the molds are sand molds which emit particulates. Therefore, the rolling, 12-month emissions may be calculated using the following equation:

tons of metal poured during rolling, 12-month period for all non-permanent molds x 3.2 lbs PE/ton x 0.10 x 1 ton/2000 lbs = ton PE/yr.

Emissions Limitation:

The hourly VOC emissions from this emissions unit shall not exceed 24.0 lbs/hr.

Applicable Compliance Method:

emission factor = 1.2 lbs VOC/ton, SCC 3-04-003-31, FIRE 6.24

maximum PWR/hr x 1.2 lbs VOC/ton = lbs VOC/hr (fugitive and stack)

If required, the permittee shall demonstrate compliance with this emission limitation by performing emission tests in accordance with USEPA Methods 1 through 4, and 25 or 18.

Emissions Limitation:

The annual VOC emissions from this emissions unit shall not exceed 2.23 tons per rolling, 12-month period.

Applicable Compliance Method:

The emission factor = 1.2 lbs VOC/ton, SCC 3-04-003-31, FIRE 6.24

Only 3,720 tons (10% of 37,200) of the molds are sand molds which emit VOC. Therefore, the rolling, 12-month emissions may be calculated using the following equation:

tons of metal poured during the rolling, 12-month period for all non-permanent molds x 1.2 lbs VOC/ton x 1 ton/2000 lbs = tons VOC/yr

Emissions Limitation:

Visible emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation for visible emissions shall include any non-stack egress points serving this emissions unit. Such

egress points shall include, but are not limited to, doorways, windows, and roof monitors.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- the emission testing shall be conducted within 6 months after issuance of this permit and within 6 months prior to permit expiration;
 - the emission testing shall be conducted to demonstrate compliance with the allowable visible emissions limitations (stack and fugitive) and the allowable mass emission rate for particulates from the baghouse exhaust;
 - the following parameters shall also be monitored and recorded during the emissions testing: the number of molds processed per period of time, the process weight rate (in tons per hour), the pressure drop across the baghouse, air stream temperature, and the flow rate in cubic feet per minute; and
 - the following test method(s) shall be employed to demonstrate compliance:

i. for the visible fugitive particulate emissions, Method 9 of 40 CFR Part 60, Appendix A;

ii. for the visible stack particulate emissions, Method 22 of 40 CFR Part 60, Appendix A; and

iii. for the mass emission rate for particulates and the particulate grain loading, Methods 1- 5 of 40 CFR Part 60, Appendix A.

The test(s) shall be conducted while the five induction furnaces, inoculation (P036) and the sand shakeout (P027) are being operated at their maximum capacities, unless otherwise approved by the Canton City Health Department, Air Pollution Control Division (CCHD, APCD).

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the CCHD, APCD. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit's operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the CCHD, APCD's refusal to accept the results of the emission test(s).

Personnel from the CCHD, APCD shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the CCHD, APCD within 30 days following completion of the test(s).

3. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

The emission testing shall be conducted each calendar year after issuance of this permit.

The emission testing shall be conducted at the inlet and outlet of the baghouse to demonstrate compliance with the allowable VOC emission limitation of 24.0 lbs/hr.

The following parameters shall also be monitored and recorded during the emissions testing: the process weight rate (in tons per hour); the composition of the materials used to make the molds and cores including the weight of each raw material in the mixture and the chemical composition of each raw material; the pressure drop across the baghouse; air stream temperature; and the flow rate in cubic feet per minute.

Unless written permission from the CCHD, APCD is received prior to the emissions testing, the following test method shall be employed to demonstrate compliance: for the VOC emissions, Method 18 of 40 CFR Part 60, Appendix A.

The air shall be sampled at the exit of the Melt Department baghouse. In order to determine the amount of VOC emissions that is not collected by the Melt Department baghouse, it shall be assumed that 90% of the VOC emitted from the emissions unit is collected and passes through the baghouse. It shall be assumed that the remaining 10% of the VOC emissions are fugitive emissions (not emitted through the baghouse stack). The sum of the of the VOC emissions measured at the baghouse stack plus the fugitive VOC emissions shall be compared to the allowable VOC emissions limitation of no more than 24.0 lbs of VOC allowed to be emitted per hour to prove compliance.

The test(s) shall be conducted while the five induction furnaces, inoculation (P036), and the sand shakeout (P027) are being operated at their maximum capacities, unless otherwise approved by the Canton LAA.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the CCHD, APCD. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit's operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the CCHD, APCD's refusal to accept the results of the emission test(s).

Personnel from the CCHD, APCD shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the CCHD, APCD within 30 days following completion of the test(s).

F. Miscellaneous Requirements

1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1576050177 Emissions Unit ID: P034 Issuance type: Draft State Permit To Operate

[Go to the top of this document](#)

Part II - Special Terms and Conditions

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.

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
2 tons/hr electric induction furnace controlled by the Melt Department baghouse (No. 5 induction furnace)	OAC rule 3745-31-05(A)(3) (PTI 15-326 issued 9/24/86)	The requirements of this rule are equivalent to the requirements of OAC rules 3745-17-07(B) and 3745-17-08(B).
	OAC rule 3745-17-07(B)(1)	See section A.2.b below.
	OAC rule 3745-17-08(B)(3)	See section A.2.c below for the required control measures.
	OAC rule 3745-35-07	See sections A.2.a and B.1 below.

2. Additional Terms and Conditions

- (a) By request of the applicant and pursuant to OAC rule 3745-35-07, the following listed Special Terms & Conditions are federally enforceable and incorporated into this permit to limit the potential to emit for this emissions unit: A - F.
 Visible emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average. For purposes of verifying compliance with this requirement, the visible particulate emissions shall be observed at any non-stack egress point from the building housing this emissions unit. These egress points shall include, but not be limited to, doorways, windows, and roof monitors.
 The permittee shall minimize or eliminate visible emissions through the employment of reasonably available control measures (RACM).

At a minimum, the permittee's employment of RACM for this emissions unit shall include the following:

- i. the use of ductwork, hoods, fans, etc. to capture emissions of fugitive dust [the capture efficiency shall be sufficient to minimize or eliminate visible emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design]; and
- ii. the control of the captured fugitive dust emissions using a baghouse that achieves and maintains an outlet emission rate of not greater than 0.010 gr/dscf and no visible particulate emissions.

This facility has five electric induction furnaces (P003, P034, P035, P041, and P042). All of these furnaces are vented to a common baghouse. At least 95% of the emissions from charging, melting, and tapping operations associated with these furnaces shall be captured and vented to this baghouse. In addition, emissions units P036 (Ductile Iron Inoculation) and P027 (Sand Shakeout) shall be vented to this same baghouse.

The baghouse shall have two separate collection chambers which allow for the continuous use of the baghouse in the event that one of the collection chambers has a malfunction. The dust control system shall also have damper controls so that when a furnace is operating or inoculation is taking place, the damper is open to that furnace and/or the inoculation area. When a furnace is being tapped, the damper shall be opened over the tapping area.

The emissions unit was installed in 1983 and the baghouse was installed in 1995. The control device was installed after the installation of the fugitive emissions unit. This emissions unit is a fugitive dust source.

