Ohio Environmental Protection Agency
John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

9/27/2012

Certified Mail

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

Alan Hartke
FERRO CORPORATION - CLEVELAND FRIT PLANT
4150 East 56th Street, P.O. Box 6550
Cleveland, OH 44101-1550

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 1318170235
Permit Number: P0110462
Permit Type: Administrative Modification
County: Cuyahoga

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the permit. A public notice will appear in the Ohio EPA Weekly Review and the local newspaper, The Plain Dealer. A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Issued Air Pollution Control Permits" link. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall
Permit Review/Development Section
Ohio EPA, DAPC
50 West Town Street, Suite 700
P.O. Box 1049
Columbus, Ohio 43216-1049

and

Cleveland Division of Air Quality
2nd Floor
75 Erieview Plaza
Cleveland, OH 44114

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Cleveland Division of Air Quality at (216)664-2297.

Sincerely,

Michael W. Ahern

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

Cc: U.S. EPA Region 5 *-Via E-Mail Notification*
CDAQ; Pennsylvania; Canada

Permit Strategy Write-Up

1. Check all that apply:

   Synthetic Minor Determination (not applicable)

   Netting Determination(not applicable)

2. Source Description:

   This is a PTI administrative modification for the following emissions units to address the lead attainment demonstration State Implementation Plan (SIP) submitted to USEPA by Ohio EPA:

P061	150 lbs/hr electric glass melter equipped with a baghouse
P063	150 lbs/hr electric glass melter equipped with a baghouse
P064	220 lbs product/cycle electric glass melter (large melter 1) equipped with a baghouse and HEPA filter
P065	220 lbs product/cycle electric glass melter (large melter 2) equipped with a baghouse and HEPA filter
P066	220 lbs product/cycle electric glass melter (large melter 3) equipped with a baghouse and HEPA filter
P067	220 lbs product/cycle electric glass melter (large melter 5) equipped with a baghouse and HEPA filter
P068	220 lbs product/cycle electric glass melter (small melter 9) equipped with a baghouse and HEPA filter
P069	220 lbs product/cycle electric glass melter (small melter 10) equipped with a baghouse and HEPA filter

3. Facility Emissions and Attainment Status:

   Facility actual particulate emissions reported as approximately 2.91 tons for 2011.
   Facility actual lead emissions reported as less than 1.0 ton/year for 2011.

   Cuyahoga County is in non-attainment for $PM_{2.5}$ and ozone.
   Cuyahoga County is in partial non-attainment for lead.

4. Source Emissions:

   P061 and P063 will be modified to reflect the following emission limitations:

   - Particulate emissions shall not exceed 0.06 lb/hr and 0.26 ton/yr.

   P064 – P069 will retain the following emission limitations:

   - Particulate emissions shall not exceed 0.01 lb/hr and 0.05 ton/yr.
   - Lead emissions from P064 – P069 combined shall not exceed 0.30 ton/yr.

5. Conclusion:

   The following changes will be made to the terms and conditions for emissions units P061 and P063 – P069:

   P061 and P063 - These emissions units do not emit lead emissions so HEPA filter controls and compliance with the facility's Preventive Maintenance Plan are not necessary. The short term and TPY allowable limits for particulates were adjusted based on the max process weight of 150 lbs/hr. The previous allowable limits were based on 125 lbs/hr which was an error.

   P064 – P069 - Terms and conditions for HEPA filter controls and compliance with the facility's Preventive Maintenance Plan will be included as operating restrictions. Terms for the installation and operation of a bag leak detection system along with the associated monitoring, recordkeeping and reporting requirements are being added to the permit.

