State of Ohio Environmental Protection Agency

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1/9/2009

Certified Mail

Yes	TOXIC REVIEW
Yes	PSD
Yes	SYNTHETIC MINOR
No	CEMS
Yes	MACT
Yes	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
Yes	MODELING SUBMITTED

Jeff Bindas
V & M Star
2669 Martin Luther King Jr. Blvd.
Youngstown, OH 44510

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0250110625
Permit Number: P0103995
Permit Type: Initial Installation
County: Mahoning

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, Youngstown-Vindicator. A copy of the public notice and the draft permit are enclosed. This permit has been posted to the Division of Air Pollution Control (DAPC) Web page http://www.epa.state.oh.us/dapc in Microsoft Word and Adobe Acrobat format. 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
122 South Front Street
Columbus, Ohio 43215

and

Ohio EPA DAPC, Northeast District Office
2110 East Aurora Road
Twinsburg, OH 43087

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 Ohio EPA DAPC, Northeast District Office at (330)425-9171.

Sincerely,

Michael W. Ahern

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

Cc: U.S. EPA
Ohio EPA-NEDO; Pennsylvania; West Virginia

MAHONING AND TRUMBULL
COUNTIES

PUBLIC NOTICE PUBLIC HEARING
OHIO ENVIRONMENTAL PROTECTION AGENCY
ISSUANCE OF DRAFT PERMIT TO INSTALL
SUBJECT TO
PREVENTION OF SIGNIFICANT DETERIORATION REVIEW
TO V and M Star

Public notice is hereby given that the Ohio Environmental Protection Agency (EPA) will hold a public hearing and has issued, on January 9, 2009, a draft action of Permit to Install (PTI) application number P0103995 to V and M Star, Youngstown, Ohio. This draft permit proposes to allow the expansion of existing operations and to install new operations in support of the expansion at the facility located at 2669 Martin Luther King, Jr. Boulevard, Youngstown, Ohio, 44510.

Air emissions of several pollutants will result. The proposed allowable criteria pollutant air emission rates at the facility are listed below, in tons per year for this permitting action.

Pollutant	Tons/yr
Particulate	190
PM10	190
NOx	567
CO	3130
VOC	142
SO2	184
Pb	1.21

This facility is subject to the applicable provisions of the Prevention of Significant Deterioration (PSD) regulations as promulgated by U.S. EPA (40 CFR 52.21) and the Ohio EPA permit to install requirements (OAC 3745-31).

The U.S. EPA allows sources to consume no more than the maximum available ambient PSD increments for each PSD pollutant. The Ohio EPA allows PSD sources to consume no more than one half the available increment, with some exceptions. The PM10 and SO2 impacts of this expansion are above one half of the increment, but the areal extent is localized. This facility has demonstrated that the impacts from the expansion is less than the available increment. Based on this analysis, the project complies with both the federal and state increment requirements for PM10 and SO2.

There are no PSD increments for CO and Pb. For these pollutants, Ohio EPA only allows a source to have impacts up to one quarter of the National Ambient Air Quality Standards. Based on this analysis, the project complies with this requirement for CO and Pb.

A public information meeting on the permit is scheduled for February 12, 2009, beginning at 6:30 p.m. A public hearing on the draft permit will commence at 7:00 p.m. to consider public comment. The public will have an opportunity to present testimony at the hearing related to the permit to an Ohio EPA hearing panel. Both activities will be held at the City Hall, 26 S. Phelps St., Youngstown, Ohio. A presiding officer will be present and may limit oral testimony to five minutes to ensure that all parties are heard.

All interested persons are entitled to attend or be represented and give written or oral comments on the draft permit at the hearing. Written comments must be received by the Ohio EPA at the place specified below by the close of the business day on February 17, 2009. Comments received after this date will not be considered to be a part of the official record of this hearing.

Comments are to be sent to Ed Perez, Ohio Environmental Protection Agency, Northeast District Office, Division of Air Pollution Control, 2110 East Aurora Road Twinsburg, Ohio 44087.

Further information concerning this application, which is available for public inspection, may be secured from the Ohio Environmental Protection Agency, Northeast District Office at the above address during normal business hours. Telephone number: (330) 425-9171.

Permit Strategy Write-Up

1. Check all that apply:

   _X_ Synthetic Minor Determination

   ___ Netting Determination

2. Source Description:

   V & M Star, which is located on 2669 Martin Luther King Jr. Blvd. in Youngstown, Ohio, submitted a permit-to-install application to increase the facility's permitted liquid steel production from 830,000 tons per year to 1,400,000 tons. To support the liquid steel production increase, the facility will modify and install the following emissions units:

   - F001 – paved and unpaved roadways (existing)
   - F006 – caster (new)
   - P012 – billet rotary hearth furnace (new)
   - P013 – pipe intermediate furnace (new)
   - P014 – FQM pipe mill (new)
   - P016 – pipe austenitizing furnace #1 (new)
   - P017 – pipe tempering furnace #1 (new)
   - P018 – pipe austenitizing furnace #2 (new)
   - P019 – pipe tempering furnace #2 (new)
   - P021 – melter furnace (new)
   - P022 – abrasive product hand (new)
   - P024 – vacuum tank degasser (VTD) (new)
   - P025 – cooling tower 7/8 (new)
   - P026 – cooling tower 1 (new)
   - P905 – electric arc furnace (existing)
   - P907 –alloy, additive, and flux handling #1 (existing)
   - P908 – alloy, additive, and flux handling #2 (new)
   - P909 – ladle metallurgy furnace (LMF) (new)
   - P910 – electric arc furnace (new), if installed in the future as a replacement to P905

   The facility will also install the following emissions units to support the liquid steel production increase but are exempt from permitting requirements:

   - Five (5) emergency generators - (OAC rule 3745-31-03(A)(4)(b))
   - ladle preheaters/dryers - (OAC rule 3745-31-03(A)(1)(a))
   - raw material handling operation - (OAC rule 3745-15-05(B))
   - steel sodium hydroxide tank - (OAC rule 3745-15-05(B))

- fore hearth furnace - (OAC rule 3745-31-03(A)(1)(a))
- tundish heaters & caster torch - (OAC rule 3745-31-03(A)(1)(a))
- tundish preheaters/dryers - (OAC rule 3745-31-03(A)(1)(a))
- mandrel furnace - (OAC rule 3745-31-03(A)(1)(a))
- five (5) vacuum tank degasser system boilers (each rated at 9.865 MMBtu/hr) (OAC rule 3745-31-03(A)(1)(a))

The increase of liquid steel production will trigger Prevention of Significant Deterioration (PSD) review for nitrogen oxides (NOx), carbon monoxide (CO), sulfur dioxide (SO2), volatile organic compound (VOC), particulate matter (PM), and particulate matter 10 microns in diameter and less (PM10).

3. Facility Emissions and Attainment Status:

The net emission increases for PSD applicability determination take into account contemporaneous increases and decreases from an earlier permit and use a 2004-2006 baseline period for prior actual emissions. The facility's potential liquid steel production increase of 732,656 tons per year (1,400,000 - 667,344 tons) triggers PSD review for NOx, CO, SO2, VOC, PM, and PM10. The lead emissions from the liquid steel production increase, however, do not trigger PSD review because the maximum incremental lead emissions restriction of 0.55 ton per year, above the baseline emissions level, is less than the applicable PSD emissions threshold level of 0.6 ton. The total lead emissions from the proposed 1,400,000 tons of liquid steel production will be 1.21 tons per year. The facility is located in Mahoning County and Trumbull County. Mahoning County and Trumbull County are attainment for particulate matter, PM10, sulfur dioxide, carbon monoxide, ozone, lead, and oxides of nitrogen.

4. Source Emissions:

The potential annual emissions of NOx, CO, SO2, VOC, PM, and PM10 from the proposed liquid steel production increase exceed the PSD significant emission increase threshold levels. The 732,656 tons per year of liquid steel production increase (1,400,000 - 667,344 tons) will have a maximum lead emissions restriction of 0.55 ton per year. The 0.55 ton per year lead emissions restriction is an incremental restriction above baseline emissions, and is less than the applicable PSD emissions threshold level of 0.6 ton.

5. Conclusion:

The proposed new potential emission, based upon federally enforceable operating restrictions, from the proposed liquid steel production increase is less than the PSD significant emission level for lead. Emissions of NOx, CO, SO2, VOC, PM, and PM10, however, are over the PSD significant emission threshold levels requiring PSD review.

6. Please provide additional notes or comments as necessary:

   None

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

Pollutant	Tons Per Year
Particulate	190
PM10	190
NOx	566
CO	3,130
SO2	184
VOC	142
Pb	1.21 or 1.14

STAFF DETERMINATION FOR THE APPLICATION TO CONSTRUCT UNDER THE PREVENTION OF SIGNIFICANT DETERIORATION REGULATIONS FOR V and M STAR YOUNGSTOWN, OHIO AIR PERMIT TO INSTALL (PTI) NUMBER 02-0103995

The Clean Air Act and regulations promulgated thereunder require that major air pollution sources undergoing construction or modification comply with all applicable Prevention of Significant Deterioration (PSD) provisions and nonattainment area New Source Review (NSR) requirements. The federal PSD rules govern emission increases in attainment areas for major sources, which are sources with the potential to emit 250 tons per year or more of any pollutant regulated under the Clean Air Act, or 100 tons per year or more if the source is included in one of 28 source categories. In nonattainment areas, the definition of major source is one having at least 100 tons per year potential emissions. A major modification is one resulting in a contemporaneous increase in emissions which exceeds the significance level of one or more pollutants. Any changes in actual emissions within a five-year period are considered to be contemporaneous. In addition, Ohio now has incorporated the PSD and NSR requirements by rule under Ohio Administrated Code (OAC) 3745-31.

Both PSD and nonattainment rules require that certain analyses be performed before a facility can obtain a permit authorizing construction of a new source or major modification to a major source. The principal requirements of the PSD regulations are:

1) Best Available Control Technology (BACT) review - A detailed engineering review must be performed to ensure that BACT is being installed for the pollutants for which the new source is a major source.

2) Ambient Air Quality Review - An analysis must be completed to ensure the continued maintenance of the National Ambient Air Quality Standards (NAAQS) and that any increases in ambient air pollutant concentrations do not exceed the incremental values set pursuant to the Clean Air Act.

For nonattainment areas, the requirements are:

1) Lowest Achievable Emissions Rate (LAER) - New major sources must install controls that represent the lowest emission levels (highest control efficiency) that has been achieved in practice.

2) The emissions from the new major source must be offset by a reduction of existing emissions of the same pollutant by at least the same amount, and a demonstration must be made that the resulting air quality shows a net air quality benefit. This is more completely described in the Emission Offset Interpretative Ruling as found in Appendix S of 40 Code of Federal Register (CFR), Part 51.3) The facility must certify that all major sources owned or operated in the state by the same entity are either in compliance with the existing State Implementation Plan (SIP) or are on an approved schedule resulting in full compliance with the SIP.

For rural ozone nonattainment areas, the requirements are:

1) LAER - New major sources must install controls that represent the lowest emissions levels (highest control efficiency) that has been achieved in practice.

2) The facility must certify that all major sources owned or operated in the state by the same entity are either in compliance with the existing SIP or are on an approved schedule resulting in full compliance with the SIP.

Finally, New Source Performance Standards (NSPS), SIP emission standards and public participation requirements must be followed in all cases.

Site Description

The facility is in Youngstown, Ohio, located in Mahoning and Trumbull Counties. This area is classified as attainment for all of the criteria pollutants.

Facility Description

V and M Star (V&M) is expanding its steel production operations at the current facility located in Youngstown, Ohio that manufactures seamless steel tubes mainly for the oil and gas industry. These steel tubes are referred to as oil country tubular goods (OCTG).

V&M is proposing two options as part of that expansion. The implementation of which option will be at V & M Star's discretion and mostly likely the option used will be due to economic conditions as they present themselves to V & M Star.

Option 1 is to upgrade the electric air furnace (EAF) in its existing building and location to increase the liquid steel production capacity to 1,400,000 tons per year and;

Option 2 is to construct a new EAF and associated bay for the new EAF with the same capacity adjacent to the planned new refining and casting bays to meet the new demand.

Under Option 1, the EAF would be modified in the existing building and the existing EAF support equipment would remain in operation. The EAF direct evacuation control (DEC) and canopy hood exhausts would be directed to the new baghouse. The existing support equipment would remain which includes the EAF's additive materials handling system, the ladle preheat stations, and cooling towers 2 and 2A. The hot metal refining and casting facilities will be upgraded with new equipment to meet the enhanced production and steel quality requirements and will be located in a new building (new refining and casting bays).

The upgraded steel refining operations would include a new ladle metallurgy furnace (LMF) and the addition of a vacuum tank degasser (VTD). A new 5-strand continuous casting machine (CCM) will also be installed to meet the increased production demand and product variation along with a new alloy, additives and flux bulk unloading station, conveyor systems, and holding bins to supply the LMF.

The LMF, CCM overhead hood, and additive materials handling systems and bins will be exhausted to the new EAF/LMF baghouse for control of particulate emissions.

Also, ancillary support equipment will be installed under option 1 scenario that includes new cooling towers for the non-contact and contact cooling water and steam generators (boilers) to supply the VTD steam jet vacuum system. The existing hot metal refining and casting operations will be decommissioned and removed upon commencement of operation of the new facilities under Option 1 scenario.

Under Option 2 the upgraded EAF installed in a new EAF bay would have the same production capacity as the proposed for the existing EAF location upgrade option 1, (172 tons per hour),

and the EAF DEC and canopy hood exhausts would be directed to the new baghouse. The ladle preheaters would be relocated to or replaced with new burners of equal size in the new refining bay. The new building alloy and flux materials handling facilities would include new silos like those for the existing for EAF. The existing EAF support cooling towers 2 and 2A would be replaced with a new cooling tower system located with the refining and casting cooling tower service at the new building. The existing EAF and support operations would be decommissioned and removed upon commencement of operation of the new facilities under option number 2.