B. Operational Restrictions

1. The maximum annual metal melting rate for the five electric induction furnaces (P003, P034, P035, P041, and P042) shall not exceed a total of 37,200 tons of metal, based upon a rolling, 12-month summation of the metal melting rates.
2. The pressure drop across the baghouse shall be maintained within the range of 2 to 4 inches of water while any emissions unit vented to this control device is in operation.

 The permittee may petition the Canton City Health Department, Air Pollution Control Division (CCHD, APCD) for reestablishment of the pressure drop range provided the permittee can demonstrate to the CCHD, APCD's satisfaction that the operating conditions upon which the pressure drop range was previously established are no longer applicable.
3. When ductile iron inoculation is occurring in one furnace, all other furnaces shall be idled. Being idled means that no melting or pouring is taking place, i.e., hot standby.
4. No more than two furnaces shall be tapped simultaneously.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the total weight of metal melted in the five electric induction furnaces (P003, P034, P035, P041, and P042). Individual records for each furnace do not have to be maintained. In addition, the permittee shall maintain monthly records of the rolling, 12-month summation of the total weight of metal melted in the five electric induction furnaces.
2. The dust control system described in section A.2.c above shall be monitored by programmable logic control (PLC) with a panel view monitor which shall continuously monitor the dust collection system's operation. This system shall constantly monitor the following parameters:
 - a. the pressure differential, and an alarm shall sound when the pressure differential goes outside the range of 2 to 4 inches of water;
 - b. air stream temperature, and an alarm shall sound when temperature nears the upper limit of the baghouse filter media; and
 - c. the flow rate, in cubic feet per minute (CFM), of the system.The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record all periods of time when the pressure drop across the baghouse was outside the range specified in B.2.
3. The permittee shall maintain daily records of the hours of operation and the operating scenarios of each of the five induction furnaces to ensure compliance with sections B.3 and B.4 above. The records shall identify all periods of time when production occurred at one furnace and all other furnaces were not being idled and all periods of time when more than two furnaces were tapped simultaneously.
4. The permittee shall perform daily checks when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse stack and any non-stack egress point (e.g., windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible particulate emissions shall be noted in an operations log. If visible particulate emissions are observed, the permittee shall also note the following in the operations log:
 - a. the location and color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible particulate emission incident; and
 - e. any corrective actions taken to eliminate the visible particulate emissions.

D. Reporting Requirements

1. The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.
2. The permittee shall submit quarterly deviation (excursion) reports of any deviation of the operating scenarios outlined in sections B.3 and B.4 above and shall include an explanation of why the deviations occurred.
3. The permittee shall submit semiannual written reports which:
 - a. identify all days during which any visible particulate emissions were observed from the baghouse stack and/or any non-stack egress point serving this emissions unit; and
 - b. describe any corrective actions taken to eliminate the visible particulate emissions.These reports shall be submitted by January 31 and July 31 of each year and shall cover the previous 6-month period.
4. The permittee shall submit quarterly deviation (excursion) reports that identify each monthly record showing that the limit of 37,200 tons of metal melted per rolling, 12-month period for all five furnaces (P003, P034, P035, P041 and P042) was exceeded.

E. Testing Requirements

1. Compliance with the emission limitation(s) in section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

Emissions Limitation:

At a minimum, the permittee's employment of RACM for this emissions unit shall include the control of the captured fugitive dust emissions using a baghouse that achieves and maintains an outlet emission rate of not greater than 0.010 gr/dscf.

Applicable Compliance Method:

Compliance shall be determined through stack testing performed in accordance with the requirements established in 40 CFR Part 60, Appendix A, Methods 1-5 and the procedures specified in OAC rule 3745-17-03 (B)(10).

Emissions Limitation:

At a minimum, the permittee's employment of RACM for this emissions unit shall include the control of the captured fugitive dust emissions using a baghouse that achieves and maintains no visible particulate emissions.

Applicable Compliance Method:

Compliance shall be determined using the requirements established in 40 CFR Part 60, Appendix A, Method 22.

Emissions Limitation:

Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation for visible particulate fugitive emissions shall include any non-stack egress points serving this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 The emission testing shall be conducted within 6 months after issuance of this permit and within 6 months prior to permit expiration.
 The emission testing shall be conducted to demonstrate compliance with the allowable visible particulate emissions limitations in sections A.2.c.ii and A.2.b and the allowable mass emission rate for particulates from the baghouse exhaust in sections A.1 and A.2.c.ii.
 The following parameters also shall be monitored and recorded during the emissions testing: the process weight rate (in tons per hour); the pressure drop across the baghouse; air stream temperature; and the flow rate in cubic feet per minute.
 The following test method(s) shall be employed to demonstrate compliance:

- i. for the visible fugitive particulate emissions, Method 9 of 40 CFR Part 60, Appendix A;
 - ii. for the visible stack particulate emissions, Method 22 of 40 CFR Part 60, Appendix A; and
 - iii. for the mass emission rate for particulates and the particulate grain loading, Methods 1-5 of 40 CFR Part 60, Appendix A.
- The test(s) shall be conducted while five induction furnaces, inoculation (P036), and the sand shakeout (P027) are being operated at or near their maximum capacities, unless otherwise approved by the Canton LAA.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Canton LAA. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit's operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Canton LAA's refusal to accept the results of the emission test(s).

Personnel from the Canton LAA shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Canton LAA within 30 days following completion of the test(s).

F. Miscellaneous Requirements

1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1576050177 Emissions Unit ID: P035 Issuance type: Draft State Permit To Operate

[Go to the top of this document](#)

Part II - Special Terms and Conditions

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.

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
2 tons/hr electric induction furnace controlled by the Melt Department baghouse (No. 4 induction furnace)	OAC rule 3745-31-05(A)(3) (PTI 15-326 issued 9/24/86)	The requirements of this rule are equivalent to the requirements of OAC rules 3745-17-07(B) and 3745-17-08(B).
	OAC rule 3745-17-07(B)(1)	See section A.2.b below.

OAC rule 3745-17-08(B)(3) See section A.2.c below for the required control measures.

OAC rule 3745-35-07 See sections A.2.a and B.1 below.

2. Additional Terms and Conditions

- (a) By request of the applicant and pursuant to OAC rule 3745-35-07, the following listed Special Terms & Conditions are federally enforceable and incorporated into this permit to limit the potential to emit for this emissions unit: A - F.

Visible emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average. For purposes of verifying compliance with this requirement, the visible particulate emissions shall be observed at any non-stack egress point from the building housing this emissions unit. These egress points shall include, but not be limited to, doorways, windows, and roof monitors.

The permittee shall minimize or eliminate visible emissions through the employment of reasonably available control measures (RACM).

At a minimum, the permittee's employment of RACM for this emissions unit shall include the following:

i. the use of ductwork, hoods, fans, etc. to capture emissions of fugitive dust [the capture efficiency shall be sufficient to minimize or eliminate visible emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design]; and

ii. the control of the captured fugitive dust emissions using a baghouse that achieves and maintains an outlet emission rate of not greater than 0.010 gr/dscf and no visible particulate emissions.

This facility has five electric induction furnaces (P003, P034, P035, P041, and P042). All of these furnaces are vented to a common baghouse. At least 95% of the emissions from charging, melting, and tapping operations associated with these furnaces shall be captured and vented to this baghouse. In addition, emissions units P036 (Ductile Iron Inoculation) and P027 (Sand Shakeout) shall be vented to this same baghouse.