6. Please provide additional notes or comments as necessary:

   None

7. Total Permit Allowable Emissions Summary (for informational purposes only):

Pollutant	Tons Per Year
PE	0.82
Lead	0.30

PUBLIC NOTICE
9/27/2012 Issuance of Draft Air Pollution Permit-To-Install

FERRO CORPORATION - CLEVELAND FRIT PLANT
4150 East 56th Street, P.O. Box 6550
Cleveland, OH 44101-1550
Cuyahoga County
FACILITY DESC.: All Other Miscellaneous Chemical Product and Preparation Manufacturing
PERMIT #: P0110462
PERMIT TYPE: Administrative Modification
PERMIT DESC: PTI administrative modification for electric melters, P061 and P063 - P069 to address the lead attainment demonstration SIP submitted to U.S. EPA by Ohio EPA. This includes compliance with the Preventative Maintenance Plan, use of bag leak detection system, and use of HEPA filters.

The Director of the Ohio Environmental Protection Agency issued the draft permit above. The permit and complete instructions for requesting information or submitting comments may be obtained at: http://epa.ohio.gov/dapc/permitsonline.aspx by entering the permit # or: David Hearne, Cleveland Division of Air Quality, 2nd Floor 75 Erieview Plaza, Cleveland, OH 44114. Ph: (216)664-2297

DRAFT

Division of Air Pollution Control
Permit-to-Install
for
FERRO CORPORATION - CLEVELAND FRIT PLANT

Facility ID:	1318170235
Permit Number:	P0110462
Permit Type:	Administrative Modification
Issued:	9/27/2012
Effective:	To be entered upon final issuance

Division of Air Pollution Control
Permit-to-Install
for
FERRO CORPORATION - CLEVELAND FRIT PLANT

Table of Contents

Authorization 1
A. Standard Terms and Conditions 3
1. Federally Enforceable Standard Terms and Conditions 4
2. Severability Clause 4
3. General Requirements 4
4. Monitoring and Related Record Keeping and Reporting Requirements 5
5. Scheduled Maintenance/Malfunction Reporting 6
6. Compliance Requirements 6
7. Best Available Technology 7
8. Air Pollution Nuisance 7
9. Reporting Requirements 7
10. Applicability 8
11. Construction of New Sources(s) and Authorization to Install 8
12. Permit-To-Operate Application 9
13. Construction Compliance Certification 9
14. Public Disclosure 9
15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations 9
16. Fees 10
17. Permit Transfers 10
18. Risk Management Plans 10
19. Title IV Provisions 10
B. Facility-Wide Terms and Conditions 11
C. Emissions Unit Terms and Conditions 13
1. Emissions Unit Group -150 lb electric melters: P061,P063, ... 14
2. Emissions Unit Group -220 lb electric melters: P064,P065,P066,P067,P068,P069, ... 18

Authorization

Facility ID:	1318170235
Facility Description:	Producer of dry powder specialty glass
Application Number(s):	M0001794, M0001805
Permit Number:	P0110462
Permit Description:	PTI administrative modification for electric melters, P061 and P063 - P069 to address the lead attainment demonstration SIP submitted to U.S. EPA by Ohio EPA. This includes compliance with the Preventative Maintenance Plan, use of bag leak detection system, and use of HEPA filters.
Permit Type:	Administrative Modification
Permit Fee:	$0.00*DO NOT send payment at this time, subject to change before final issuance*
Issue Date:	9/27/2012
Effective Date:	To be entered upon final issuance

This document constitutes issuance to:

FERRO CORPORATION - CLEVELAND FRIT PLANT
4150 East 56th Street
P.O. Box 6550
Cleveland, OH 44101-1550

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

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

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

The above named entity is hereby granted a Permit-to-Install for the emissions unit(s) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally
Director

Authorization (continued)

Permit Number: P0110462
Permit Description: PTI administrative modification for electric melters, P061 and P063 - P069 to address the lead attainment demonstration SIP submitted to U.S. EPA by Ohio EPA. This includes compliance with the Preventative Maintenance Plan, use of bag leak detection system, and use of HEPA filters.