In both options, the EAF's emissions will be ducted to a new six (6) exhaust compartment mono-vent baghouse with an outlet loading of 0.0018 grain/dry standard cubic feet (dscf) and a total exhaust flow of 1,200,000 actual cubic feet per minute (ACFM).

The current ladle refining station (LRS) and 3-strand caster in the meltshop building will be removed under both options. Under option number 1, liquid steel will travel via a ladle carrier from the upgraded operations contained within the meltshop to a new hot metal building that will house a new Ladle Metallurgy Furnace (LMF), 5-strand caster, vacuum tank degassing (VTD) system and second alloy-additives-flux system.

Under option number 2, the liquid steel will not travel via a ladle carrier since the new EAF will be adjacent to the LMF operations.

Under both options the following will occur:

Steam for the vacuum de-gassing system will be provided by up to five (5) natural gas-fired boilers with a heat input of 9.87 MMBtu/hr each. The VTD system will have its own two stacks. One stack will exhaust the five steam boilers. The other will exhaust the VTD steam ejector.

A new building will be built that will house a new abrasives manufacturing process that uses baghouse dust. V&M is working with another company to re-cycle their baghouse dust into an abrasive product for sale.

The proposed Project will feature a pipe mill referred to as the Fine Quality Mill (FQM). The FQM pipe mill will include a natural gas-fired rotary hearth furnace to heat the billets to the proper temperature for piercing and rolling. It will also include a natural gas fired pipe reheating furnace and two pipe treating lines, each with natural gas-fired hardening and tempering furnaces.

There will also be a natural gas fired mandrel pre-heat furnace in the new pipe mill.

Other proposed mill upgrades and expansion projects will include up to five (6) diesel-fired emergency generator sets that will only operate as stand-by during a power outage. Each emergency generator will be limited to 100 hours/year for readiness testing. Anticipated operation is less than 1 hour per week.

Roadway emissions will be increased due to the proposed increase in production of liquid steel.

<u>New Source Review (NSR)/PSD Applicability</u>

V&M's production capacity was about 710,000 liquid steel tons per year. However, an air permit-to-install (PTI)/PSD issued in September 2008 approved modifications to increase production to 830,000 tons per year from that level. But as mentioned above, V&M is planning with this expansion to increase the 830,000 production level to 1,400,000 tons per year.

The Project will generate criteria pollutant emissions of particulate matter (PM) and particulate matter 10 microns and less in diameter (PM10), nitrogen oxides (NO_x), carbon monoxide (CO),

volatile organic compound (VOC), sulfur dioxide (SO_2) and lead (Pb).

Currently, the V& M facility is a major stationary source pursuant to the PSD rules. A PSD analysis is required for any increase in emissions of a pollutant exceeding the PSD threshold emission level, or the significance emission levels.

In determining whether option numbers 1 and 2 using the worse case evaluation of the two options would trigger a significant emission increase, V&M used the actual 24-month annual average steel production through June 2006 of 667,344 tons per year as the baseline actual annual emission period. Because the newly planned modifications (either option number 1 or 2) are contemporaneous with the modifications that resulted in the issuance of the September 2008 PSD permit just approved, the same baseline period was used.

The proposed project modifications using the above baseline constitute a major modification at a current major stationary source subject to the PSD requirements in accordance with OAC rule 3745-31-15 and 40 CFR, Part 52.21 incorporated by reference.

Therefore, with this project, V&M will trigger PSD significant emission threshold levels for the following pollutants emitted, PM, PM10, NO_x, SO_2, CO and VOC as denoted in Table 1 below.

TABLE 1

PRELIMINARY POLLUTANT EMISSION RATES
MODIFICATION TO INCREASE EMISSION RATES

Air Pollutant	PTI Allowable (tpy)	PTI Increase (tpy)	PSD/NSR Threshold (tpy)
Particulate (PM)	190	91	25
PM10	190	91	15
Nitrogen Oxides (NOx)	567	342	40
Sulfur Dioxide (SO_2)	184	100	40
Carbon Monoxide (CO)	3130	1738	100
Volatile Organic Compounds (VOC/OC)	142	79	40
Lead	1.21	0.55	0.6

Control Technology Review

As part of the application for any source regulated under the PSD requirements, an analysis must be conducted that demonstrates that Best Available Control Technology (BACT) will be employed by the source. The V&M facility is subject to PSD regulations which mandate a case-by-case BACT analysis be performed for PSD triggering pollutants. The application used a "top-down" approach to determine the latest demonstrated control techniques and select an appropriate control.

BACT Evaluation Steps:

Identify all available potential control options;
Eliminate technically infeasible options;
Rank remaining technologies by control effectiveness;
Evaluate the feasible controls by performance and cost analysis; and
Select the most effective control based on energy, environmental and economic impacts (generally, the feasible technology that is also considered to be cost effective).

Technologies Evaluated:

Particulate (PM/PM10)

The following feasible control technologies were evaluated. V&M is proposing BACT determinations without conducting a cost effectiveness analysis for each process, except for the billet preheat furnace (natural gas fired) and the VTD boilers.

Option 1 Existing Meltshop Building - - EAF (emissions unit P905) Control and Option 2 new building replacement EAF emissions unit P910 Control	**Description**
Capture by direct furnace evacuation, canopy hood exhaust, roof area exhausts which are directed to a common EAF/LMF baghouse.	This was the control option utilized by steel operations in the RBLC. The applicant proposes to increase size of current baghouse size to 1,200,000 actual cubic feet per minute (acfm) design flow with an outlet grain loading of 0.0018 grains/dry standard cubic feet (dscf) for PM/PM10. Note due to high performance there is very little large particulate passing the filter material and it is assumed that total filterable particulate (PM) is equal to the PM10 emissions.
New Billet-Making Building – Ladle Metallurgy Furnace (LMF) - emissions unit P909 Control	**Description**
Capture by close-fitting side draft ladle cover roof and skirt exhausts which are directed to a common EAF/LMF baghouse.	This was the control option utilized by steel operations in the RBLC. The applicant used a design baghouse flow rate of 980,000 actual cubic feet per minute (acfm) with an outlet grain loading of 0.0018 grains/dry standard cubic feet (dscf) for PM/PM10. Note due to high performance there is very little large particulate passing the filter material and it is assumed that total filterable particulate (PM) is equal to the PM10 emissions.
New Billet-Making	**Description**

Building - - LMF 2nd Alloy, Additives, Flux and Lime System – emissions unit P908 Control	
Emissions will be ducted to EAF/LMF baghouse due to the small amount of emissions generated by this operation.	PM/PM10 emissions are expected to be minimal from these sources.
New Billet-Making Building - - Continuous Caster emissions unit F006 Control	**Description**
Emissions will be ducted to EAF/LMF baghouse due to the small amount of emissions generated by this operation.	PM/PM10 uncontrolled emissions are minimal from the continuous caster operations. An overhead capture hood will exhaust these emissions to the EAF/LMF baghouse.
New Billet-Making Building - - Vacuum Tank Degasser (VTD) emissions unit P024 Control	**Description**
Uncontrolled particulate loading is estimated at 0.2 lb/ton of steel processed.	PM/PM10 emissions are expected to be minimal from this emissions unit in the range of 0.34 pound per hour due to predicted 99% reduction by steam jet vacuum system associated with this emissions unit.
New Billet-Making Building – 5 VTD Boilers Control	**Description**
No alternative emission reduction techniques are applied for small natural gas-fired boiler.	Exempt from Ohio permitting requirements if emissions unit is less than 10 MMBtu per hour. PM/PM10 emissions are expected to be minimal from these emissions units.
Current Pipe Mill -.- Billet Reheat Furnace (natural gas fired) – (emissions unit P011) Control	**Description** Note that this emission unit is not being modified in the expansion and is thus not part of the PTI. OEPA forms were not submitted for this unit.
No change to this emissions unit.	AP-42 emission factor in pounds per MMBtu value is BACT.
New Fine Quality Mill	**Description**

(FQM) Pipe Mill - - Billet Rotary Hearth Reheat Furnace - emissions unit P012 Control	
The use of natural gas and good combustion practices.	AP-42 emission factor in pounds per MMBtu value is BACT which results in about 3.61 tons per year.
New FQM Pipe Mill - - Intermediate Reheat Furnace (TMP159958) emissions unit P013 Control	**Description**
The use of natural gas and good combustion practices.	AP-42 emission factor in pounds per MMBtu value is BACT which results in about 1.52 tons per year.
New FQM Pipe Mill - - Mandrel Furnace (exempt from OAC rules) Control	**Description**
The use of natural gas and good combustion practices.	AP-42 emission factor in pounds per MMBtu value is BACT. PM/PM10 emissions are expected to be minimal from these sources.
New FQM Pipe Mill - - Pipe Mill (CEFQMPM) emissions unit P014 Control	**Description**
Emissions will be ducted to venturi scrubber.	Scrubber with an outlet grain loading of 0.004 grains/dry standard cubic feet (dscf).
New FQM Pipe Mill - - Hardening (Austenitizing) Furnaces #1 and #2 emissions units P016 and P018 Control	**Description**
The use of natural gas and good combustion practices.	AP-42 emission factor in pounds per MMBtu value is BACT which results in about 0.67 tons per year from each furnace.
New FQM Pipe Mill - - Tempering Furnaces #1 and #2 emissions units P019 and P018 Control	**Description**
The use of natural gas	AP-42 emission factor in pounds per MMBtu value is BACT

and good combustion practices.	which results in about 0.57 ton per year from each furnace.
New Abrasives Manufacturing Building - Raw Materials Handling Control	**Description**
Emissions will be ducted to pneumatic transfer vent filters (baghouse)	Baghouse with an outlet grain loading of 0.005 grains/dry standard cubic feet (dscf) results in deminimis emissions generated by this operation.
New Abrasives Manufacturing Building - Melting Furnace Scrubber emissions unit P021 Control	**Description**
Emissions will be ducted to venturi and packed tower scrubbers.	The expected particulate control efficiency is 99% which results in an outlet grain loading of 0.010 grains/dry standard cubic feet (dscf)
New Abrasives Manufacturing Building - Product Handling emissions unit P022 Control	**Description**
Emissions will be ducted to a baghouse	Baghouse with an outlet grain loading of 0.005 grains/dry standard cubic feet (dscf) due to the small amount of emissions generated by this operation.
Cooling Towers emissions unit P025 Control	**Description**
Total dissolved solids of the circulating cooling water employed and drift eliminator.	Total dissolved solids of the circulating cooling water of 1000 ppm or less and drift eliminator performance of 0.005%.
Standby/Emergency Generators	BACT is proposed as compliance with 40 CFR Part 60, Subpart III - - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.
Fugitive emissions from truck traffic Control	PM/PM10 emissions are expected to be minimal from these sources due to an aggressive dust control program.

Carbon monoxide (CO)

The following control technologies were evaluated.

Opton 1 Existing Meltshop Building - - EAF (emissions units P905) Control and Option 2 new EAF (emissions unit P910)	**Description**

Control	
DEC	This is the technology used by sources in the RBLC. The CO limit will be 4.0 pounds/ton of steel for combined EAF and LMF emissions, which is the low end of the range of other similar units listed. The estimated EAF component is 3.5 lb/ton or less.
New Billet-Making Building - Ladle Metallurgy Furnace (LMF) - emissions unit P909 Control	**Description**
Close-fitting capture hood	This is the technology used by sources in the RBLC. The CO limit will be 4.0 pounds/ton of steel for combined EAF and LMF emissions, which is the low end of the range of other similar units listed. The estimated LMF component is 0.5 lb/ton or less.
New Billet-Making Building - - Vacuum Tank Degasser (VTD) emissions unit P024 Control	**Description**
CO is estimated at 0.2 lb/ton of steel processed.	CO emissions are expected from this emissions unit in the range of 34 pounds per hour. There is no applicable add-on control for this low concentration CO emission.
New Billet-Making Building – 5 VTD Boilers Control	**Description**
No alternative emission reduction techniques are applied for small natural gas-fired boiler.	Exempt from Ohio permitting requirements if emissions unit is less than 10 MMBtu per hour. CO emissions are expected to be minimal from these emissions units based upon AP-42 emission factor.
New Fine Quality Mill (FQM) Pipe Mill - - Billet Rotary Hearth Reheat Furnace - emissions unit P012 Control	**Description**
The use of natural gas and good combustion practices.	AP-42 emission factor in pounds per MMBtu value is BACT which results in about 39.90 tons per year.
New FQM Pipe Mill - - Intermediate Reheat Furnace emissions unit P013 Control	**Description**
The use of natural gas and good combustion practices.	AP-42 emission factor in pounds per MMBtu value is BACT which results in about 16.8 tons per year.

New FQM Pipe Mill - - Mandrel Furnace (exempt from OAC rules) Control	**Description**
The use of natural gas and good combustion practices.	AP-42 emission factor in pounds per MMBtu value is BACT. CO emissions are expected to be minimal from these sources.
New FQM Pipe Mill - - Hardening (Austenitizing) Furnaces #1 and #2 emissions units P016 and P018 Control	**Description**
The use of natural gas and good combustion practices.	AP-42 emission factor in pounds per MMBtu value is BACT which results in about 7.35 tons per year from each furnace.
New FQM Pipe Mill - - Tempering Furnaces #1 and #2 emissions units P017 and P019 Control	**Description**
The use of natural gas and good combustion practices.	AP-42 emission factor in pounds per MMBtu value is BACT which results in about 6.3 tons per year from each furnace.
New Abrasives Manufacturing Building - Melting Furnace Scrubber emissions unit P021 Control	**Description**
	CO emissions are based upon AP-42 emissions factor of 0.2 lb/ton of product produced.
Standby/Emergency Generators	BACT is proposed as compliance with 40 CFR Part 60, Subpart III - - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.