The baghouse shall have two separate collection chambers which allow for the continuous use of the baghouse in the event that one of the collection chambers has a malfunction. The dust control system shall also have damper controls so that when a furnace is operating or inoculation is taking place, the damper is open to that furnace and/or the inoculation area. When a furnace is being tapped, the damper shall be opened over the tapping area.

The emissions unit was installed in 1983 and the baghouse was installed in 1995. The control device was installed after the installation of the fugitive emissions unit. This emissions unit is a fugitive dust source.

B. Operational Restrictions

1. The maximum annual metal melting rate for the five electric induction furnaces (P003, P034, P035, P041, and P042) shall not exceed a total of 37,200 tons of metal, based upon a rolling, 12-month summation of the metal melting rates.
2. The pressure drop across the baghouse shall be maintained within the range of 2 to 4 inches of water while any emissions unit vented to this control device is in operation.

The permittee may petition the Canton City Health Department, Air Pollution Control Division (CCHD, APCD) for reestablishment of the pressure drop range provided the permittee can demonstrate to the CCHD, APCD's satisfaction that the operating conditions upon which the pressure drop range was previously established are no longer applicable.

3. When ductile iron inoculation is occurring in one furnace, all other furnaces shall be idled. Being idled means that no melting or pouring is taking place, i.e., hot standby.
4. No more than two furnaces shall be tapped simultaneously.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the total weight of metal melted in the five electric induction furnaces (P003, P034, P035, P041, and P042). Individual records for each furnace do not have to be maintained. In addition, the permittee shall maintain monthly records of the rolling, 12-month summation of the total weight of metal melted in the five electric induction furnaces.
2. The dust control system described in section A.2.c above shall be monitored by programmable logic control (PLC) with a panel view monitor which shall continuously monitor the dust collection system's operation. This system shall constantly monitor the following parameters:
 - a. the pressure differential, and an alarm shall sound when the pressure differential goes outside the range of 2 to 4 inches of water;
 - b. air stream temperature, and an alarm shall sound when temperature nears the upper limit of the baghouse filter media; and
 - c. the flow rate, in cubic feet per minute (CFM), of the system.

The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record all periods of time when the pressure drop across the baghouse was outside the range specified in B.2.

3. The permittee shall maintain daily records of the hours of operation and the operating scenarios of each of the five induction furnaces to ensure compliance with sections B.3 and B.4 above. The records shall identify all periods of time when production occurred at one furnace and all other furnaces were not being idled and all periods of time when more than two furnaces were tapped simultaneously.
4. The permittee shall perform daily checks when the emissions unit is in operation and when the weather conditions

allow, for any visible particulate emissions from the baghouse stack and any non-stack egress point (e.g., windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible particulate emissions shall be noted in an operations log. If visible particulate emissions are observed, the permittee shall also note the following in the operations log:

- a. the location and color of the emissions;
- b. whether the emissions are representative of normal operations;
- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- d. the total duration of any visible particulate emission incident; and
- e. any corrective actions taken to eliminate the visible particulate emissions.

D. Reporting Requirements

1. The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.
2. The permittee shall submit quarterly deviation (excursion) reports of any deviation of the operating scenarios outlined in sections B.3 and B.4 above and shall include an explanation of why the deviations occurred.
3. The permittee shall submit semiannual written reports which:
 - a. identify all days during which any visible particulate emissions were observed from the baghouse stack and/or any non-stack egress point serving this emissions unit; and
 - b. describe any corrective actions taken to eliminate the visible particulate emissions.

These reports shall be submitted by January 31 and July 31 of each year and shall cover the previous 6-month period.
4. The permittee shall submit quarterly deviation (excursion) reports that identify each monthly record showing that the limit of 37,200 tons of metal melted per rolling, 12-month period for all five furnaces (P003, P034, P035, P041 and P042) was exceeded.

E. Testing Requirements

1. Compliance with the emission limitation(s) in section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

Emissions Limitation:

At a minimum, the permittee's employment of RACM for this emissions unit shall include the control of the captured fugitive dust emissions using a baghouse that achieves and maintains an outlet emission rate of not greater than 0.010 gr/dscf.

Applicable Compliance Method:

Compliance shall be determined through stack testing performed in accordance with the requirements established in 40 CFR Part 60, Appendix A, Methods 1-5 and the procedures specified in OAC rule 3745-17-03(B)(10).

Emissions Limitation:

At a minimum, the permittee's employment of RACM for this emissions unit shall include the control of the captured fugitive dust emissions using a baghouse that achieves and maintains no visible particulate emissions.

Applicable Compliance Method:

Compliance shall be determined using the requirements established in 40 CFR Part 60, Appendix A, Method 22.

Emissions Limitation:

Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation for visible particulate fugitive emissions shall include any non-stack egress points serving this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.
2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

The emission testing shall be conducted within 6 months after issuance of this permit and within 6 months prior to permit expiration.

The emission testing shall be conducted to demonstrate compliance with the allowable visible particulate emissions limitations in sections A.2.c.ii and A.2.b and the allowable mass emission rate for particulates from the baghouse exhaust in sections A.1 and A.2.c.ii.

The following parameters also shall be monitored and recorded during the emissions testing: the process weight rate (in tons per hour); the pressure drop across the baghouse; air stream temperature; and the flow rate in cubic feet per minute.

The following test method(s) shall be employed to demonstrate compliance:

 - i. for the visible fugitive particulate emissions, Method 9 of 40 CFR Part 60, Appendix A;
 - ii. for the visible stack particulate emissions, Method 22 of 40 CFR Part 60, Appendix A; and
 - iii. for the mass emission rate for particulates and the particulate grain loading, Methods 1-5 of 40 CFR Part 60, Appendix A.

The test(s) shall be conducted while five induction furnaces, inoculation (P036), and the sand shakeout (P027) are being operated at or near their maximum capacities, unless otherwise approved by the Canton LAA.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Canton LAA. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit's operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Canton LAA's refusal to accept the results of the emission test(s).

Personnel from the Canton LAA shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Canton LAA within 30 days following completion of the test(s).

F. Miscellaneous Requirements

- 1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1576050177 Emissions Unit ID: P036 Issuance type: Draft State Permit To Operate

[Go to the top of this document](#)

Part II - Special Terms and Conditions

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.

A. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ductile iron inoculation, controlled by the Melt Department baghouse	OAC rule 3745-17-07(B)(1)	See section A.2.b below.
	OAC rule 3745-17-08(B)(3)	The particulate emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-35-07. See section A.2.c below for the required control measures.
	OAC rule 3745-35-07	During the operation of the Melt Department baghouse, while any combination of the emissions units served by baghouse are in operation, the particulate emission rate and the PM10 emission rate from the baghouse shall not exceed 0.010 grain/dscf and there shall be no visible particulate emissions from the baghouse stack(s). The annual stack emissions from this emissions unit shall not exceed 1.58 tons of PM10 per rolling, 12-month period. The annual stack emissions from this emissions unit shall not exceed 1.58 tons of PE per rolling, 12-month period. The annual fugitive emissions from this emissions unit shall not exceed 5.58 tons of PM10 per rolling, 12-month period. The annual fugitive emissions from this emissions unit shall not exceed 5.58 tons of PM per rolling, 12-month period.