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

Group Name: 150 lb electric melters

Emissions Unit ID:	**P061**
Company Equipment ID:	FEM (E&SG) P111-1
Superseded Permit Number:	13-03509
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P063**
Company Equipment ID:	FEM (E&SG) P111-3
Superseded Permit Number:	13-03509
General Permit Category and Type:	Not Applicable

Group Name: 220 lb electric melters

Emissions Unit ID:	**P064**
Company Equipment ID:	FEM (E&SG) Melter 1
Superseded Permit Number:	13-03509
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P065**
Company Equipment ID:	FEM (E&SG) Melter 2
Superseded Permit Number:	13-03509
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P066**
Company Equipment ID:	FEM (E&SG) Melter 3
Superseded Permit Number:	13-03509
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P067**
Company Equipment ID:	FEM (E&SG) Melter 5
Superseded Permit Number:	13-03509
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P068**
Company Equipment ID:	FEM (E&SG) Melter 9
Superseded Permit Number:	13-03509
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P069**
Company Equipment ID:	FEM (E&SG) Melter 10
Superseded Permit Number:	13-03509
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:

(1) Standard Term and Condition A.2.a), Severability Clause

(2) Standard Term and Condition A.3.c) through A. 3.e)General Requirements

(3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements

(4) Standard Term and Condition A.9., Reporting Requirements

(5) Standard Term and Condition A.10., Applicability

(6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install

(7) Standard Term and Condition A.14., Public Disclosure

(8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

(9) Standard Term and Condition A.16., Fees

(10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. General Requirements

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

b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.

c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.

d) This permit does not convey any property rights of any sort, or any exclusive privilege.

e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

4. Monitoring and Related Record Keeping and Reporting Requirements

a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

(1) The date, place (as defined in the permit), and time of sampling or measurements.

(2) The date(s) analyses were performed.

(3) The company or entity that performed the analyses.

(4) The analytical techniques or methods used.

(5) The results of such analyses.

(6) The operating conditions existing at the time of sampling or measurement.

b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:

(1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Cleveland Division of Air Quality.

(2) Quarterly written reports of (i) any deviations from federally enforceable emissionlimitations, operationalrestrictions,

andcontroldeviceoperatingparameterlimitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Cleveland Division of Air Quality. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.

(3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, andreportingrequirements contained in this permit shall be submitted (i.e., postmarked) to the Cleveland Division of Air Quality every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.

(4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

5. Scheduled Maintenance/Malfunction Reporting

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

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

6. Compliance Requirements

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

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

c) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:

(1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.

(3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

(4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

d) The permittee shall submit progress reports to the Cleveland Division of Air Quality concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

(1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

(2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

7. Best Available Technology

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

8. Air Pollution Nuisance

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

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Cleveland Division of Air Quality.

b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Cleveland Division of Air Quality. If no deviations occurred during a calendar quarter, the permittee shall submit a

quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

10. Applicability

This Permit-to-Install is applicable only to the emissions unit(s) identified in the Permit-to-Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

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

a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as “permanently shut down” in Ohio EPA’s “Air Services” along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).

d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All

records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

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

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

12. Permit-To-Operate Application

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

13. Construction Compliance Certification

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

a) Completion of initial installation date shall be enteredupon completion of construction and prior to start-up.

b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. Public Disclosure

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

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

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

16. Fees

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

17. Permit Transfers

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

18. Risk Management Plans

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

19. Title IV Provisions

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

B. Facility-Wide Terms and Conditions

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

   a) None.

C. Emissions Unit Terms and Conditions

1. Emissions Unit Group -150 lb electric melters: P061,P063,

EU ID	Operations, Property and/or Equipment Description
P061	150 lb/hr electric glass melter equipped with a baghouse
P063	150 lb/hr electric glass melter equipped with a baghouse

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) PTI modification 13-03509 issued on February 14, 2006	Particulate emissions shall not exceed 0.06lb/hr and 0.26 ton/yr. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). See c)(2) below.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by rule.
c.	OAC rule 3745-17-11(B)(1)	The particulate emission limitation specified by this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

(1) The pressure drop across the baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