Nitrogen Oxides (NOx)

The following control technologies were evaluated.

Option 1 Existing Meltshop Building - - EAF (emissions units P905) Control and Option 2 new EAF (emissions unit P910) Control	**Description**
SCR, SNCR and flue gas	No listed applicable control in RBLC and based upon

recirculation (FGR) were investigated and DEC.	numerous investigations with steel process engineers and control technology suppliers none is applicable. The proposed BACT for the EAF is DEC, monitoring of process variables, and good carbon injection foamy slag practices and proper oxy-fuel burner operation with a resulting limit of 0.40 lb of NOx/ton of steel for combined EAF and LMF emissions. This is consistent with the most of the lower end RBLC limitations listed for which compliance has been demonstrated.
New Billet-Making Building - Ladle Metallurgy Furnace (LMF) - emissions unit P909 Control	**Description**
Good furnace melting practice with and proper operation procedures.	This is the technology used by sources in the RBLC. The NOx limit will be 0.40 pounds/ton of steel for combined EAF and LMF emissions, which is the low end of the range of other similar units listed.
Continuous Caster Control emissions unit F006	**Description**
No alternative control options	This is the technology used by sources in the RBLC for this unconfined emission. The NOx limit will be 0.05 pound/ton of steel, which has been used by applicant for similar existing caster operations.
New Billet-Making Building – 5 VTD Boilers Control	**Description**
No alternative emission reduction techniques are applied for small natural gas-fired boiler.	Exempt from Ohio permitting requirements if emissions unit is less than 10 MMBtu per hour. BACT is proposed as low NOx burner technology at 0.10 pound of NOx per MMBtu for this small input but high volumetric heat release rate boiler design.
New Fine Quality Mill (FQM) Pipe Mill - - Billet Rotary Hearth Reheat Furnace - emissions unit P012 Control	**Description**
Ultra low NOx burners.	BACT is proposed as ultra-low NOx burner technology at 0.08 pound of NOx per MMBtu.
New FQM Pipe Mill - - Intermediate Reheat Furnace emissions unit P013 Control	**Description**
Ultra low NOx burners.	BACT is proposed as ultra-low NOx burner technology at 0.08

	pound of NOx per MMBtu.
New FQM Pipe Mill - - Mandrel Furnace (exempt from OAC rules) Control	**Description**
	Exempt from Ohio permitting requirements for emissions unit less than 10 MMBtu per hour. BACT is proposed as low NOx burner technology at 0.11 pound of NOx per MMBtu.
New FQM Pipe Mill - - Hardening (Austenitizing) Furnaces #1 and #2 emissions units P016 and P018 Control	**Description**
Ultra low NOx burners.	BACT is proposed as ultra-low NOx burner technology at 0.08 pound of NOx per MMBtu
New FQM Pipe Mill - - Tempering Furnaces #1 and #2 emissions units P017 and P019 Control	**Description**
Ultra low NOx burners.	BACT is proposed as ultra-low NOx burner technology at 0.08 pound of NOx per MMBtu
New Abrasives Manufacturing Building – Melting Furnace Scrubber emissions unit P021 Control	**Description**
	BACT is proposed as 0.5 pound of NOx per MMBtu
Standby/Emergency Generators	BACT is proposed as compliance with 40 CFR Part 60, Subpart III - - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.

Sulfur Dioxide (SO2)

The following control technologies were evaluated.

Option 1 Existing Meltshop Building - - EAF (emissions units P905) Control and Option 2 new EAF (emissions unit P910) Control	**Description**

	The SO2 limit will be 0.25 pounds/ton of steel for combined EAF and LMF emissions, which is the low end of the range of other similar units listed and based upon September 2008 issued PSD permit.
New Billet-Making Building - Ladle Metallurgy Furnace (LMF) - emissions unit P909 Control	**Description**
	The SO2 limit will be 0.25 pounds/ton of steel for combined EAF and LMF emissions, which is the low end of the range of other similar units listed and based upon September 2008 issued PSD permit.
New Billet-Making Building – 5 VTD Boilers Control	**Description**
No alternative emission reduction techniques are applied for small natural gas-fired boiler.	Exempt from Ohio permitting requirements if emissions unit is less than 10 MMBtu per hour. BACT is based upon AP-42 emissions factor.
New Fine Quality Mill (FQM) Pipe Mill - - Billet Rotary Hearth Reheat Furnace - emissions unit P012 Control	**Description**
	BACT is based upon AP-42 emissions factor.
New FQM Pipe Mill - - Intermediate Reheat Furnace emissions unit P013 Control	**Description**
	BACT is based upon AP-42 emissions factor.
New FQM Pipe Mill - - Mandrel Furnace (exempt from OAC rules) Control	**Description**
	BACT is based upon AP-42 emissions factor.
New FQM Pipe Mill - - Hardening (Austenitizing) Furnaces #1 and #2 emissions units P016 and P018 Control	**Description**
	BACT is based upon AP-42 emissions factor.
New FQM Pipe Mill - - Tempering Furnaces #1 and #2 (TMP159962 and TMP159964) emissions	**Description**

units P017 and P019 Control	
	BACT is based upon AP-42 emissions factor.
New Abrasives Manufacturing Building – Melting Furnace Scrubber emissions unit P021 Control	**Description**
	BACT is proposed as caustic packed tower scrubber at 90% control.
Standby/Emergency Generators	BACT is proposed as compliance with 40 CFR Part 60, Subpart III - - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.

Volatile Organic Compound (CO)

The following control technologies were evaluated.

Option 1 Existing Meltshop Building - - EAF (emissions units P905) Control and Option 2 new EAF (emissions unit P910) Control	**Description**
	The VOC limit will be 0.18 pounds/ton of steel, which is the low end of the range of other similar units listed and based upon September 2008 issued PSD permit.
New Billet-Making Building – 5 VTD Boilers (TMP159994) Control	**Description**
No alternative emission reduction techniques are applied for small natural gas-fired boiler.	Exempt from Ohio permitting requirements if emissions unit is less than 10 MMBtu per hour. BACT is based upon AP-42 emissions factor.
New Fine Quality Mill (FQM) Pipe Mill - - Billet Rotary Hearth Reheat Furnace - emissions unit P012 Control	**Description**
	BACT is based upon AP-42 emissions factor.
New FQM Pipe Mill - - Intermediate Reheat Furnace emissions unit P013 Control	**Description**
	BACT is based upon AP-42 emissions factor.
New FQM Pipe Mill - - Mandrel Furnace (exempt	**Description**

from OAC rules) Control	
	BACT is based upon AP-42 emissions factor.
New FQM Pipe Mill - - Hardening (Austenitizing) Furnaces #1 and #2 emissions units P016 and P018.Control	**Description**
	BACT is based upon AP-42 emissions factor.
New Abrasives Manufacturing Building – Melting Furnace Scrubber emissions unit P021 Control	**Description**
	BACT is .2 lb/ton of liquid steel produced.
Standby/Emergency Generators	BACT is proposed as compliance with 40 CFR Part 60, Subpart III - - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.

Ambient Air Quality Monitoring Requirements

The V and M Star facility is located in AQCR 178 in Mahoning and Trumbull Counties in Youngstown, Ohio. The area is attainment for all criteria pollutants. U.S. EPA regulations require the establishment of baseline air quality in the vicinity of the proposed project. This is normally accomplished using representative air quality monitoring data. Air quality modeling can be utilized to demonstrate that the project will have less than a threshold impact. This threshold impact is identified as the PSD monitoring de minimis level. If the projected impact from the proposed project exceeds this level, ambient data must be collected or existing representative data must be identified which is representative of the area.

V and M Star has conducted ambient air quality modeling to determine the potential impact due to the proposed installation. Impacts from the proposed installation are below their respective PSD monitoring de minimis levels with the exception of PM10, SO2, and CO. Ohio EPA has identified representative PM10, SO2, and CO data for use by V and M Star in this project. Therefore, V and M Star would not be required to perform preconstruction or post construction monitoring. The following are the projected impacts:

Pollutant	Averaging Period	V&M Modeled Impact in ug/m3	Monitoring De Minimis in ug/m3
PM10	24-hour	50.76	10
CO	8-hour	1,448.66	575
SO2	24-hour	67.31	13

Modeling

Air quality dispersion was conducted to assess the effect of this modification on the national ambient air quality standards (NAAQS) and for the PSD increments. AERMOD was used in the regulatory default, urban mode. Five years of representative meteorological data (Youngtown surface data, Pittsburgh upper air data, 2003-2007) were used. Building downwash was incorporated into the AERMOD estimates.

Peak impacts of NOx, SO2 and 24-hour PM10 were above their respective PSD significant impact levels. Therefore, additional modeling to address NAAQS were necessary. A PSD analysis was conducted for PM10, NOx and SO2.

PSD Increment

Pollutant	Averaging Period	Modeled Impact in ug/m3	PSD Increments in ug/m3
PM10	24-hour	25.27	30
	Annual	4.74	17
NOx	Annual	12.22	25
SO2	3-hour	100.04	512
	24-hour	66.25	91
	Annual	5.10	20

Ohio EPA=s policy is that no single project should consume more than 50% of the available PSD increment, except in situations where the impact is localized, temporary or as part of a brownfields project. In such cases, the peak constraining concentration can consume up to 83.3% of the PSD increment. In this case, V and M Star's 24 hour PM10 PSD impact does exceed 83.3% of the available increment but the impact is extremely localized. The increment consumption is not expected to prevent future growth of other facilities; rather it will only hinder V and M Star's potential growth.

NAAQS

Existing sources at the facility, existing sources above the PSD significant rates within the V and M Star significant impact area (SIA) and sources greater than 100 tons/yr outside of the SIA are modeled to determine the combined impact of existing and proposed sources. A background value was added to account for minor sources not explicitly included in the modeling.

Pollutant	Averaging Period	V&M Modeled Concentration in ug/m3	Includes the Total Predicted (which includes both the V&M Modeled and the Background Sources within SIA) and the Ambient Background Concentrations (outside SIA) in ug/m3	NAAQS Concentration in ug/m3
PM10	24-hour	50.76	114.82	150
	Annual	11.59	37.69	50
CO	8-hour	1,448.66	3,738.74	10,000
	1-hour	3,186.64	8,911.71	40,000
SO2	3-hour	105.81	244.67	1,300
	24-hour	67.31	11.89	365

	Annual	8.97	22.98	80
NOx	Annual	17.83	50.36	100

Toxics Analysis

The Ohio Air Toxics Policy requires evaluation of increases in air toxics above the one ton/year threshold. The applicant has indicated that air toxics will exceed one ton/year, therefore, modeling was conducted for those air toxics. The results of the air toxics analysis show that model predicted concentrations comply with the OEPA MAGLC.

Mercury
Mercury emissions are generated by any Mercury contained in the scrap steel, which would mainly come from mercury switches in the auto frag scrap. This scrap will only be a portion of

the total scrap charged to the furnace, but a worst case assumption is being made for permitting purposes.

It is only feasible to remove mercury switches from old vehicles prior to flattening them at the scrap yard. Some auto junk yards are taking steps to remove mercury switches. Automobile manufacturers have reportedly discontinued the use of mercury switches, so emissions from the EAF due to auto frag scrap are expected to decrease.

Since 2005 V&M has followed a detailed OEPA-approved Scrap Management Plan for mercury switch removal pursuant to permitting requirements in past as well as this permitting action. The total annual mercury emissions from 1,400,000 tons per year of liquid steel production are estimated to be less than 0.15 tons based on a U.S. EPA emission factor. The estimated annual emission attributable to the allowable increase in steel production is less than 41 pounds (0.02 ton).

In addition to this Scrap Management Plan, the existing EAF as well as the modified facility is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAPS) Area Source rule for EAFs. This rule contains specific provisions for limiting the mercury content of scrap metal. V&M is complying with this regulation.

Therefore the technology for mercury reduction is a combination of using the baghouse and the scrap management plan. An efficient baghouse should remove some percent of the mercury as it does other particulate matter, however a large percent of the mercury emitted from EAFs may occur in vapor form.

<u>Secondary Impact Analysis</u>

V and M Star has demonstrated that the predicted pollutant concentrations throughout the study area are below the secondary NAAQS thresholds. The secondary NAAQS are designed to limit the amount of pollutants in the ambient air to levels below those which could have an adverse impact on human welfare, soils and vegetation. The modeling analyses demonstrate that no significant impacts on human welfare, soils or vegetation will occur from the proposed modification.

The V and M Star facility is located approximately 250 kilometers from the closest class I area which is the Dolly Sods Wilderness Area located in West Virginia.

Based on recent communication within the last year with the Federal Land Managers with regard to the Federal Land Managers Air Quality Related Values Workgroup (FLAG) and the following data: 567 tons per year of NOx, 190 tons per year of PM10, and 184 tons per year of SO2 which added together results in 941 tons per year of total emission increase over previous levels pursuant to OAC rule 3745-31-01 and the distance from this facility to the Dolly Sods Wilderness Area located in West Virginia would not trigger the need for class I visibility analysis.

In addition, the primary or secondary pollutants associated with this project are not anticipated to affect local or class I visibility.

This is a modification of an existing major stationary source that recently was issued a PSD permit for a proposed increase in production. Since this increase is below the NAAQS, it is assumed that the proposed increase would not have an adverse effect on the area due to growth of the area from the modification.

Conclusions

Based upon the review of the permit to install application and the supporting documentation provided by the applicant (and their consultants), the Ohio EPA staff has determined the installation will comply with all applicable State and Federal environmental regulations and that the requirements for BACT are satisfied. Therefore, the Ohio EPA staff recommends that a permit to install be issued to V and M Star for the installation of the new steel production equipment.