See sections A.2.a and A.2.c.

2. Additional Terms and Conditions

- (a) By request of the applicant and pursuant to OAC rule 3745-35-07, the following Special Terms & Conditions are federally enforceable and incorporated into this permit to limit the potential to emit for this emissions unit: A - F.
Visible emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average. For purposes of verifying compliance with this requirement, the visible particulate emissions shall be observed at any non-stack egress point from the building housing this emissions unit. These egress points shall include, but not be limited to, doorways, windows, and roof monitors.
The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM).

At a minimum, the permittee's employment of RACM for this emissions unit shall include the following:

- i. the use of ductwork, hoods, fans, etc. to capture emissions of fugitive dust [the capture efficiency shall be sufficient to minimize or eliminate visible emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design]; and
- ii. the control of the captured fugitive dust emissions using a baghouse that achieves and maintains an outlet emissions rate of 0.010 gr/dscf and no visible particulate emissions.

This facility has five electric induction furnaces (P003, P034, P035, P041, & P042). All of these furnaces shall be vented to the Melt Department baghouse. At least 95% of the emissions from melting and tapping from each of these furnaces shall be captured and vented to this fabric filter. In addition, emissions units P036 (Ductile Iron Inoculation) and P027 (Sand Shakeout) shall be vented to this same fabric filter. At least 85% of the emissions from this emissions unit (P036) shall be captured and vented to this fabric filter.

The baghouse shall have two separate collection chambers which allow for the continuous use of the baghouse in the event that one of the collection chambers has a malfunction. The dust control system shall also have damper controls, so that when a furnace is operating or inoculation is taking place, the damper is open to that furnace and/or the inoculation area. When a furnace is being tapped, the damper shall be opened over the tapping area.

The emissions unit was installed in 1940 and the baghouse was installed in 1995. Consequently, this emissions unit is subject to the fugitive dust control requirements of OAC rule 3745-17-08(B)(3) because the control device was installed after the installation of the fugitive emissions unit and after February 15, 1972.

B. Operational Restrictions

1. This emissions unit is inherently restricted by the amount of iron inoculated. The maximum annual iron inoculating rate shall not exceed a total of 18,600 tons, based upon a rolling, 12-month summation of the iron inoculation rates.
2. The pressure drop across the baghouse shall be maintained within the range of 2 to 4 inches of water while any emissions unit vented to this control device is in operation.

The permittee may petition the Canton City Health Department, Air Pollution Control Division (CCHD, APCD) for reestablishment of the pressure drop range provided the permittee can demonstrate to the CCHD, APCD's satisfaction that the operating conditions upon which the pressure drop range was previously established are no longer applicable.
3. When ductile iron inoculation is occurring in one furnace, all other furnaces shall be idled. Being idle means that no melting or pouring is taking place, i.e., hot standby.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the total weight in tons of the iron inoculated. In addition, the permittee shall maintain monthly records of the rolling, 12-month summation of the total weight in tons of iron inoculated.
2. The dust control system described in condition A.2.c above shall be monitored by programmable logic control (PLC) with a panel view monitor which shall continuously monitor the dust collection system's operation. This system shall constantly monitor the following parameters:
the pressure differential across the baghouse, and an alarm shall sound when the pressure differential goes outside the range of 2 to 4 inches of water;
air stream temperature, and an alarm shall sound when temperature nears the upper limit of the baghouse filter media; and
the flow rate, in cubic feet per minute (CFM), of the system.

The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record all periods of time when the pressure drop across the baghouse was outside the range specified in B.2.
3. The permittee shall maintain daily records of the hours of operation and the operating scenarios of iron inoculation to ensure compliance with section B.3 above. Any excursion of the noted operating restrictions shall be recorded in a bound log book and shall include an explanation of the excursion.
4. The permittee shall perform daily checks when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse and any non-stack egress point (e.g., windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible particulate emissions shall be noted in an operations log. If visible particulate emissions are observed, the permittee shall also note the following in the operations log:
the location and color of the emissions;
whether the emissions are representative of normal operations;
if the emissions are not representative of normal operations, the cause of the abnormal emissions;

the total duration of any visible emission incident; and
any corrective actions taken to eliminate the visible emissions.

5. The permittee shall calculate and maintain monthly records of the following information for this emissions unit:
 - the stack PM10 emissions, in tons;
 - the fugitive PM10 emissions, in tons;
 - the rolling, 12-month stack PM10 emissions, in tons;
 - the rolling, 12-month, fugitive PM10 emissions, in tons;
 - the stack PE emissions, in tons;
 - the fugitive PM emissions, in tons;
 - the rolling, 12-month, stack PE emissions, in tons; and
 - the rolling, 12-month fugitive PM emissions, in tons.
6. The permittee shall maintain monthly records of the hours of operation and the rolling, 12-month hours of operation for this emissions unit.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all monthly records showing that the limit of 18,600 tons of iron inoculated per rolling, 12-month period, was exceeded.
2. The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.
3. The permittee shall submit quarterly deviation (excursion) reports that identify all deviations of the operating scenarios outlined in section B.3 above and shall include an explanation of why the deviations occurred.
4. The permittee shall submit semiannual written reports which:
 - identify all days during which any visible particulate emissions were observed from the baghouse and/or any non-stack egress point serving this emissions unit; and
 - describe any corrective actions taken to eliminate the visible emissions.

These reports shall be submitted by January 31 and July 31 of each year and shall cover the previous 6-month period.
5. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of:
 - the rolling, 12-month emission limitation for fugitive PM10 emissions;
 - the rolling, 12-month emission limitation for stack PM10 emissions;
 - the rolling, 12-month emission limitation for fugitive PM emissions; and
 - the rolling, 12-month emission limitation for stack PE.
6. The permittee shall submit annual written reports of fugitive PM10, fugitive PM, stack PM10, and stack PE emissions. These reports shall be submitted by January 31 of each year, shall cover the previous 12-month period January 1 through December 31, and shall include the calculations of the emissions.

E. Testing Requirements

1. Compliance with the emission limitation(s) in section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

Emissions Limitation:

0.010 gr/dscf (outlet from the baghouse)

Applicable Compliance Method:

Compliance shall be determined through stack testing performed in accordance with the requirements established in 40 CFR Part 60, Appendix A, Methods 1-5 and the procedures specified in OAC rule 3745-17-03 (B)(10).

Emissions Limitation:

There shall be no visible emissions from the baghouse stack.

Applicable Compliance Method:

Compliance shall be determined using the requirements established in 40 CFR Part 60, Appendix A, Method 22.

Emissions Limitation:

The annual stack emissions from this emissions unit shall not exceed 1.58 tons of PM10 per rolling, 12-month period.

Applicable Compliance Method:

Assumed capture efficiency = 85%
Assumed control efficiency = 95%

The following equation shall be used to demonstrate compliance:

$$\text{tons of metal poured during the rolling, 12-month period for all non-permanent molds} \times 4.00 \text{ lbs PM10/ton} \times 0.85 \times 0.05 \times 1 \text{ ton/2000 lbs} = \text{tons PM10/yr}$$

After emission testing is performed for this emissions unit, the permittee shall calculate the rolling, 12-month PE by multiplying the actual emission rate, in lbs/hr, for this emissions unit [from the latest emission test] by the rolling, 12-month hours of operation, and then dividing by 2000.