(2) This emissions unit shall not be used for leaded glass melting.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall properly operate and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on aweekly basis. The monitoring equipment shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

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

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

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

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

(2) The permittee shall record and maintain records on the quantity and content of all constituents of the glass mix for each batch melted for this emissions unit.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reportsto the Cleveland DAQ that identify the following information:

a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;

b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;

c. each incident of deviation described in “a” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in “a” where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

e. each incident of deviation described in “a” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

(2) The permittee shall submit deviation (excursion) reports to the Cleveland DAQ that identify all periods of time during which this emissions unit was used for leaded glass melting. These reports shall be submitted within 30 days after the deviation occurs.

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

f) Testing Requirements

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

a. Emission Limitation:
Particulate emissions shall not exceed 0.06lb/hr.

Applicable Compliance Method:
Compliance with the hourly emission limitation may be determined through the use of the following equation:

PE = CL * SF * DC * E

where:

PE = particulate emissions (lbs/hr)
CL = cycle load in lbs/cycle (150lbs product/hr)
SF = factor of safety (1.04)
DC = dust collector efficiency (1 - 0.99)

E = uncontrolled particulate emissions (PE) from all stages of the melting process (0.04 lb PE/lb product). E was established based on the emission factors and transfer efficiencies for the various stages of the melting process submitted in Permit to Install application #13-3509, dated December 1, 1998.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

b. Emission Limitation:
Particulate emissions shall not exceed 0.26 ton/yr.

Applicable Compliance Method:
Compliance with the annual limitation shall be assumed as long as compliance with the hourly limitation is maintained (the annual limitation was calculated by multiplying the hourly limitation by 8,760hrs/yr, and then dividing by 2,000lbs/ton).

c. Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by rule.

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)(1).

g) Miscellaneous Requirements

(1) Deviations in the pressure drop across the baghouse is not necessarily indicative of an emission violation, but rather serves as a trigger level for additional testing and/or further investigation to establish compliance with the emission limitations.

2. Emissions Unit Group -220 lb electric melters: P064,P065,P066,P067,P068,P069,

EU ID	Operations, Property and/or Equipment Description
P064	220 lb product/cycle electric glass melter (large melter1) equipped with a baghouse and HEPA filter
P065	220 lb product/cycle electric glass melter (large melter2) equipped with a baghouse and HEPA filter
P066	220 lb product/cycle electric glass melter (large melter3) equipped with a baghouse and HEPA filter
P067	220 lb product/cycle electric glass melter (large melter5) equipped with a baghouse and HEPA filter
P068	220 lb product/hr electric glass melter (small melter9) equipped with a baghouse and HEPA filter
P069	220 lb product/cycle electric glass melter (small melter10) equipped with a baghouse and HEPA filter

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) PTI modification 13-03509 issued on February 14, 2006	Particulate emissions shall not exceed 0.01 lb/hr and 0.05 ton/yr. Combined limitation of 0.30 ton/yr of lead emissions. See b)(2)a. below. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by rule.
c.	OAC rule 3745-17-11(B)(1)	The particulate emission limitation specified by this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

a. The total lead emissions from emissions units P064 - P069 shall not exceed 0.30 ton/yr.

c) Operational Restrictions

(1) The pressure drop across the baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

(2) The permitee shall operate the HEPA filter at all times while this emissions unit is in operation.

(3) The permittee shall operate the baghouse for this emissions unit in accordance with the Preventative Maintenance Plan (PMP) submitted on February 22, 2012 to the Cleveland Division of Air Quality (Cleveland DAQ). The PMP shall serve as an operational restriction for the baghouse. Any future revisions to the PMP must be approved by the Cleveland DAQ.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall properly operate and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a weekly basis. The monitoring equipment shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

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

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

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

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

(2) The permittee shall record and maintain records on the quantity and content of all constituents of the glass mix for each batch melted for this emissions unit.