State of Ohio Environmental Protection Agency
Division of Air Pollution Control

DRAFT

Air Pollution Permit-to-Install

for

V & M Star

Facility ID: 0250110625
Permit Number: P0103995
Permit Type: Initial Installation
Issued: 1/9/2009
Effective: To be entered upon final issuance

OhioEPA
State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Air Pollution Permit-to-Install
for
V & M Star

Table of Contents

Authorization

Facility ID: 0250110625
Facility Description: Steel manufacturing facility
Application Number(s): A0036278, A0036648
Permit Number: P0103995
Permit Description: Production expansion
Permit Type: Initial Installation
Permit Fee: $14,200.00 *DO NOT send payment at this time, subject to change before final issuance*
Issue Date: 1/9/2009
Effective Date: To be entered upon final issuance

This document constitutes issuance to:

V & M Star
2669 Martin Luther King Jr. Blvd.
Youngstown, OH 44510

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

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

Ohio EPA DAPC, Northeast District Office
2110 East Aurora Road
Twinsburg, OH 43087
(330)425-9171

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

Chris Korleski
Director

Authorization (continued)

Permit Number: P0103995
Permit Description: Production expansion

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

Emissions Unit ID: **F001**
Company Equipment ID: Roadways & parking
Superseded Permit Number:
General Permit Category and Type: Not Applicable

Emissions Unit ID: **F006**
Company Equipment ID: Caster
Superseded Permit Number:
General Permit Category and Type: Not Applicable

Emissions Unit ID: **P012**
Company Equipment ID: Billet Rotary Hearth
Superseded Permit Number:
General Permit Category and Type: Not Applicable

Emissions Unit ID: **P013**
Company Equipment ID: Pipe Intermediate Furnace
Superseded Permit Number:
General Permit Category and Type: Not Applicable

Emissions Unit ID: **P014**
Company Equipment ID: FQM Pipemill
Superseded Permit Number:
General Permit Category and Type: Not Applicable

Emissions Unit ID: **P016**
Company Equipment ID: Pipe Aust Furnace #1
Superseded Permit Number:
General Permit Category and Type: Not Applicable

Emissions Unit ID: **P017**
Company Equipment ID: Pipe Temp Furnace #1
Superseded Permit Number:
General Permit Category and Type: Not Applicable

Emissions Unit ID: **P018**
Company Equipment ID: Pipe Aust Furnace #2
Superseded Permit Number:
General Permit Category and Type: Not Applicable

Emissions Unit ID: **P019**
Company Equipment ID: Pipe Temp Furnace #2
Superseded Permit Number:
General Permit Category and Type: Not Applicable

Emissions Unit ID: **P021**
Company Equipment ID: Melter Furnace
Superseded Permit Number:
General Permit Category and Type: Not Applicable

Emissions Unit ID: **P022**
Company Equipment ID: AbrasiveProduct Hand
Superseded Permit Number:

General Permit Category and Type: Not Applicable

Emissions Unit ID: **P024**
Company Equipment ID: VTD Steam Condenser
Superseded Permit Number:
General Permit Category and Type: Not Applicable

Emissions Unit ID: **P025**
Company Equipment ID: Cooling Tower 7
Superseded Permit Number:
General Permit Category and Type: Not Applicable

Emissions Unit ID: **P026**
Company Equipment ID: Cooling Tower 1
Superseded Permit Number:
General Permit Category and Type: Not Applicable

Emissions Unit ID: **P905**
Company Equipment ID: Electric Arc Furnace
Superseded Permit Number:
General Permit Category and Type: Not Applicable

Emissions Unit ID: **P907**
Company Equipment ID: Alloy, Additives and Flux Handling
Superseded Permit Number:
General Permit Category and Type: Not Applicable

Emissions Unit ID: **P908**
Company Equipment ID: LMF AAFL Handling
Superseded Permit Number:
General Permit Category and Type: Not Applicable

Emissions Unit ID: **P909**
Company Equipment ID: LMF
Superseded Permit Number:
General Permit Category and Type: Not Applicable

Emissions Unit ID: **P910**
Company Equipment ID: Electric Arc Furnace
Superseded Permit Number:
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 its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. General Requirements

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

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

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

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

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

4. Monitoring and Related Record Keeping and Reporting Requirements

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

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

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

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

(4) The analytical techniques or methods used.

(5) The results of such analyses.

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

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

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

(1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Northeast District Office.

(2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Ohio EPA DAPC, Northeast District Office. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.

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

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

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

5. Scheduled Maintenance/Malfunction Reporting

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

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

6. Compliance Requirements

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

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

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

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

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

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

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

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

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

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

7. Best Available Technology

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

8. Air Pollution Nuisance

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

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Northeast District Office.

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

(i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

10. Applicability

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

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

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

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

c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed through completion of the annual PER covering the last period of operation 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 PER 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 PER, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

12. Permit-To-Operate Application

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

13. Construction Compliance Certification

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

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

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

14. Public Disclosure

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

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

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

16. Fees

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

17. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The Ohio EPA DAPC, Northeast District Office must be notified in writing of any transfer of this permit.

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.

2. The following emissions units (EU) are also increasing emissions as part of this project:

EU	BACT	Emissions
VTD boilers	AP-42 emission factors	1.14 TPY of PM/PM10 12.60 TPY of CO 0.09 TPY of SO2 0.83 TPY of VOC.
	0.101 lb/MMBtu/hr	15.30 TPY of NOx.
FQM mandrel furnace	AP-42 emission factors	0.02 TPY of PM/PM10 0.25 TPY of CO 0.002 TPY of SO2 0.017 TPY of VOC.
	0.12 lb/MMBtu/hr	0.37 TPY of NOx.
Abrasive forehearth furnace	AP-42 emission factors	0.007 TPY of PM/PM10 0.072 TPY of CO
	0.20 lb/MMBtu	0.086 TPY of NOx 0.0005 TPY of SO2 0.005 TPY of VOC.
Abrasive raw material handling	0.005 grains/scf	0.14 TPY of PM/PM10.
Standby/emergency generators which are the following: 3 FQM pipe mill each one = 1 MW 2 meltshop each one = 1 MW 1 administration each = 150 kw	NSPS, 40 CFR Subpart IIII	0.10 TPY of PM/PM10 0.64 TPY of CO 3.34 TPY of NOx 0.16 TPY of SO2 0.05 TPY of VOC.
Three (3) ladle preheaters, natural gas burners each ≤ 5 MMBtu/hr, which will be installed if the option to install a new EAF (P910) is selected	AP-42 emission factors	0.46 TPY PM/PM10 5.07 TPY of CO 6.04 TPY of NOx 0.04 TPY of SO2 0.33 TPY of VOC.
Misc. Natural Gas Burners each ≤ 5 MMBtu/hr which	AP-42 emission factors	0.87 TPY PM/PM10 9.65 TPY of CO

are the following units	11.49 TPY of NOx
R Bay – ladle & tundish	0.07 TPY of SO2
dryers	0.63 TPY of VOC.
EAF bldg – vert. ladle	
hold burner	
Caster – tundish	
htrs, shroud, torch	

3. The following emissions units contained in this permit are subject to MACT Subpart YYYYY: Electric Arc Furnace (P905 or, if installed in the future, P910). The complete MACT requirements, including the MACT General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA District office or local air agency.

C. Emissions Unit Terms and Conditions

1. F001, Roadways & parking

Operations, Property and/or Equipment Description:

Vehicle traffic and parking

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 operations(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. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-10 through OAC rule 3745-31-20	Fugitive particulate matter (PM)/ particulate matter of 10 microns or less (PM10) shall not exceed 12.4 tons/year. All PM/PM10 are considered filterable PM. No visible PM/PM10 except for one minute during any 60-minute period for paved roadways and parking area. No visible PM/PM10 except for 3 minutes during any 60-minute period for unpaved roadways and parking areas. Best available control measures that are sufficient to minimize or eliminate visible PM/PM10 of fugitive dust See b)(2)b. through b)(2)g.
b.	OAC rule 3745-17-07(B)(4)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-10 through OAC rule 3745-31-20.
c.	OAC rule 3745-17-07(B)(5)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-10 through OAC rule 3745-31-20.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-17-08(B)	See b)(2)b. through b)(2)g.
e.	OAC rule 3745-05(A)(3)(a)(ii)	See b)(2)h.

(2) Additional Terms and Conditions

a. The requirement of this Permit to Install supersedes the requirements specified in the terms and conditions of EU ID No. F001 in the Title V permit (issued on July 27, 2001).

b. The permittee shall employ best available control measures on all paved roadways and parking areas, and all unpaved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's application, the permittee has committed to treat the paved roadways and parking areas by sweeping and watering/flushing at sufficient treatment frequencies to ensure compliance. In accordance with the permittee's application, the permittee has committed to treat the unpaved roadways and parking areas by application of chemical stabilization/dust suppressants and/or watering at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

c. The needed frequencies of implementation of the control measures shall be determined by the permittee's inspections pursuant to the monitoring section of this permit. Implementation of the control measures shall not be necessary for paved roadways and parking areas or unpaved roadways and parking areas that are covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.

d. The permittee shall promptly remove, in such a manner as to minimize or prevent resuspension, earth and/or other material from paved streets onto which such material has been deposited by trucking or earth moving equipment or erosion by water or other means.

e. Any unpaved roadway or parking area that is subsequently paved may be controlled with the control measure(s) specified above for paved roadways and parking areas.

f. Open-bodied vehicles transporting materials likely to become airborne shall have such materials covered at all times if the control measure is necessary for the materials being transported.

g. Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the best available technology requirements of OAC rule 3745-31-10 through OAC rule 3745-31-20.

h. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled PM/PM10 emissions from this air contaminant source since the potential to emit for PM/PM10 is less than ten tons per year.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Except as otherwise provided in this section, the permittee shall perform inspections of each of the roadway segments and parking areas in accordance with the following frequencies:

paved roadways and parking areas	minimum inspection frequency
scale house road - P1 (A-C)	weekly
north road & apron - P2 (A-C)	weekly
center road - P3 (A-C)	weekly
entry road – P4 (A)	weekly
visitor parking & roadways – P5 (A-B)	weekly
employee parking & roadway – P6 (A-B)	weekly
courtyard – P7 (A-B)	weekly
mill building east road & apron – P8 (A-B)	weekly
melt shop ramp – scrap road (option #1) P9 (A-C)	weekly
South road – P10 (A-H)	weekly
New hot metal roadway (option #1) P11 (A-B)	weekly
Scrap handling roadway – P12 (A-D)	weekly
Trumbull county access road – P13 (A-B)	weekly
Trumbull county truck entrance P14 (A-B)	weekly
Trumbull county visitor parking P15 (A)	weekly
Trumbull county employee entrance P16 (A)	weekly

Trumbull county employee parking P17 (A-B)	weekly
FQM access roadways – P18 (A-E)	weekly
FQM water systems roadways – P19 (A-E)	weekly
Mill service roadway – P20 (A)	weekly

unpaved roadways and parking areas	minimum inspection frequency
mill building south road water systems U1 (A-B)	weekly
G&I bay access roads – U2 (A)	weekly
melt shop utility roadways (A,B,C,D) U3 (A-D) (only with option #2)	weekly
Storage area #1 – US1	weekly
Storage area #2 – US2	weekly

(2) The purpose of the inspections is to determine the need for implementing the above-mentioned control measures. The inspections shall be performed during representative, normal traffic conditions. No inspection shall be necessary for a roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above-identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.

(3) The permittee shall maintain records of the following information:

a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;

b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;

c. the dates the control measures were implemented; and

d. on a calendar quarter basis, the total number of weeks the control measures were implemented and the total number of weeks where snow and/or ice cover or precipitation were sufficient to not require the control measures.

(4) The information required in d)(3)d. shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

e) Reporting Requirements

(1) The permittee shall submit deviation reports that identify any of the following occurrences:

a. each week during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and

b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.

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

f) Testing Requirements

(1) Emission Limitation:

No visible PM/PM10 from paved roadways and parking areas except for a period of time not to exceed one minute during any 60-minute observation period.

Applicable Compliance Method:

If required, compliance with the visible PM/PM10 limitation listed above shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources").

(2) Emission Limitation:

No visible PM/PM10 from unpaved roadways and parking areas except for a period of time not to exceed 3 minutes during any 60-minute observation period.

Applicable Compliance Method:

If required, compliance with the visible PM/PM10 limitation listed above shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03.

(3) Emission Limitation:

12.4 tons/year of fugitive PM/PM10.

Applicable Compliance Method:

(4) Compliance with fugitive PM/PM10 limitation shall be determined by using the emission factor equations in Section 13.2.1, in Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume 1 (revised 11/06) for paved roadways, and the emission factor equations in Section 13.2.2, in Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume 1 (revised 11/06) for unpaved roadways. Should further

updates in AP-42 occur, the most current equations for paved and unpaved roads shall be used.

g) Miscellaneous Requirements

(1) None.

2. F006, Caster

Operations, Property and/or Equipment Description:

Caster (EAF/LMF 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 operations(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. 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 3745-17-07(B)(1)	See b)(2)a.
b.	OAC rule 3745-17-08(B)	See b)(2)b.
c.	OAC rule 3745-31-10 through OAC rule 3745-31-20	PM/PM10 emissions shall not exceed 0.07 lb per ton of liquid steel production, 0.6 lb/hour and 2.45 tons/year based upon a rolling 12-month summation. All PM/PM10 are considered filterable PM. NOx emissions shall not exceed 0.05 lb per ton of liquid steel production, 8.6 lbs/hour and 35 tons/year based upon a rolling 12-month summation. See b)(2)c. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(B)(1) and OAC rule 3745-17-08(B).
d.	OAC rule 3745-31-05(E)	PE/PM10 emissions shall not exceed 2.45 tons/year. See b)(2)e.
e.	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-10 thru for 20 for NOx.