Emissions Limitation:

The annual stack emissions from this emissions unit shall not exceed 1.58 tons of PE per rolling, 12-month period.

Applicable Compliance Method:

Assumed capture efficiency = 85%
Assumed control efficiency = 95%

The following equation shall be used to demonstrate compliance:

tons of metal poured during the rolling, 12-month period for all non-permanent molds x 4.00 lbs PE/ton x 0.85 x 0.05 x 1 ton/2000 lbs = tons PE/yr

After emission testing is performed for this emissions unit, the permittee shall calculate the rolling, 12-month PE by multiplying the actual emission rate, in lbs/hr, for this emissions unit [from the latest emission test] by the rolling, 12-month hours of operation, and then dividing by 2000.

Emissions Limitation:

The annual fugitive emissions from this emissions unit shall not exceed 5.58 tons of PM10 per rolling, 12-month period.

Applicable Compliance Method:

Assumed capture efficiency = 85%

The following equation shall be used to demonstrate compliance:

tons of metal poured during the rolling, 12-month period for all non-permanent molds x 4.00 lbs PM10/ton x 0.15 x 1 ton/2000 lbs = tons PM10/yr.

After emission testing is performed for this emissions unit, the permittee shall calculate the rolling, 12-month PE by multiplying the actual emission rate, in lbs/hr, for this emissions unit [from the latest emission test] by the rolling, 12-month hours of operation, and then dividing by 2000.

Emissions Limitation:

The annual fugitive emissions from this emissions unit shall not exceed 5.58 tons of PM per rolling, 12-month period.

Applicable Compliance Method:

Assumed capture efficiency = 85%

The following equation shall be used to demonstrate compliance:

tons of metal poured during the rolling, 12-month period for all non-permanent molds x 4.00 lbs PE/ton x 0.15 x 1 ton/2000 lbs = tons PE/yr

After emission testing is performed for this emissions unit, the permittee shall calculate the rolling, 12-month PE by multiplying the actual emission rate, in lbs/hr, for this emissions unit [from the latest emission test] by the rolling, 12-month hours of operation, and then dividing by 2000.

Emissions Limitation:

Visible emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation for visible particulate fugitive emissions shall include any non-stack egress points serving this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

The emission testing shall be conducted within 6 months after issuance of this permit and within 6 months prior to permit expiration.

The emission testing shall be conducted to demonstrate compliance with the allowable visible particulate emission limitations (stack and fugitive) and the allowable mass emission rate in grain per dry standard cubic foot for particulates from the baghouse.

The following parameters also shall be monitored and recorded during the emissions testing: the process weight rate (in tons per hour); the pressure drop across the baghouse; air stream temperature; and the flow rate in cubic feet per minute.

The following test method(s) shall be employed to demonstrate compliance:

- i. for the visible emissions of fugitive dust, Method 9 of 40 CFR Part 60, Appendix A;
 - ii. for the stack visible particulate emissions, Method 22 of 40 CFR Part 60, Appendix A; and
 - iii. for the particulate grain loading, Methods 1- 5 of 40 CFR Part 60, Appendix A.
- The test(s) shall be conducted while five induction furnaces (P003, P034, P035, P041 and P042), inoculation (P036), and the sand shakeout (P027) are being operated at their maximum capacities, unless otherwise approved by the CCHD, APCD.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the CCHD, APCD. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit's operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the CCHD, APCD's refusal to accept the results of the emission test(s).

Personnel from the CCHD, APCD shall be permitted to witness the test(s), examine the testing equipment and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the CCHD, APCD within 30 days following completion of the test(s).

F. Miscellaneous Requirements

- 1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1576050177 Emissions Unit ID: P041 Issuance type: Draft State Permit To Operate

[Go to the top of this document](#)

Part II - Special Terms and Conditions

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.

A. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
6 tons/hr electric induction furnace controlled by the Melt Department baghouse (No. 1 induction furnace)	OAC rule 3745-31-05(A)(3) (PTI 15-01337 issued 4/24/03)	During the operation of the Melt Department baghouse, while any combination of the emissions units served by the baghouse are in operation, the PE and PM10 emission rates from the baghouse shall not exceed 0.010 grain/dscf, and there shall be no visible particulate emissions from the baghouse stack(s).
		The particulate emission (PE) rate from the baghouse for this EU shall not exceed 0.26 lb/hr and 1.14 tons/yr.
		The PM10 emission rate from the baghouse for this EU shall not exceed 0.25 lb/hr and 1.10 tons/yr.
		The fugitive PM emission rate for this EU shall not exceed 0.27 lb/hr and 0.84 ton/yr.
		The fugitive PM10 emission rate for this EU shall not exceed 0.26 lb/hr and 0.80 ton/yr.
		The visible particulate emission limitation specified by this rule is less stringent than the visible particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(A)(1)	See section A.2.b below.
	OAC rule 3745-17-07(B)(1)	The particulate emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-08(B)(3)	See section A.2.c below for the required control measures.
	OAC rule 3745-17-11	The particulate emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-35-07	See sections A.2.a and B.1 below.

2. Additional Terms and Conditions

- (a) By request of the applicant and pursuant to OAC rule 3745-35-07, the following listed Special Terms and

Conditions are federally enforceable and incorporated into this permit to limit the potential to emit for this emissions unit: A - F.

Visible emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average. For purposes of verifying compliance with this requirement, the visible emissions shall be observed at any non-stack egress point from the building housing this emissions unit. These egress points shall include, but not be limited to, doorways, windows, and roof monitors.

The permittee shall minimize or eliminate visible emissions of fugitive dust through the employment of reasonably available control measures (RACM).

At a minimum, the permittee's employment of RACM for this emissions unit shall include the use of ductwork, hoods, fans, etc. to capture emissions of fugitive dust and vent the emissions to a baghouse.

The collection efficiency shall be sufficient to minimize or eliminate visible emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

The baghouse shall have two separate collection chambers which allow for the continuous use of the baghouse in the event that one of the chambers has a malfunction. The dust control system shall also have damper controls so that when a furnace is operating or inoculation is taking place, the damper is open to that furnace and/or the inoculation area. When a furnace is being tapped, the damper shall be opened over the tapping area.

The Melt Department baghouse was installed in 1995 and serves multiple emissions units. This emissions unit was installed in 1997 and was vented to the Melt Department baghouse at the time of installation. This emissions unit replaced a previous electric induction furnace which was served by the same baghouse. This emissions unit is a stack and fugitive dust source.

B. Operational Restrictions

1. The maximum annual metal melting rate for the five electric induction furnaces (P003, P034, P035, P041 and P042) shall not exceed a total of 37,200 tons of metal, based upon a rolling, 12-month summation of the metal melting rates.
2. The pressure drop across the baghouse shall be maintained within the range of 2 to 4 inches of water while any emissions unit vented to this control device is in operation.

The permittee may petition the Canton City Health Department, Air Pollution Control Division (CCHD, APCD) for reestablishment of the pressure drop range provided the permittee can demonstrate to the CCHD, APCD's satisfaction that the operating conditions upon which the pressure drop range was previously established are no longer applicable.