(3) The permitteeshall install, calibrate, maintain, and continuously operate a fabric filter bag leak detection system, in accordance with the system manufacturer's instructions, to monitor the baghouse performance. For this purpose, the term "fabric filter bag leak detection system" means a system that is capable of continuously monitoring relative particulate emissions (dust) loadings in the exhaust of a baghouse in order to detect bag leaks and other upset conditions.

(4) The fabric filter bag leak detection system must be equipped with an alarm system that will sound when an increase in relative particulate emissions loading is detected over a preset level, and the alarm must be located such that it can be heard by the appropriate plant personnel.

(5) If the fabric filter bag leak detection system alarms, the permittee shall initiate investigation of the baghouse and/or emissions unit(s) within one (1) hour of the first discovery of the alarming incident for possible corrective action. If corrective action is required, the permittee shall proceed to implement such corrective action, in accordance with a written corrective action plan, as soon as practicable in order to minimize possible exceedances of the emission limitations established in b)(1). The corrective action plan shall include, at a minimum, the following provisions:

a. inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in emissions;

b. sealing off defective bags or filter media;

c. replacing defective bags or filter media, or otherwise repairing the control device;

d. sealing off a defective baghouse compartment;

e. cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system; and

f. shutting down the melting operations.

(6) The permittee shall maintain records of each bag leak detection system alarm, including the date and time of the alarm, the amount of time taken for corrective action to be initiated, the cause of the alarm, an explanation of the corrective actions taken, and when the cause of the alarm was corrected.

(7) The permittee shall maintain records of all inspections and maintenance performed on the fabric filter bag leak detection system. Records shall include the date and time of each inspection or maintenance activity; the activities performed; and the results of any drift checks and response tests.

(8) Within 60 days after the effective date of this permit,the permittee shall conduct monthly QA checks and annual instrument set ups of the fabric filter bag leak detection system consistent with the guidance provided in EPA-454/R-98-015: U.S. EPA Fabric Filter Bag Leak Detection Guidance.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reportsto the Cleveland DAQ that identify the following information:

a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;

b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;

c. each incident of deviation described in “a” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in “a” where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

e. each incident of deviation described in “a” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

(2) The permittee shall submit annual reports to the Cleveland DAQ that specify the total particulate and lead emissions from this emissions unit. These reports shall be submitted by April 15 of each year in accordance with the fee emission reporting requirement, and cover the previous calendar year.

(3) The permittee shall submit quarterly deviation (excursion) reports to the Cleveland DAQ that identify the following:

a. all periods of time in which the bag leak detection alarm system was triggered; and

b. all periods of time (including the date) in which the permittee did not initiate corrective actions within 1 hour of an alarm from the bag leak detection system.

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

f) Testing Requirements

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

a. Emission Limitations:
Particulate emissions shall not exceed 0.01 lb/hr and 0.05 ton/yr.

Applicable Compliance Methods:
Compliance with the hourly emission limitation may be determined through the use of the U.S. EPA database, FIRE 6.22 emission factor for frit smelting with a fabric filter (0.02 lb/ton) which is multiplied by the maximum production rate for the emissions unit (220 lbs/hr) and divided by 2,000 lbs/ton.

If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission testing performed in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

Compliance with the ton per year limitation shall be assumed as long as compliance is maintained with the lbs PE/hr limitation (the annual limitation was calculated by multiplying the hourly limitation by 8,760hrs/yr, and then dividing by 2,000lbs/ton).

b. Emission Limitation:
Combined lead emission limitation of 0.30 ton/yrfor emissions units P064-P069.

Applicable Compliance Method:
Compliance with the lead emission limitation shall be demonstrated provided the permittee remains in compliance with the particulate emission limitations for emissions units P064 through P069.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 12 of 40 CFR Part 60, Appendix A.

c. Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by rule.

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)(1).

g) Miscellaneous Requirements

(1) Deviations in the pressure drop across the baghouse is not necessarily indicative of an emission violation, but rather serves as a trigger level for additional testing and/or further investigation to establish compliance with the emission limitations.