(2) Additional Terms and Conditions

a. Visible particulate emissions of fugitive dust shall not exceed twenty percent opacity as a three-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.

b. 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 shall include:

i. the use of a ladle cover/mechanical shrouding between the ladle and the tundish and between the tundish and the mold; and

ii. the use of a canopy collection system with sufficient air volume, located at the roof level of the building, to effectively manage or control fugitive particulate emissions and exhaust emissions into the positive pressure baghouse.

c. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the source design characteristics with shrouding of the liquid pour stream and continuous caster design constitute BACT for this emissions unit. No alternative add-on emission controls are identified for the continuous caster. The emission limitations based on the BACT requirements are listed under OAC rules 3745-31-(10) thru (20) above.

d. The hourly emission limitations listed in b)(1) are based upon the potential to emit of this emissions unit and therefore no record keeping and reporting requirements of those limitations are necessary.

e. Permit to install P0103995 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purposes of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3);

i. the annual liquid steel production of 1,400,000 tons per year.

c) Operational Restrictions

None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information:

a. the liquid steel production rate for each month;

b. the monthly PM/PM10 and NOx emissions; and

c. the rolling, 12-month summation of the PM/PM10 and NOx.

(2) The permittee shall perform monthly inspections on the mechanical shrouding between the ladle and the tundish and between the tundish and the mold to ensure that they are in good operating condition.

(3) The permittee shall perform daily checks when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from any egress point (e.g., windows, doors, roof monitors, etc.) associated with this emissions unit. The presence or absence of any visible fugitive particulate emissions shall be noted in an operations log. An EPA Method 9 opacity analysis shall be required upon OEPA request, but is not required for the daily or weekly visible emissions checks. If visible fugitive particulate emissions are observed, the permittee shall also note the following in the operations log:

a. the 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 fugitive particulate emission incident; and

e. any corrective actions taken to eliminate the visible fugitive particulate emissions.

Notwithstanding the frequency of reporting requirements specified in d)(3), the permittee may reduce the frequency of visual observations for this emissions unit from daily to weekly if the following conditions are met:

f. for any 3 consecutive calendar months (excluding scheduled maintenance-shut down) this emissions unit's visual observations indicated no visible emissions; and

g. the permittee continues to comply with all the record keeping and monitoring requirements specified above.

The permittee shall revert to daily readings for this emissions unit if visible emissions are observed. The permittee may again reduce the frequency of visible emissions observations from daily to weekly after obtaining 3 consecutive calendar months (excluding scheduled maintenance-shut down) of observations with no visible emissions for this emissions unit.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month PM/PM10 and NOx emission limitations listed in b) under OAC rules 3745-31-10 through OAC rule 3745-31-20.

(2) The permittee shall submit deviation (excursion) reports that identify all monthly inspections of the mechanical shrouding between the ladle and the tundish and between the tundish and the mold that indicate they were not in good operating condition and summarize any corrective action taken.

(3) The permittee shall submit deviation (excursion) reports that identify all instances when the collection system, located at the roof level of the building, was not operating during the casting operation.

(4) The permittee shall submit semiannual written reports which:

a. identify all days during which any visible fugitive particulate emissions were observed from any egress point serving this emissions unit; and

b. describe any corrective actions taken to eliminate the visible fugitive particulate emissions.

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

f) Testing Requirements

(1) Emission Limitation:

PM/PM10 emissions shall not exceed 0.6 pound per hour.

Applicable Compliance Method:

To determine the hourly particulate emission rate for the continuous caster the following equation may be used:

E = (A)(B)(1-C)

where:

E = particulate emissions (lb/hr)

A = 0.07 pound of PM/PM10/ton of steel emission produced factor (AP-42 Section 12.5, Table 12.5-1, Teeming Unleaded Steel, Iron and Steel Production, 10/86).

B = maximum hourly production, 172 tons/hr.

C = control efficiency for mechanical shrouding, 95%.

If required by the Ohio EPA, compliance with the particulate emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 5.

(2) Emission Limitation:

PM/PM10 emissions shall not exceed 2.45 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

To determine the annual particulate emission rate for the continuous caster the following equation shall be used:

E = (A)(B)(1-C)/D

where:

A = annual liquid steel produced based upon the record keeping requirements specified in d)(1) above, in tons/year.

B = 0.07 pound of PE/PM10/ton of steel produced emission factor (AP-42 Section 12.5, Table 12.5-1, Teeming Unleaded Steel, Iron and Steel Production, 10/86).

C = control efficiency for mechanical shrouding, 95%**.**

D = 2000 lbs/ton.

(3) Emission Limitation:

NOx shall not exceed 8.6 pounds per hour.

Applicable Compliance Method:

To determine the hourly NOx emission rate for the continuous caster the following equation may be used:

E = (A)(B)

E = (tons of steel/hour) (0.05 pound of NOx/ton steel)

where:

E = NOx emissions (lb/hr).

A = 0.05 pound of NOx/ton of steel produced emission factor (emission factor provided by permittee in PTI # P0103995 application).

B = maximum hourly production, 172 tons/hr.

If required by the Ohio EPA, compliance with the NOx emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 7 or 7E.

(4) Emission Limitation:

NOx emissions shall not exceed 35 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

To determine the annual NOx emission rate for the continuous caster the following equation shall be used:

E = (A)(B)/C

E = (tons of steel/year) (0.05 pound of NOx/ton steel) (1 ton/2000 pounds)

where:

E = NOx emissions (tons/yr).

A = 0.05 pound of NOx/ton of steel produced emission factor (emission factor provided by permittee in PTI # P0103995 application).

B = annual liquid steel produced based upon the record keeping requirements specified in d)(1) above, in tons/year.

C = 2000 lbs/ton.

(5) Emission Limitation:

Fugitive visible emissions shall not exceed twenty percent opacity, as a three-minute average.

Applicable Compliance Method:

Compliance with the visible emission limitation for the operation(s) identified above shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

g) Miscellaneous Requirements

(1) None.

3. P012, Billet Rotary Hearth

Operations, Property and/or Equipment Description:

Natural gas fired Billet Rotary Hearth Furnace rated at 265 MMBtu/hr

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 operations(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. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-10 through OAC rule 3745-31-20	PM/PM10 emissions shall not exceed 1.51 lbs/hour and 3.61 tons/year based upon a rolling 12-month summation. All PM/PM10 are considered filterable PM. NOx emissions shall not exceed 0.08 lb/MMBtu, 16.24 lbs/hour, and 38.78 tons/year based upon a rolling 12-month summation. CO emissions shall not exceed 16.72 lbs/hour and 39.90 tons/yr based upon a rolling 12-month summation. VOC emissions shall not exceed 1.09 lbs/hour and 2.61 tons/year based upon a rolling 12-month summation. See b)(2)a. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1).
b.	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-10 thru for 20 for NOx and CO and OAC rule 3745-21-08.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC 3745-17-11	See b)(2)b.
d.	OAC 3745-17-10	See b)(2)c.
e.	OAC rule 3745-21-08	See b)(2)d.
f.	OAC rule 3745-05(A)(3)(a)(ii)	See b)(2)e.
g.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
h.	OAC rule 3745-18-06	The emission limitation specified by this rule is less stringent that the emission limitation established pursuant to OAC rule 3745-31-10 thru 20 as listed in their PSD application of December 16, 2008.

(2) Additional Terms and Conditions

a. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of natural gas as fuel, good combustion practices, new ultra-low NOx burner technology, acceptance of a PE/PM10 limitation of 7.6 lb/MMscf, acceptance of CO limitation of 84 lb/MMscf, acceptance of VOC limitation of 5.5 lb/MMscf, and acceptance of NOx limitation of 0.08 lb/MMBtu constitute BACT for this emissions unit. The emission limitations are based on the BACT requirements listed under OAC rule 3745-31-(10) thru (20) above.

b. The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight, as defined in OAC rule 3745-17-01(B)(17), is equal to zero.

c. The burning of fuel in this unit is for the primary purpose of producing heat in which the products of combustion come into direct contact with materials being processed. It is, therefore, exempt from emission limitations and control requirements contained in OAC rule 3745-17-10.

d. The permittee shall satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology (BAT) requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the BAT requirements.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. On June 24, 2003, the rule revision was submitted to the U.S. EPA as a revision to Ohio's

State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

e. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled PE/PM10, SO2, and VOC emissions from this air contaminant source since the potential to emit for PE/PM10, SO2, and VOC is less than ten tons per year.

f. The hourly emission limitations listed in b)(1) are based upon the potential to emit of this emissions unit and therefore no record keeping and reporting requirements of those limitations are necessary.

c) Operational Restrictions

(1) The permittee shall use only natural gas as fuel for this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type, quantity, and quality of fuel burned in this emissions unit.

(2) The permittee shall maintain monthly records of the following information:

a. the quantity of natural gas burned in this emissions unit in MMscf for each calendar month; and

b. the monthly PM/PM10, VOC, NOx, and CO emissions; and

c. the rolling, 12-month summation of the PM/PM10, VOC, NOx, and CO emissions.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of:

a. the rolling, 12-month and PM/PM10, VOC, NOx, and CO emission limitations for this emissions unit in b)(1).

f) Testing Requirements

(1) Emission Limitation:

20% opacity of visible emissions as a 6-minute average

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(1) of OAC rule 3745-17-03.

(2) Emission Limitation:

NOx emissions shall not exceed 0.08 lb/MMBtu.

Applicable Compliance Method:

Compliance shall be determined by emission testing as specified in Section f)(12).

(3) Emission Limitation:

NOx emissions shall not exceed 16.24 lbs/hour.

Applicable Compliance Method:

Compliance with the NOx emission limitation shall be determined by multiplying the most recent compliance test result (lb/MMBtu) by the simultaneous input of 203 MMBtu/hr.

(4) Emission Limitation:

NOx emissions shall not exceed 38.78 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

To determine the annual NOx emission rate from burning natural gas, the following equation shall be used:

E = (A)(B)(C) / D

where:

E = annual NOx emissions, in tons per year.

A = most recent compliance stack emissions test result (lb/MMBtu).

B = natural gas heat content, 1020 Btu/scf.

C = annual natural gas usage based upon the record keeping requirements specified in d)(2)a. of this permit, in MMscf/yr.

D = 2000 lbs/ton.

(5) Emission Limitation:

CO emissions shall not exceed 16.72 lbs/hour.

Applicable Compliance Method:

If required by the Ohio EPA, compliance with the CO emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 10.

(6) Emission Limitation:

CO emissions shall not exceed 84 lbs/MMBtu.

Applicable Compliance Method:

Compliance shall be based upon emission factors from AP-42, Table 1.4-1, 7/98 version.

(7) Emission Limitation:

CO emissions shall not exceed 39.90 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

Compliance with the annual CO emission limitation shall be determined by multiplying the emission factor of 84 lbs/MMscf (from AP-42, Table 1.4-1, 7/98 version) by the annual natural gas fuel usage (MMscf), and dividing by 2,000 lbs/ton. The annual natural gas fuel usage should be based upon the record keeping requirements specified in d)(2)a. of this permit.

(8) Emission Limitation:

PM/PM10 emissions shall not exceed 1.51 lbs per hour.

Applicable Compliance Method:

To determine the particulate emission rate from burning natural gas, the following equation shall be used:

E = (A)(B)

where:

E = particulate emission rate from burning natural gas, in lb/hr.

A = 7.6 lbs/MMscf, emission factor for total particulate material from burning natural gas from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98.

B = 0.199 MMscf/hr, the maximum natural gas used in this emissions unit in an hour.

(9) Emission Limitation:

PM/PM10 emissions shall not exceed 3.61 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

To determine the annual particulate emission rate for this emissions unit, the following equation shall be used:

E = (A)(B)/C

where:

E = annual PM/PM10 emissions.

A = annual natural gas usage based upon the record keeping requirements specified in d)(2)a. of this permit, MMscf/yr.

B = 7.6 lbs/MMscf, natural gas combustion AP-42 emission factor (Section 1.4, Table 1.4-2, version 7/98).

C = 2000 lbs/ton.

(10) Emission Limitation:

VOC emissions shall not exceed 1.09 lbs per hour.

Applicable Compliance Method:

To determine the VOC emission rate from burning natural gas, the following equation shall be used:

E = (A)(B)

where:

E = VOC emission rate from burning natural gas, in lb/hr.

A = 5.5 lbs/MMscf, emission factor for VOC from burning natural gas from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98.

B = 0.199 MMscf/hr, the maximum natural gas used in this emissions unit in an hour.

(11) Emission Limitation:

VOC emissions shall not exceed 2.61 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

To determine the annual VOC emission rate for this emissions unit, the following equation shall be used:

E = (A)(B)/C

where:

E = annual VOC emissions.

A = annual natural gas usage based upon the record keeping requirements specified in d)(2)a. of this permit, MMscf/yr.

B = 5.5 lbs/MMscf, natural gas combustion AP-42 emission factor (Section 1.4, Table 1.4-2, version 7/98).

C = 2000 lbs/ton.

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

a. The emission testing shall be conducted within 3 months after startup of this emissions unit.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for NO_X, and CO.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

NO_X - Method 7, 7E of 40 CFR Part 60, Appendix A.

CO - Method 10 of 40 CFR Part 60, Appendix A.

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit 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 Ohio EPA District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office Miscellaneous Requirements.

g) Miscellaneous Requirements

(1) None.