3. When ductile iron inoculation is occurring in one furnace, all other furnaces shall be idled. Being idled means that no melting or pouring is taking place, i.e., hot standby.
4. No more than two furnaces shall be tapped simultaneously.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the total weight of metal melted in the five electric induction furnaces (P003, P034, P035, P041, and P042). Individual records for each furnace do not have to be maintained. In addition, the permittee shall maintain monthly records of the rolling, 12-month summation of the total weight of metal melted in the five electric induction furnaces.
2. The dust control system described in section A.2.c above shall be monitored by programmable logic control (PLC) with a panel view monitor which shall continuously monitor the dust collection system's operation. This system shall constantly monitor the following parameters:
the pressure differential, and an alarm shall sound when the pressure differential goes outside the range of 2 to 4 inches of water;
air stream temperature, and an alarm shall sound when temperature nears the upper limit of the baghouse filter media; and
the flow rate, in cubic feet per minute (CFM), of the system.

The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record all periods of time when the pressure drop across the baghouse was outside the range specified in B.2.

3. The permittee shall maintain daily records of the hours of operation and the operating scenarios of each of the five induction furnaces to ensure compliance with sections B.3 and B.4 above. The records shall identify all periods of time when production occurred at one furnace and all other furnaces were not being idled and all periods of time when more than two furnaces were tapped simultaneously.
4. The permittee shall perform daily checks when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse and all non-stack egress points (e.g., windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible particulate emissions shall be noted in an operations log. If visible particulate emissions are observed, the permittee shall also note the following in the operations log:
the location and color of the emissions;
whether the emissions are representative of normal operations;
if the emissions are not representative of normal operations, the cause of the abnormal emissions;
the total duration of any visible particulate emission incident; and
any corrective actions taken to eliminate the visible particulate emissions.
5. The permittee shall calculate and maintain monthly records of the following information for this emissions unit:
the annual particulate emissions for the stack and fugitive emissions, in tons; and
the annual PM10 emissions for the stack and fugitive emissions, in tons.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of:
the annual emissions limitation for fugitive PM;
the annual emissions limitation for stack PE;

the annual emissions limitation for fugitive PM10; and
the annual emissions limitation for stack PM10.

2. The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.
3. The permittee shall submit quarterly deviation (excursion) reports of any deviation of the operating scenarios outlined in sections B.3 and B.4 above and shall include an explanation of why the deviations occurred.
4. The permittee shall submit semiannual written reports which:
identify all days during which any visible particulate emissions were observed from the baghouse and/or any non-stack egress point serving this emissions unit; and
describe any corrective actions taken to eliminate the visible particulate emissions.

These reports shall be submitted by January 31 and July 31 of each year and shall cover the previous 6-month period.

5. The permittee shall submit quarterly deviation (excursion) reports that identify monthly records showing that the limit of 37,200 tons of metal melted per rolling, 12-month period for all five furnaces (P003, P034, P035, P041 and P042) was exceeded.
6. The permittee shall submit annual written reports of the PM fugitive, PM10 fugitive, PE stack and PM10 stack emissions, in tons, for this emissions unit.

These reports shall be submitted by January 31 of each year and shall cover the previous 12-month period [January 1 through December 31].

E. Testing Requirements

1. Compliance with the emission limitation(s) in section A.1. of these terms and conditions shall be determined in accordance with the following method(s):
Emissions Limitation:

The particulate emission (PE) rate from the baghouse for this EU shall not exceed 0.26 lb/hr.

Applicable Compliance Method:

Compliance shall be determined through stack testing performed in accordance with the requirements established in 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

Emissions Limitation:

The PM10 rate from the baghouse for this EU shall not exceed 0.25 lb/hr.

Applicable Compliance Method:

Compliance shall be determined through stack testing performed in accordance with the requirements established in 40 CFR Part 60, Appendix A, Methods 1 through 4, and 201 or 202, and the procedures specified in OAC rule 3745-17-03(B)(10).

Emissions Limitations:

The fugitive PM rate for this EU shall not exceed 0.27 lb/hr.

Applicable Compliance Method:

Emission Factor = 0.90 lb PM/ton, uncontrolled, SCC 3-04-003-03, FIRE 6.24

Assumed capture efficiency = 95%

The following equation shall be used to determine compliance:

actual tons/hr x 0.9 lb PM/ton x 0.05 = lb PM emitted per hour

Emissions Limitation:

The fugitive PM10 rate for this EU shall not exceed 0.26 lb/hr

Applicable Compliance Method:

Emission Factor = 0.86 lb PM10/ton, uncontrolled, SCC 3-04-003-03, FIRE 6.24

Assumed capture efficiency = 95%.

The following equation shall be used to determine compliance:

actual tons/hr x 0.86 lb PM10/ton x 0.05 = lb PM10 emitted per hour

Emissions Limitation:

Visible emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average. For purposes of verifying compliance with this requirement, the visible emissions shall be observed at any non-stack egress point from the building housing this emissions unit. These egress points shall include, but not be limited to, doorways, windows, and roof monitors.

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation for visible particulate fugitive emissions shall include any non-stack egress points serving this

emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.

Emissions Limitation:

During the operation of the Melt Department baghouse, while any combination of the emissions units served by the baghouse are in operation, the PE and PM10 emission rates from the baghouse shall not exceed 0.010 grain/dscf.

Applicable Compliance Method:

Compliance shall be determined through stack testing performed in accordance with the requirements established in 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

Emissions Limitation:

During the operation of the Melt Department baghouse, while any combination of the emissions units served by the baghouse are in operation, there shall be no visible particulate emissions from the baghouse stack(s).

Applicable Compliance Method:

Compliance shall be determined using the requirements established in 40 CFR Part 60, Appendix A, Method 22.

Emissions Limitation:

The annual stack emissions from this emissions unit shall not exceed 1.14 tons of PE.

Applicable Compliance Method:

Emission Factor = 0.90 lb PE/ton, uncontrolled, SCC 3-04-003-03, FIRE 6.24

Assumed capture efficiency = 95%.

Assumed control Efficiency = 95%.

The following equation shall be used to determine compliance:

actual annual tons of metal poured in this emissions unit x 0.90 lb PE/ton x 0.95 x 0.05 x 1 ton/2000 lbs = tons PE emitted per year

Emissions Limitation:

The annual stack emissions from this emissions unit shall not exceed 1.10 tons of PM10.

Applicable Compliance Method:

Emission Factor = 0.86 lb PM10/ton, uncontrolled, SCC 3-04-003-03, FIRE 6.24

Assumed capture efficiency = 95%.

Assumed control Efficiency = 95%.

The following equation shall be used to determine compliance:

actual annual tons of metal poured in this emissions unit x 0.86 lb PM10/ton x 0.95 x 0.05 x 1 ton/2000 lbs = tons PM10 emitted per year

Emissions Limitation:

The annual fugitive emissions from this emissions unit shall not exceed 0.84 ton of PM.

Applicable Compliance Method:

Emission Factor = 0.90 lb PM/ton, uncontrolled, SCC 3-04-003-03, FIRE 6.24

Assumed capture efficiency = 95%.

The following equation shall be used to determine compliance:

actual annual tons of metal poured in this emissions unit x 0.90 lb PM/ton x 0.05 x 1 ton/2000 lbs = ton PM emitted per year

Emissions Limitation:

The annual fugitive emissions from this emissions unit shall not exceed 0.800 ton of PM10.