4. P013, Pipe Intermediate Furnace

Operations, Property and/or Equipment Description:

Natural gas fired Pipe Intermediate Furnace rated at 98 MMBtu/hr

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 operations(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. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-10 through OAC rule 3745-31-20	PM/PM10 emissions shall not exceed 0.66 lb/hour and 1.52 tons/year based upon a rolling 12-month summation. All PM/PM10 are considered filterable PM. NOx emissions shall not exceed 0.08 lb/MMBtu, 7.04 lbs/hour, and 16.32 tons/year based upon a rolling 12-month summation. CO emissions shall not exceed 7.25 lbs/hour and 16.80 tons/yr based upon a rolling 12-month summation. VOC emissions shall not exceed 0.47 lb/hour and 1.1 tons/year based upon a rolling 12-month summation. See b)(2)a. The requirements of this rule also include compliance with the requirements of 3745-17-07(A)(1).
b.	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-10 thru for 20 for NOx and CO and OAC rule 3745-21-08.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC 3745-17-11	See b)(2)b.
d.	OAC 3745-17-10	See b)(2)c.
e.	OAC rule 3745-21-08	See b)(2)d.
f.	OAC rule 3745-05(A)(3)(a)(ii)	See b)(2)e.
g.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
h.	OAC rule 3745-18-06	The emission limitation specified by this rule is less stringent that the emission limitation established pursuant to OAC rule 3745-31-10 thru 20 as listed in their PSD application of December 16, 2008.

(2) Additional Terms and Conditions

a. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of natural gas as fuel, good combustion practices, low NOx burner technology, acceptance of a PE/PM10 limitation of 7.6 lb/MMscf, acceptance of CO limitation of 84 lb/MMscf, acceptance of VOC limitation of 5.5 lb/MMscf, and acceptance of NOx limitation of 0.08 lb/MMBtu constitute BACT for this emissions unit. The emission limitations are based on the BACT requirements listed under OAC rule 3745-31-(10) thru (20) above.

b. The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight, as defined in OAC rule 3745-17-01(B)(17), is equal to zero.

c. The burning of fuel in this unit is for the primary purpose of producing heat in which the products of combustion come into direct contact with materials being processed. It is, therefore, exempt from emission limitations and control requirements contained in OAC rule 3745-17-10.

d. The permittee shall satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology (BAT) requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the BAT requirements.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. On June 24, 2003, the rule revision was submitted to the U.S. EPA as a revision to Ohio's

State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

e. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled PE/PM10, SO2, and VOC emissions from this air contaminant source since the potential to emit for PE/PM10, SO2, and VOC is less than ten tons per year.

f. The hourly emission limitations listed in b)(1) are based upon the potential to emit of this emissions unit and therefore no record keeping and reporting requirements of those limitations are necessary.

c) Operational Restrictions

(1) The permittee shall use only natural gas as fuel for this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type, quantity, and quality of fuel burned in this emissions unit.

(2) The permittee shall maintain monthly records of the following information:

a. the quantity of natural gas burned in this emissions unit in MMscf for each calendar month; and

b. the monthly PM/PM10, VOC, NOx, and CO emissions.

c. the rolling, 12-month summation of the PM/PM10, VOC, NOx, and CO emissions.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of:

a. the rolling, 12-month and PM/PM10, VOC, NOx, and CO emission limitations for this emissions unit in b)(1).

f) Testing Requirements

(1) Emission Limitation:

20% opacity of visible emissions as a 6-minute average

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(1) of OAC rule 3745-17-03.

(2) Emission Limitation:

NOx emissions shall not exceed 0.08 lb/MMBtu.

Applicable Compliance Method:

Compliance shall be determined by emission testing as specified in f)(11).

(3) Emission Limitation:

NOx emissions shall not exceed 7.04 lbs/hour.

Applicable Compliance Method:

Compliance with the NOx emission limitation shall be determined by multiplying the most recent compliance test result (lb/MMBtu) by the simultaneous input of 88 MMBtu/hr.

(4) Emission Limitation:

NOx emissions shall not exceed 16.32 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

To determine the annual NOx emission rate from burning natural gas, the following equation shall be used:

E = (A)(B)(C) / D

where:

E = annual NOx emissions, in tons per year.

A = most recent compliance stack emissions test result (lb/MMBtu).

B = natural gas heat content, 1020 Btu/scf.

C = annual natural gas usage based upon the record keeping requirements specified in d)(2)a. of this permit, in MMscf/yr.

D = 2000 lbs/ton.

(5) Emission Limitation:

CO emissions shall not exceed 7.25 lbs/hour.

Applicable Compliance Method:

If required by the Ohio EPA, compliance with the CO emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 10.

(6) Emission Limitation:

CO emissions shall not exceed 16.80 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

Compliance with the annual CO emission limitation shall be determined by multiplying the emission factor of 84 lbs/MMscf (from AP-42, Table 1.4-1, 7/98 version) by the annual natural gas fuel usage (MMscf), and dividing by 2,000 lbs/ton. The annual natural gas fuel usage should be based upon the record keeping requirements specified in d)(2)a. of this permit.

(7) Emission Limitation:

PM/PM10 emissions shall not exceed 0.66 lb per hour.

Applicable Compliance Method:

To determine the particulate emission rate from burning natural gas, the following equation shall be used:

E = (A)(B)

where:

E = particulate emission rate from burning natural gas, in lb/hr.

A = 7.6 lbs/MMscf, emission factor for total particulate material from burning natural gas from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98.

B = 0.0863 MMscf/hr, the maximum natural gas used in this emissions unit in an hour.

(8) Emission Limitation:

PM/PM10 emissions shall not exceed 1.52 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

To determine the annual particulate emission rate for this emissions unit, the following equation shall be used:

E = (A)(B)/C

where:

E = annual PM/PM10 emissions.

A = annual natural gas usage based upon the record keeping requirements specified in d)(2)a. of this permit, MMscf/yr.

B = 7.6 lbs/MMscf, natural gas combustion AP-42 emission factor (Section 1.4, Table 1.4-2, version 7/98).

C = 2000 lbs/ton.

(9) Emission Limitation:

VOC emissions shall not exceed 0.47 lb per hour.

Applicable Compliance Method:

To determine the VOC emission rate from burning natural gas, the following equation shall be used:

E = (A)(B)

where:

E = VOC emission rate from burning natural gas, in lb/hr.

A = 5.5 lbs/MMscf, emission factor for VOC from burning natural gas from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98.

B = 0.0863 MMscf/hr, the maximum natural gas used in this emissions unit in an hour.

(10) Emission Limitation:

VOC emissions shall not exceed 1.1 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

To determine the annual VOC emission rate for this emissions unit, the following equation shall be used:

E = (A)(B)/C

where:

E = annual VOC emissions.

A = annual natural gas usage based upon the record keeping requirements specified in d)(2)a. of this permit, MMscf/yr.

B = 5.5 lbs/MMscf, natural gas combustion AP-42 emission factor (Section 1.4, Table 1.4-2, version 7/98).

C = 2000 lbs/ton.

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

a. The emission testing shall be conducted within 3 months after startup of this emissions unit.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for NO_X.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

NO_X - Method 7, 7E of 40 CFR Part 60, Appendix A.

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit 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 Ohio EPA District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office.

g) Miscellaneous Requirements

(1) None.

5. P014, FQM Pipemill

Operations, Property and/or Equipment Description:

FQM Pipemill with wet scrubber system

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 operations(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. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-10 through OAC rule 3745-31-20	PM/PM10 emissions shall not exceed 0.004 gr/dscf, 5.4 lbs/hour and 23.7 tons/year based upon a rolling 12-month summation. All PM/PM10 are considered filterable PM. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1).
b.	OAC 3745-17-11	The emission limitation required by this applicable rule is less stringent than or equivalent to the emission limitation established pursuant to OAC rule 3745-31-10 through OAC rule 3745-31-20.
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
d.	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-10 thru for 20 for PM/PM10.

(2) Additional Terms and Conditions

a. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has

been determined that the rod deck venture scrubber, and acceptance of 0.004 grains/dscf scrubber outlet limitation constitute BACT for this emission unit. The emission limitations based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

c) Operational Restrictions

(1) The emissions from this emissions unit shall be vented to a rod deck venturi scrubber at all times the emissions unit is in operation.

d) Monitoring and/or Recordkeeping Requirements

(1) In order to maintain compliance with the applicable emission limitations contained in this permit, the acceptable range or limit for the pressure drop across the scrubber, and the scrubber liquid flow rate shall be based upon the manufacturer's specifications until such time as any required emission testing is conducted and the appropriate range for each parameter is established to demonstrate compliance.

(2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop across the scrubber (in pounds per square inch, gauge), and the scrubber liquid flow rate (in gallons per minute) during operation of this emissions unit, including periods of startup and shutdown. The permittee shall record the pressure drop across the scrubber and the scrubber liquid's flow rate on a once per shift basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s).

Whenever the monitored value for any parameter deviates from the range(s) or minimum limit(s) specified in 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 control equipment parameters within the acceptable range(s), or at or above the minimum limit(s) 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 the 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 and flow rate 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.

These range(s) and/or limit(s) for the pressure drop and liquid flow rate are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA, Northeast District Office. The permittee may request revisions to the permitted range or limit for the pressure drop or liquid flow rate based upon information obtained during future emission tests that demonstrate compliance with the allowable emission rates for this emissions unit. 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 A minor permit modification@.

(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 stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. An EPA Method 9 opacity analysis shall be required upon OEPA request, but is not required for the daily or weekly visible emissions checks. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the 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 minimize or eliminate the visible emissions.

Notwithstanding the frequency of reporting requirements specified above, the permittee may reduce the frequency of visual observations for this emissions unit from daily to weekly if the following conditions are met:

f. for any 3 consecutive calendar months (excluding scheduled maintenance-shut down) this emissions unit's visual observations indicated no visible emissions; and

g. the permittee continues to comply with all the record keeping and monitoring requirements specified above.

The permittee shall revert to daily readings for this emissions unit if visible emissions are observed. The permittee may again reduce the frequency of visible emissions observations from daily to weekly after obtaining 3 consecutive calendar months (excluding scheduled maintenance-shut down) of observations with no visible emissions for this emissions unit.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

e) Reporting Requirements

(1) The permittee shall submit quarterly reports that identify the following information concerning the operation of the venturi scrubber during the operation of the controlled emissions unit(s):

a. each period of time when the pressure drop across the scrubber, and/or liquid flow rate were outside of the appropriate range or limit specified by the manufacturer and outside of the acceptable range following any required compliance demonstration;

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

c. an identification of each incident of deviation described in “a” where prompt corrective action, that would bring the pressure drop, and/or liquid flow rate, into compliance with the acceptable range or limit, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in “a” where proper records were not maintained for the investigation and/or the corrective action(s).

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

(2) The permittee shall submit semiannual written reports that (a) identify all weeks during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate any visible particulate emissions. These reports shall be submitted to the Ohio EPA, Northeast District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

f) Testing Requirements

(1) Emission Limitation:

PM/PM10 emissions shall not exceed 0.004 grains per dry standard cubic foot of exhaust gases.

Applicable Compliance Method:

Compliance shall be determined by emission testing as specified in f)(5) .

(2) Emission Limitation:

PM/PM10 emissions shall not exceed 5.4 pounds per hour.

Applicable Compliance Method:

Compliance shall be determined by emission testing as specified in f)(5).

(3) Emission Limitation:

PM/PM10 emissions shall not exceed 23.7 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

The annual PM/PM10 emission limitation was developed by multiplying the short-term allowable PM/PM10 emission limitation (5.4 lbs/hour) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

(4) Emission Limitation:

20% opacity of visible emissions as a 6-minute average.

Applicable Compliance Method:

Compliance with the visible emission limitation shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(1) of OAC rule 3745-17-03.

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

a. The emission testing shall be conducted within 3 months after startup of this emissions unit.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for PM/PM10.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

PM - Method 5 of 40 CFR Part 60, Appendix A.

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit 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 Ohio EPA District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office.

g) Miscellaneous Requirements

(1) None.

6. P016, Pipe Aust Furnace #1

Operations, Property and/or Equipment Description:

Natural gas fired Pipe Austenitizing Furnace #1 rated at 40 MMBtu/Hr

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 operations(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. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-10 through OAC rule 3745-31-20	PM/PM10 emissions shall not exceed 0.24 lb/hour and 0.67 ton/year based upon a rolling 12-month summation. All PM/PM10 are considered filterable PM. NOx emissions shall not exceed 0.08 lb/MMBtu, 2.56 lbs/hour, and 7.14 tons/year based upon a rolling 12-month summation. CO emissions shall not exceed 2.64 lbs/hour and 7.35 tons/yr based upon a rolling 12-month summation. VOC emissions shall not exceed 0.17 lb/hour and 0.48 ton/year based upon a rolling 12-month summation. See b)(2)a. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1) and 3745-21-08.
b.	OAC 3745-17-11	See b)(2)b.
c.	OAC 3745-17-10	See b)(2)c.
d.	OAC rule 3745-21-08	See b)(2)d.
e.	OAC rule 3745-05(A)(3)(a)(ii)	See b)(2)e.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
g.	OAC rule 3745-18-06	The emission limitation specified by this rule is less stringent that the emission limitation established pursuant to OAC rule 3745-31-10 thru 20 as listed in their PSD application of December 16, 2008.

(2) Additional Terms and Conditions

a. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of natural gas as fuel, good combustion practices, low NOx burner technology, acceptance of a PE/PM10 limitation of 7.6 lb/MMscf, acceptance of CO limitation of 84 lb/MMscf, acceptance of VOC limitation of 5.5 lb/MMscf, and acceptance of NOx limitation of 0.08 lb/MMBtu constitute BACT for this emissions unit. The emission limitations are based on the BACT requirements listed under OAC rule 3745-31-(10) thru (20) above.

b. The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight, as defined in OAC rule 3745-17-01(B)(17), is equal to zero.

c. The burning of fuel in this unit is for the primary purpose of producing heat in which the products of combustion come into direct contact with materials being processed. It is, therefore, exempt from emission limitations and control requirements contained in OAC rule 3745-17-10.

d. The permittee shall satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology (BAT) requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the BAT requirements.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. On June 24, 2003, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

e. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled PE/PM10, CO, NOx, SO2, and VOC emissions from this air contaminant source since the potential to emit for PE/PM10, CO, NOx, SO2, and VOC is less than ten tons per year.

f. The hourly emission limitations listed in b)(1) are based upon the potential to emit of this emissions unit and therefore no record keeping and reporting requirements of those limitations are necessary.

c) Operational Restrictions

(1) The permittee shall use only natural gas as fuel for this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type, quantity, and quality of fuel burned in this emissions unit.

(2) The permittee shall maintain monthly records of the following information:

a. the quantity of natural gas burned in this emissions unit in MMscf for each calendar month;

b. the monthly PM/PM10, VOC, NOx, and CO emissions; and,

c. the rolling, 12-month summation of the PM/PM10, VOC, NOx, and CO emissions.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of:

a. the rolling, 12-month and PM/PM10, VOC, NOx, and CO emission limitations for this emissions unit in b)(1).

f) Testing Requirements

(1) Emission Limitation:

20% opacity of visible emissions as a 6-minute average.

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(1) of OAC rule 3745-17-03.

(2) Emission Limitation:

NOx emissions shall not exceed 0.08 lb/MMBtu.

Applicable Compliance Method:

If required by the Ohio EPA, compliance with the NOx emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 7.

(3) Emission Limitation:

NOx emissions shall not exceed 2.56 lbs/hour.

Applicable Compliance Method:

Compliance shall be based on the following calculation by using emission factors supplied by the manufacturer for natural gas combustion and the simultaneous capacity of the gas burners.

E(NOx) = 32 mmBtu/hr x 0.08 lb NOx/mmBtu (mfg. emission factor) = 2.56 lbs/hr.

(4) Emission Limitation:

NOx emissions shall not exceed 7.14 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

To determine the annual NOx emission rate from burning natural gas, the following equation shall be used:

E = (A)(B)(C) / D

where:

E = annual NOx emissions, in tons per year.

A = emission factor supplied by the manufacturer (lb/MMBtu).

B = natural gas heat content, 1020 Btu/scf.

C = annual natural gas usage based upon the record keeping requirements specified in d)(2)a. of this permit, in MMscf/yr.

D = 2000 lbs/ton.

(5) Emission Limitation:

CO emissions shall not exceed 2.64 lbs/hour.

Applicable Compliance Method:

To determine the CO emission rate from burning natural gas, the following equation shall be used:

E = (A)(B)

where:

E = CO emission rate from burning natural gas, in lb/hr.

A = 84 lbs/MMscf, emission factor for CO from burning natural gas from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98.

B = 0.0314 MMscf/hr, the simultaneous natural gas used in this emissions unit in an hour.

(6) Emission Limitation:

CO emissions shall not exceed 7.35 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

Compliance with the annual CO emission limitation shall be determined by multiplying the emission factor of 84 lbs/MMscf (from AP-42, Table 1.4-1, 7/98 version) by the annual natural gas fuel usage (MMscf), and dividing by 2,000 lbs/ton. The annual natural gas fuel usage should be based upon the record keeping requirements specified in d)(2)a. of this permit.

(7) Emission Limitation:

PM/PM10 emissions shall not exceed 0.24 lb per hour.

Applicable Compliance Method:

To determine the particulate emission rate from burning natural gas, the following equation shall be used:

E = (A)(B)

where:

E = particulate emission rate from burning natural gas, in lb/hr.

A = 7.6 lbs/MMscf, emission factor for total particulate material from burning natural gas from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98.

B = 0.0314 MMscf/hr, the simultaneous natural gas used in this emissions unit in an hour.

(8) Emission Limitation:

PM/PM10 emissions shall not exceed 0.67 ton per year based upon a rolling 12-month summation.

Applicable Compliance Method:

To determine the annual particulate emission rate for this emissions unit, the following equation shall be used:

E = (A)(B)/C

where:

E = annual PM/PM10 emissions.

A = annual natural gas usage based upon the record keeping requirements specified in d)(2)a. of this permit, MMscf/yr.

B = 7.6 lbs/MMscf, natural gas combustion AP-42 emission factor (Section 1.4, Table 1.4-2, version 7/98).

C = 2000 lbs/ton.

(9) Emission Limitation:

VOC emissions shall not exceed 0.17 lb per hour.

Applicable Compliance Method:

To determine the VOC emission rate from burning natural gas, the following equation shall be used:

E = (A)(B)

where:

E = VOC emission rate from burning natural gas, in lb/hr.

A = 5.5 lbs/MMscf, emission factor for VOC from burning natural gas from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98.

B = 0.0314 MMscf/hr, the simultaneous natural gas used in this emissions unit in an hour.

(10) Emission Limitation:

VOC emissions shall not exceed 0.48 ton per year based upon a rolling 12-month summation.

Applicable Compliance Method:

To determine the annual VOC emission rate for this emissions unit, the following equation shall be used:

E = (A)(B)/C

where:

E = annual VOC emissions.

A = annual natural gas usage based upon the record keeping requirements specified in d)(2)a. of this permit, MMscf/yr.

B = 5.5 lbs/MMscf, natural gas combustion AP-42 emission factor (Section 1.4, Table 1.4-2, version 7/98).

C = 2000 lbs/ton.

g) Miscellaneous Requirements

(1) None.

7. P017, Pipe Temp Furnace #1

Operations, Property and/or Equipment Description:

Natural gas fired Pipe Tempering Furnace #1 rated at 33.4 MMBtu/Hr

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 operations(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. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-10 through OAC rule 3745-31-20	PM/PM10 emissions shall not exceed 0.20 lb/hour and 0.57 ton/year based upon a rolling 12-month summation. All PM/PM10 are considered filterable PM. NOx emissions shall not exceed 0.08 lb/MMBtu, 2.16 lbs/hour, and 6.12 tons/year based upon a rolling 12-month summation. CO emissions shall not exceed 2.22 lbs/hour and 6.30 tons/yr based upon a rolling 12-month summation. VOC emissions shall not exceed 0.15 lb/hour and 0.41 ton/year based upon a rolling 12-month summation. See b)(2)a. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1) and 3745-21-08.
b.	OAC 3745-17-11	See b)(2)b.
c.	OAC 3745-17-10	See b)(2)c.
d.	OAC rule 3745-21-08	See b)(2)d.
e.	OAC rule 3745-05(A)(3)(a)(ii)	See b)(2)e.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
g.	OAC rule 3745-18-06	The emission limitation specified by this rule is less stringent that the emission limitation established pursuant to OAC rule 3745-31-10 thru 20 as listed in their PSD application of December 16, 2008.

(2) Additional Terms and Conditions

a. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of natural gas as fuel, good combustion practices, low NOx burner technology, acceptance of a PE/PM10 limitation of 7.6 lb/MMscf, acceptance of CO limitation of 84 lb/MMscf, acceptance of VOC limitation of 5.5 lb/MMscf, and acceptance of NOx limitation of 0.08 lb/MMBtu constitute BACT for this emissions unit. The emission limitations are based on the BACT requirements listed under OAC rule 3745-31-(10) thru (20) above.

b. The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight, as defined in OAC rule 3745-17-01(B)(17), is equal to zero.

c. The burning of fuel in this unit is for the primary purpose of producing heat in which the products of combustion come into direct contact with materials being processed. It is, therefore, exempt from emission limitations and control requirements contained in OAC rule 3745-17-10.

d. The permittee shall satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available control technology (BACT) requirements established pursuant to OAC rule 3745-31-10 through OAC rule 3745-31-20 in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the BACT requirements.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. On June 24, 2003, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

e. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled PE/PM10, CO, NOx, SO2, and VOC emissions from this air contaminant source since the potential to emit for PE/PM10, CO, NOx, SO2, and VOC is less than ten tons per year.

f. The hourly emission limitations listed in b)(1) are based upon the potential to emit of this emissions unit and therefore no record keeping and reporting requirements of those limitations are necessary.

c) Operational Restrictions

(1) The permittee shall use only natural gas as fuel for this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type, quantity, and quality of fuel burned in this emissions unit.

(2) The permittee shall maintain monthly records of the following information:

a. the quantity of natural gas burned in this emissions unit in MMscf for each calendar month;

b. the monthly PM/PM10, VOC, NOx, and CO emissions; and,

c. the rolling, 12-month summation of the PM/PM10, VOC, NOx, and CO emissions.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of:

a. the rolling, 12-month and PM/PM10, VOC, NOx, and CO emission limitations for this emissions unit in b)(1).

f) Testing Requirements

(1) Emission Limitation:

20% opacity of visible emissions as a 6-minute average.

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(1) of OAC rule 3745-17-03.

(2) Emission Limitation:

NOx emissions shall not exceed 0.08 lb/MMBtu.

Applicable Compliance Method:

If required by the Ohio EPA, compliance with the NOx emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 7.

(3) Emission Limitation:

NOx emissions shall not exceed 2.16 lbs/hour.

Applicable Compliance Method:

Compliance shall be based on the following calculation by using emission factors supplied by the manufacturer for natural gas combustion and the simultaneous capacity of the gas burners.

E(NOx) = 26.5 mmBtu/hr x 0.08 lb NOx/mmBtu (mfg. emission factor) = 2.16 lbs/hr.

(4) Emission Limitation:

NOx emissions shall not exceed 6.12 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

To determine the annual NOx emission rate from burning natural gas, the following equation shall be used:

E = (A)(B)(C) / D

where:

E = annual NOx emissions, in tons per year.

A = emission factor supplied by the manufacturer (lb/MMBtu).

B = natural gas heat content, 1020 Btu/scf.

C = annual natural gas usage based upon the record keeping requirements specified in d)(2)a. of this permit, in MMscf/yr.

D = 2000 lbs/ton.

(5) Emission Limitation:

CO emissions shall not exceed 2.22 lbs/hour.

Applicable Compliance Method:

To determine the CO emission rate from burning natural gas, the following equation shall be used:

E = (A)(B)

where:

E = CO emission rate from burning natural gas, in lb/hr.

A = 84 lbs/MMscf, emission factor for CO from burning natural gas from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98.

B = 0.0265 MMscf/hr, the simultaneous natural gas used in this emissions unit in an hour.

(6) Emission Limitation:

CO emissions shall not exceed 6.30 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

Compliance with the annual CO emission limitation shall be determined by multiplying the emission factor of 84 lbs/MMscf (from AP-42, Table 1.4-1, 7/98 version) by the annual natural gas fuel usage (MMscf), and dividing by 2,000 lbs/ton. The annual natural gas fuel usage should be based upon the record keeping requirements specified in d)(2)a. of this permit.

(7) Emission Limitation:

PM/PM10 emissions shall not exceed 0.20 lb per hour.

Applicable Compliance Method:

To determine the particulate emission rate from burning natural gas, the following equation shall be used:

E = (A)(B)

where:

E = particulate emission rate from burning natural gas, in lb/hr.

A = 7.6 lbs/MMscf, emission factor for total particulate material from burning natural gas from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98.

B = 0.0265 MMscf/hr, the simultaneous natural gas used in this emissions unit in an hour.

(8) Emission Limitation:

PM/PM10 emissions shall not exceed 0.57 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

To determine the annual particulate emission rate for this emissions unit, the following equation shall be used:

E = (A)(B)/C

where:

E = annual PM/PM10 emissions.

A = annual natural gas usage based upon the record keeping requirements specified in d)(2)a. of this permit, MMscf/yr.

B = 7.6 lbs/MMscf, natural gas combustion AP-42 emission factor (Section 1.4, Table 1.4-2, version 7/98).

C = 2000 lbs/ton.

(9) Emission Limitation:

VOC emissions shall not exceed 0.15 lb per hour.

Applicable Compliance Method:

To determine the VOC emission rate from burning natural gas, the following equation shall be used:

E = (A)(B)

where:

E = VOC emission rate from burning natural gas, in lb/hr.

A = 5.5 lbs/MMscf, emission factor for VOC from burning natural gas from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98.

B = 0.0265 MMscf/hr, the simultaneous natural gas used in this emissions unit in an hour.

(10) Emission Limitation:

VOC emissions shall not exceed 0.41 ton per year based upon a rolling 12-month summation.

Applicable Compliance Method:

To determine the annual VOC emission rate for this emissions unit, the following equation shall be used:

E = (A)(B)/C

where:

E = annual VOC emissions.

A = annual natural gas usage based upon the record keeping requirements specified in d)(2)a. of this permit, MMscf/yr.

B = 5.5 lbs/MMscf, natural gas combustion AP-42 emission factor (Section 1.4, Table 1.4-2, version 7/98).

C = 2000 lbs/ton.

g) Miscellaneous Requirements

(1) None.

8. P018, Pipe Aust Furnace #2

Operations, Property and/or Equipment Description:

Pipe Austenitizing Furnace #2 rated at 40 MMBtu/hr

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 operations(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. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-10 through OAC rule 3745-31-20	PM/PM10 emissions shall not exceed 0.24 lb/hour and 0.67 ton/year based upon a rolling 12-month summation. All PM/PM10 are considered filterable PM. NOx emissions shall not exceed 0.08 lb/MMBtu, 2.56 lbs/hour, and 7.14 tons/year based upon a rolling 12-month summation. CO emissions shall not exceed 2.64 lbs/hour and 7.35 tons/yr based upon a rolling 12-month summation. VOC emissions shall not exceed 0.17 lb/hour and 0.48 ton/year based upon a rolling 12-month summation. See b)(2)a. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1) and 3745-21-08.
b.	OAC 3745-17-11	See b)(2)b.
c.	OAC 3745-17-10	See b)(2)c.
d.	OAC rule 3745-21-08	See b)(2)d.
e.	OAC rule 3745-05(A)(3)(a)(ii)	See b)(2)e.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
g.	OAC rule 3745-18-06	The emission limitation specified by this rule is less stringent that the emission limitation established pursuant to OAC rule 3745-31-10 thru 20 as listed in their PSD application of December 16, 2008.