Applicable Compliance Method:

Emission Factor = 0.86 lb PM10/ton, uncontrolled, SCC 3-04-003-03, FIRE 6.24

Assumed capture efficiency = 95%.

The following equation shall be used to determine compliance:

actual annual tons of metal poured in this emissions unit x 0.86 lb PM10/ton x 0.05 x 1 ton/2000 lbs = ton PM10 emitted per year

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

The emission testing shall be conducted within 6 months after issuance of this permit and within 6 months prior to permit expiration.

The emission testing shall be conducted to demonstrate compliance with the allowable visible particulate emissions limitations in sections E.1.e and E.1.g and the allowable mass emission rate for particulates from the

baghouse exhaust in section E.1.a and E.1.f.

The following parameters also shall be monitored and recorded during the emissions testing: the process weight rate (in tons per hour); the pressure drop across the baghouse; air stream temperature; and the flow rate in cubic feet per minute.

The following test method(s) shall be employed to demonstrate compliance:

- i. for the visible fugitive particulate emissions, Method 9 of 40 CFR Part 60, Appendix A;
- ii. for the visible stack particulate emissions, Method 22 of 40 CFR Part 60, Appendix A; and
- iii. for the mass emission rate for particulates, Methods 1-5 of 40 CFR Part 60, Appendix A.

The test(s) shall be conducted while five electric induction furnaces, inoculation (P036), and the sand shakeout (P027) are being operated at or near their maximum capacities, unless otherwise approved by the Canton LAA.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Canton LAA. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit's operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Canton LAA's refusal to accept the results of the emission test(s).

Personnel from the Canton LAA shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Canton LAA within 30 days following completion of the test(s).

F. Miscellaneous Requirements

- 1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1576050177 Emissions Unit ID: P042 Issuance type: Draft State Permit To Operate

[Go to the top of this document](#)

Part II - Special Terms and Conditions

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.

A. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
4 tons/hr electric induction furnace controlled by the Melt Department baghouse (No. 2 induction furnace)	OAC rule 3745-31-05(A)(3) (PTI 15-01337 issued 4/24/03)	<p>During the operation of the Melt Department baghouse, while any combination of the emissions units served by the baghouse are in operation, the PE and PM10 emission rates from the baghouse shall not exceed 0.010 grain/dscf, and there shall be no visible particulate emissions from the baghouse stack(s).</p> <p>The particulate emission (PE) rate from the baghouse for this EU shall not exceed 0.17 lb/hr and 0.74 ton/yr.</p> <p>The PM10 emission rate from the baghouse for this EU shall not exceed 0.16 lb/hr and 0.70 ton/yr.</p> <p>The fugitive PM emission rate for this EU shall not exceed 0.18 lb/hr and 0.79 ton/yr.</p> <p>The fugitive PM10 emission rate for this EU shall not exceed 0.17 lb/hr and 0.75 ton/yr.</p>

OAC rule 3745-17-07(A)(1)	The visible particulate emission limitation specified by this rule is less stringent than the visible particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-07(B)(1)	See section A.2.b below.
OAC rule 3745-17-08(B)(3)	The particulate emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). See section A.2.c below for the required control measures.
OAC rule 3745-17-11	The particulate emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-35-07	See sections A.2.a and B.1 below.

2. Additional Terms and Conditions

- (a) By request of the applicant and pursuant to OAC rule 3745-35-07, the following listed Special Terms and Conditions are federally enforceable and incorporated into this permit to limit the potential to emit for this emissions unit: A - F.
 Visible emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average. For purposes of verifying compliance with this requirement, the visible emissions shall be observed at any non-stack egress point from the building housing this emissions unit. These egress points shall include, but not be limited to, doorways, windows, and roof monitors.
 The permittee shall minimize or eliminate visible emissions of fugitive dust through the employment of reasonably available control measures (RACM).

At a minimum, the permittee's employment of RACM for this emissions unit shall include the use of ductwork, hoods, fans, etc. to capture emissions of fugitive dust and vent the emissions to a baghouse.

The collection efficiency shall be sufficient to minimize or eliminate visible emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

The baghouse shall have two separate collection chambers which allow for the continuous use of the baghouse in the event that one of the chambers has a malfunction. The dust control system shall also have damper controls so that when a furnace is operating or inoculation is taking place, the damper is open to that furnace and/or the inoculation area. When a furnace is being tapped, the damper shall be opened over the tapping area.

The Melt Department baghouse was installed in 1995 and serves multiple emissions units. This emissions unit was installed in 1997 and was vented to the Melt Department baghouse at the time of installation. This emissions unit is a stack and fugitive dust source.

B. Operational Restrictions

- 1. The maximum annual metal melting rate for the five electric induction furnaces (P003, P034, P035, P041 and P042) shall not exceed a total of 37,200 tons of metal, based upon a rolling, 12-month summation of the metal melting rates.
- 2. The pressure drop across the baghouse shall be maintained within the range of 2 to 4 inches of water while any emissions unit vented to this control device is in operation.

 The permittee may petition the Canton City Health Department, Air Pollution Control Division (CCHD, APCD) for reestablishment of the pressure drop range provided the permittee can demonstrate to the CCHD, APCD's satisfaction that the operating conditions upon which the pressure drop range was previously established are no longer applicable.
- 3. When ductile iron inoculation is occurring in one furnace, all other furnaces shall be idled. Being idled means that no melting or pouring is taking place, i.e., hot standby.
- 4. No more than two furnaces shall be tapped simultaneously.

C. Monitoring and/or Record Keeping Requirements

- 1. The permittee shall maintain monthly records of the total weight of metal melted in the five electric induction furnaces (P003, P034, P035, P041, and P042). Individual records for each furnace do not have to be maintained. In addition, the permittee shall maintain monthly records of the rolling, 12-month summation of the total weight of metal melted in the five electric induction furnaces.
- 2. The dust control system described in section A.2.c above shall be monitored by programmable logic control (PLC) with a panel view monitor which shall continuously monitor the dust collection system's operation. This system shall constantly monitor the following parameters:
 the pressure differential, and an alarm shall sound when the pressure differential goes outside the range of 2 to 4 inches of water;
 air stream temperature, and an alarm shall sound when temperature nears the upper limit of the baghouse filter media; and
 the flow rate, in cubic feet per minute (CFM), of the system.

 The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record all periods of time when the pressure drop across the baghouse was outside the range specified in B.2.
- 3. The permittee shall maintain daily records of the hours of operation and the operating scenarios of each of the five induction furnaces to ensure compliance with sections B.3 and B.4 above. The records shall identify all periods of time when production occurred at one furnace and all other furnaces were not being idled and all periods of time when more than two furnaces were tapped simultaneously.

4. The permittee shall perform daily checks when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse and all non-stack egress points (e.g., windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible particulate emissions shall be noted in an operations log. If visible particulate emissions are observed, the permittee shall also note the following in the operations log:
 - the location and color of the emissions;
 - whether the emissions are representative of normal operations;
 - if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - the total duration of any visible particulate emission incident; and
 - any corrective actions taken to eliminate the visible particulate emissions.
5. The permittee shall calculate and maintain monthly records of the following information for this emissions unit:
 - the annual particulate emissions for the stack and fugitive emissions, in tons; and
 - the annual PM10 emissions for the stack and fugitive emissions, in tons.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of:
 - the annual emissions limitation for fugitive PM;
 - the annual emissions limitation for stack PE;
 - the annual emissions limitation for fugitive PM10; and
 - the annual emissions limitation for stack PM10.
2. The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.
3. The permittee shall submit quarterly deviation (excursion) reports of any deviation of the operating scenarios outlined in sections B.3 and B.4 above and shall include an explanation of why the deviations occurred.
4. The permittee shall submit semiannual written reports which:
 - identify all days during which any visible particulate emissions were observed from the baghouse and/or any non-stack egress point serving this emissions unit; and
 - describe any corrective actions taken to eliminate the visible particulate emissions.

These reports shall be submitted by January 31 and July 31 of each year and shall cover the previous 6-month period.

5. The permittee shall submit quarterly deviation (excursion) reports that identify monthly records showing that the limit of 37,200 tons of metal melted per rolling, 12-month period for all five furnaces (P003, P034, P035, P041 and P042) was exceeded.
6. The permittee shall submit annual written reports of the PM fugitive, PM10 fugitive, PE stack and PM10 stack emissions, in tons, for this emissions unit.

These reports shall be submitted by January 31 of each year and shall cover the previous 12-month period [January 1 through December 31].

E. Testing Requirements

1. Compliance with the emission limitation(s) in section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

Emissions Limitation:

The particulate emission (PE) rate from the baghouse for this EU shall not exceed 0.17 lb/hr.

Applicable Compliance Method:

Compliance shall be determined through stack testing performed in accordance with the requirements established in 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

Emissions Limitation:

The PM10 rate from the baghouse for this EU shall not exceed 0.16 lb/hr.

Applicable Compliance Method:

Compliance shall be determined through stack testing performed in accordance with the requirements established in 40 CFR Part 60, Appendix A, Methods 1 through 4, and 201 and 202, and the procedures specified in OAC rule 3745-17-03(B)(10).

Emissions Limitations:

The fugitive PM rate for this EU shall not exceed 0.18 lb/hr.

Applicable Compliance Method:

Emission Factor = 0.90 lb PM/ton, uncontrolled, SCC 3-04-003-03, FIRE 6.24

Assumed capture efficiency = 95%

The following equation shall be used to determine compliance:

$$\text{actual tons/hr} \times 0.9 \text{ lb PM/ton} \times 0.05 = \text{lb PM emitted per hour}$$

Emissions Limitation:

The fugitive PM10 rate for this EU shall not exceed 0.17 lb/hr

Applicable Compliance Method:

Emission Factor = 0.86 lb PM10/ton, uncontrolled, SCC 3-04-003-03, FIRE 6.24

Assumed capture efficiency = 95%

The following equation shall be used to determine compliance:

actual tons/hr x 0.86 lb PM10/ton x 0.05 = lb PM10 emitted per hour
Emissions Limitation:

Visible emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average. For purposes of verifying compliance with this requirement, the visible emissions shall be observed at any non-stack egress point from the building housing this emissions unit. These egress points shall include, but not be limited to, doorways, windows, and roof monitors.

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation for visible particulate fugitive emissions shall include any non-stack egress points serving this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.
Emissions Limitation:

During the operation of the Melt Department baghouse, while any combination of the emissions units served by the baghouse are in operation, the PE and PM10 emission rates from the baghouse shall not exceed 0.010 grain/dscf.

Applicable Compliance Method:

Compliance shall be determined through stack testing performed in accordance with the requirements established in 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).
Emissions Limitation:

During the operation of the Melt Department baghouse, while any combination of the emissions units served by the baghouse are in operation, there shall be no visible particulate emissions from the baghouse stack(s).

Applicable Compliance Method:

Compliance shall be determined using the requirements established in 40 CFR Part 60, Appendix A, Method 22.
Emissions Limitation:

The annual stack emissions from this emissions unit shall not exceed 0.74 ton of PE.

Applicable Compliance Method:

Emission Factor = 0.90 lb PE/ton, uncontrolled, SCC 3-04-003-03, FIRE 6.24

Assumed capture efficiency = 95%
Assumed control efficiency = 95%

The following equation shall be used to determine compliance:

actual annual tons of metal poured in this emissions unit x 0.90 lb PE/ton x 0.95 x 0.05 x 1 ton/2000 lbs = ton PE emitted per year
Emissions Limitation:

The annual stack emissions from this emissions unit shall not exceed 0.70 ton of PM10.

Applicable Compliance Method:

Emission Factor = 0.86 lb PM10/ton, uncontrolled, SCC 3-04-003-03, FIRE 6.24

Assumed capture efficiency = 95%
Assumed control efficiency = 95%

The following equation shall be used to determine compliance:

actual annual tons of metal poured in this emissions unit x 0.86 lb PM10/ton x 0.95 x 0.05 x 1 ton/2000 lbs = ton PM10 emitted per year
Emissions Limitation:

The annual fugitive emissions from this emissions unit shall not exceed 0.79 ton of PM.

Applicable Compliance Method:

Emission Factor = 0.90 lb PM/ton, uncontrolled, SCC 3-04-003-03, FIRE 6.24

Assumed capture efficiency = 95%

The following equation shall be used to determine compliance:

actual annual tons of metal poured in this emissions unit x 0.90 lb PM/ton x 0.05 x 1 ton/2000 lbs = ton PM emitted per year
Emissions Limitation:

The annual fugitive emissions from this emissions unit shall not exceed 0.75 ton of PM10.

Applicable Compliance Method:

Emission Factor = 0.86 lb PM10/ton, uncontrolled, SCC 3-04-003-03, FIRE 6.24

Assumed capture efficiency = 95%

The following equation shall be used to determine compliance:

actual annual tons of metal poured in this emissions unit x 0.86 lb PM10/ton x 0.05 x 1 ton/2000 lbs = ton PM10 emitted per year

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

The emission testing shall be conducted within 6 months after issuance of this permit and within 6 months prior to permit expiration.

The emission testing shall be conducted to demonstrate compliance with the allowable visible particulate emissions limitations in sections E.1.e and E.1.g and the allowable mass emission rate for particulates from the baghouse exhaust in section E.1.a and E.1.f.

The following parameters also shall be monitored and recorded during the emissions testing: the process weight rate (in tons per hour); the pressure drop across the baghouse; air stream temperature; and the flow rate in cubic feet per minute.

The following test method(s) shall be employed to demonstrate compliance:

- i. for the visible fugitive particulate emissions, Method 9 of 40 CFR Part 60, Appendix A;
- ii. for the visible stack particulate emissions, Method 22 of 40 CFR Part 60, Appendix A; and
- iii. for the mass emission rate for particulates and particulate grain loading, Methods 1-5 of 40 CFR Part 60, Appendix A.

The test(s) shall be conducted while five electric induction furnaces, inoculation (P036), and the sand shakeout (P027) are being operated at or near their maximum capacities, unless otherwise approved by the Canton LAA.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Canton LAA. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit's operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Canton LAA's refusal to accept the results of the emission test(s).

Personnel from the Canton LAA shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Canton LAA within 30 days following completion of the test(s).

F. Miscellaneous Requirements

1. None