(2) Additional Terms and Conditions

a. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of natural gas as fuel, good combustion practices, low NOx burner technology, acceptance of a PE/PM10 limitation of 7.6 lb/MMscf, acceptance of CO limitation of 84 lb/MMscf, acceptance of VOC limitation of 5.5 lb/MMscf, and acceptance of NOx limitation of 0.0.08 lb/MMBtu constitute BACT for this emissions unit. The emission limitations are based on the BACT requirements listed under OAC rule 3745-31-(10) thru (20) above.

b. The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight, as defined in OAC rule 3745-17-01(B)(17), is equal to zero.

c. The burning of fuel in this unit is for the primary purpose of producing heat in which the products of combustion come into direct contact with materials being processed. It is, therefore, exempt from emission limitations and control requirements contained in OAC rule 3745-17-10.

d. The permittee shall satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available control technology (BACT) requirements established pursuant to OAC rule 3745-31-10 through OAC rule 3745-31-20 in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the BACT requirements.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. On June 24, 2003, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

e. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled PE/PM10, CO, NOx, SO2, and VOC emissions from this air contaminant source since the potential to emit for PE/PM10, CO, NOx, SO2, and VOC is less than ten tons per year.

f. The hourly emission limitations listed in b)(1) are based upon the potential to emit of this emissions unit and therefore no record keeping and reporting requirements of those limitations are necessary.

c) Operational Restrictions

(1) The permittee shall use only natural gas as fuel for this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type, quantity, and quality of fuel burned in this emissions unit.

(2) The permittee shall maintain monthly records of the following information:

a. the quantity of natural gas burned in this emissions unit in MMscf for each calendar month;

b. the monthly PM/PM10, VOC, NOx, and CO emissions; and,

c. the rolling, 12-month summation of the PM/PM10, VOC, NOx, and CO emissions.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of:

a. the rolling, 12-month and PM/PM10, VOC, NOx, and CO emission limitations for this emissions unit in b)(1).

f) Testing Requirements

(1) Emission Limitation:

20% opacity of visible emissions as a 6-minute average.

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(1) of OAC rule 3745-17-03.

(2) Emission Limitation:

NOx emissions shall not exceed 0.08 lb/MMBtu.

Applicable Compliance Method:

If required by the Ohio EPA, compliance with the NOx emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 7.

(3) Emission Limitation:

NOx emissions shall not exceed 2.56 lbs/hour.

Applicable Compliance Method:

Compliance shall be based on the following calculation by using emission factors supplied by the manufacturer for natural gas combustion and the simultaneous capacity of the gas burners.

E(NOx) = 32 mmBtu/hr x 0.08 lb NOx/mmBtu (mfg. emission factor) = 2.56 lbs/hr.

(4) Emission Limitation:

NOx emissions shall not exceed 7.14 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

To determine the annual NOx emission rate from burning natural gas, the following equation shall be used:

E = (A)(B)(C) / D

where:

E = annual NOx emissions, in tons per year.

A = emission factor supplied by the manufacturer (lb/MMBtu).

B = natural gas heat content, 1020 Btu/scf.

C = annual natural gas usage based upon the record keeping requirements specified in d)(2)a. of this permit, in MMscf/yr.

D = 2000 lbs/ton.

(5) Emission Limitation:

CO emissions shall not exceed 2.64 lbs/hour.

Applicable Compliance Method:

To determine the CO emission rate from burning natural gas, the following equation shall be used:

E = (A)(B)

where:

E = CO emission rate from burning natural gas, in lb/hr.

A = 84 lbs/MMscf, emission factor for CO from burning natural gas from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98.

B = 0.0314 MMscf/hr, the simultaneous natural gas used in this emissions unit in an hour.

(6) Emission Limitation:

CO emissions shall not exceed 7.35 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

Compliance with the annual CO emission limitation shall be determined by multiplying the emission factor of 84 lbs/MMscf (from AP-42, Table 1.4-1, 7/98 version) by the annual natural gas fuel usage (MMscf), and dividing by 2,000 lbs/ton. The annual natural gas fuel usage should be based upon the record keeping requirements specified in d)(2)a. of this permit.

(7) Emission Limitation:

PM/PM10 emissions shall not exceed 0.24 lb per hour.

Applicable Compliance Method:

To determine the particulate emission rate from burning natural gas, the following equation shall be used:

E = (A)(B)

where:

E = particulate emission rate from burning natural gas, in lb/hr.

A = 7.6 lbs/MMscf, emission factor for total particulate material from burning natural gas from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98.

B = 0.0314 MMscf/hr, the simultaneous natural gas used in this emissions unit in an hour.

(8) Emission Limitation:

PM/PM10 emissions shall not exceed 0.67 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

To determine the annual particulate emission rate for this emissions unit, the following equation shall be used:

E = (A)(B)/C

where:

E = annual PM/PM10 emissions.

A = annual natural gas usage based upon the record keeping requirements specified in d)(2)a. of this permit, MMscf/yr.

B = 7.6 lbs/MMscf, natural gas combustion AP-42 emission factor (Section 1.4, Table 1.4-2, version 7/98).

C = 2000 lbs/ton.

(9) Emission Limitation:

VOC emissions shall not exceed 0.17 lb per hour.

Applicable Compliance Method:

To determine the VOC emission rate from burning natural gas, the following equation shall be used:

E = (A)(B)

where:

E = VOC emission rate from burning natural gas, in lb/hr.

A = 5.5 lbs/MMscf, emission factor for VOC from burning natural gas from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98.

B = 0.0314 MMscf/hr, the simultaneous natural gas used in this emissions unit in an hour.

(10) Emission Limitation:

VOC emissions shall not exceed 0.48 ton per year based upon a rolling 12-month summation.

Applicable Compliance Method:

To determine the annual VOC emission rate for this emissions unit, the following equation shall be used:

E = (A)(B)/C

where:

E = annual VOC emissions.

A = annual natural gas usage based upon the record keeping requirements specified in d)(2)a. of this permit, MMscf/yr.

B = 5.5 lbs/MMscf, natural gas combustion AP-42 emission factor (Section 1.4, Table 1.4-2, version 7/98).

C = 2000 lbs/ton.

g) Miscellaneous Requirements

(1) None.

9. P019, Pipe Temp Furnace #2

Operations, Property and/or Equipment Description:

Pipe Tempering Furnace #2 rated at 33.4 MMBtu/hr

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 operations(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. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-10 through OAC rule 3745-31-20	PM/PM10 emissions shall not exceed 0.20 lb/hour and 0.57 ton/year based upon a rolling 12-month summation. All PM/PM10 are considered filterable PM. NOx emissions shall not exceed 0.08 lb/MMBtu, 2.16 lbs/hour, and 6.12 tons/year based upon a rolling 12-month summation. CO emissions shall not exceed 2.22 lbs/hour and 6.30 tons/yr based upon a rolling 12-month summation. VOC emissions shall not exceed 0.15 lb/hour and 0.41 ton/year based upon a rolling 12-month summation. See b)(2)a. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1) and 3745-21-08.
b.	OAC 3745-17-11	See b)(2)b.
c.	OAC 3745-17-10	See b)(2)c.
d.	OAC rule 3745-21-08	See b)(2)d.
e.	OAC rule 3745-05(A)(3)(a)(ii)	See b)(2)e.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
g.	OAC rule 3745-18-06	The emission limitation specified by this rule is less stringent that the emission limitation established pursuant to OAC rule 3745-31-10 thru 20 as listed in their PSD application of December 16, 2008.

(2) Additional Terms and Conditions

a. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of natural gas as fuel, good combustion practices, low NOx burner technology, acceptance of a PE/PM10 limitation of 7.6 lb/MMscf, acceptance of CO limitation of 84 lb/MMscf, acceptance of VOC limitation of 5.5 lb/MMscf, and acceptance of NOx limitation of 0.0.08 lb/MMBtu constitute BACT for this emissions unit. The emission limitations are based on the BACT requirements listed under OAC rule 3745-31-(10) thru (20) above.

b. The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight, as defined in OAC rule 3745-17-01(B)(17), is equal to zero.

c. The burning of fuel in this unit is for the primary purpose of producing heat in which the products of combustion come into direct contact with materials being processed. It is, therefore, exempt from emission limitations and control requirements contained in OAC rule 3745-17-10.

d. The permittee shall satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available control technology (BACT) requirements established pursuant to OAC rule 3745-31-10 through OAC rule 3745-31-20 in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the BACT requirements.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. On June 24, 2003, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

e. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled PE/PM10, CO, NOx, SO2, and VOC emissions from this air contaminant source since the potential to emit for PE/PM10, CO, NOx, SO2, and VOC is less than ten tons per year.

f. The hourly emission limitations listed in b)(1) are based upon the potential to emit of this emissions unit and therefore no record keeping and reporting requirements of those limitations are necessary.

c) Operational Restrictions

(1) The permittee shall use only natural gas as fuel for this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type, quantity, and quality of fuel burned in this emissions unit.

(2) The permittee shall maintain monthly records of the following information:

a. the quantity of natural gas burned in this emissions unit in MMscf for each calendar month;

b. the monthly PM/PM10, VOC, NOx, and CO emissions; and,

c. the rolling, 12-month summation of the PM/PM10, VOC, NOx, and CO emissions.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of:

a. the rolling, 12-month and PM/PM10, VOC, NOx, and CO emission limitations for this emissions unit in b)(1).

f) Testing Requirements

(1) Emission Limitation:

20% opacity of visible emissions as a 6-minute average

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(1) of OAC rule 3745-17-03.

(2) Emission Limitation:

NOx emissions shall not exceed 0.08 lb/MMBtu.

Applicable Compliance Method:

If required by the Ohio EPA, compliance with the NOx emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 7.

(3) Emission Limitation:

NOx emissions shall not exceed 2.16 lbs/hour.

Applicable Compliance Method:

Compliance shall be based on the following calculation by using emission factors supplied by the manufacturer for natural gas combustion and the simultaneous capacity of the gas burners.

E(NOx) = 26.5 mmBtu/hr x 0.08 lb NOx/mmBtu (mfg. emission factor) = 2.16 lbs/hr.

(4) Emission Limitation:

NOx emissions shall not exceed 6.12 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

To determine the annual NOx emission rate from burning natural gas, the following equation shall be used:

E = (A)(B)(C) / D

where:

E = annual NOx emissions, in tons per year.

A = emission factor supplied by the manufacturer (lb/MMBtu).

B = natural gas heat content, 1020 Btu/scf.

C = annual natural gas usage based upon the record keeping requirements specified in d)(2)a. of this permit, in MMscf/yr.

D = 2000 lbs/ton.

(5) Emission Limitation:

CO emissions shall not exceed 2.22 lbs/hour.

Applicable Compliance Method:

To determine the CO emission rate from burning natural gas, the following equation shall be used:

E = (A)(B)

where:

E = CO emission rate from burning natural gas, in lb/hr.

A = 84 lbs/MMscf, emission factor for CO from burning natural gas from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98.

B = 0.0265 MMscf/hr, the simultaneous natural gas used in this emissions unit in an hour.

(6) Emission Limitation:

CO emissions shall not exceed 6.30 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

Compliance with the annual CO emission limitation shall be determined by multiplying the emission factor of 84 lbs/MMscf (from AP-42, Table 1.4-1, 7/98 version) by the annual natural gas fuel usage (MMscf), and dividing by 2,000 lbs/ton. The annual natural gas fuel usage should be based upon the record keeping requirements specified in d)(2)a. of this permit.

(7) Emission Limitation:

PM/PM10 emissions shall not exceed 0.20 lb per hour.

Applicable Compliance Method:

To determine the particulate emission rate from burning natural gas, the following equation shall be used:

E = (A)(B)

where:

E = particulate emission rate from burning natural gas, in lb/hr.

A = 7.6 lbs/MMscf, emission factor for total particulate material from burning natural gas from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98.

B = 0.0265 MMscf/hr, the simultaneous natural gas used in this emissions unit in an hour.

(8) Emission Limitation:

PM/PM10 emissions shall not exceed 0.57 ton per year based upon a rolling 12-month summation.

Applicable Compliance Method:

To determine the annual particulate emission rate for this emissions unit, the following equation shall be used:

E = (A)(B)/C

where:

E = annual PM/PM10 emissions.

A = annual natural gas usage based upon the record keeping requirements specified in d)(2)a. of this permit, MMscf/yr.

B = 7.6 lbs/MMscf, natural gas combustion AP-42 emission factor (Section 1.4, Table 1.4-2, version 7/98).

C = 2000 lbs/ton.

(9) Emission Limitation:

VOC emissions shall not exceed 0.15 lb per hour.

Applicable Compliance Method:

To determine the VOC emission rate from burning natural gas, the following equation shall be used:

E = (A)(B)

where:

E = VOC emission rate from burning natural gas, in lb/hr.

A = 5.5 lbs/MMscf, emission factor for VOC from burning natural gas from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98.

B = 0.0265 MMscf/hr, the simultaneous natural gas used in this emissions unit in an hour.

(10) Emission Limitation:

VOC emissions shall not exceed 0.41 ton per year based upon a rolling 12-month summation.

Applicable Compliance Method:

To determine the annual VOC emission rate for this emissions unit, the following equation shall be used:

E = (A)(B)/C

where:

E = annual VOC emissions.

A = annual natural gas usage based upon the record keeping requirements specified in d)(2)a. of this permit, MMscf/yr.

B = 5.5 lbs/MMscf, natural gas combustion AP-42 emission factor (Section 1.4, Table 1.4-2, version 7/98).

C = 2000 lbs/ton.

g) Miscellaneous Requirements

(1) None.

10. P021, Melter Furnace

Operations, Property and/or Equipment Description:

Melter Furnace

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 operations(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. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-10 through OAC rule 3745-31-20	PM/PM10 emissions shall not exceed 0.010 gr/dscf, 0.5 lb/hour and 2.11 tons/year based upon a rolling 12-month summation. All PM/PM10 are considered filterable PM. NOx emissions shall not exceed 0.5 lb/MMBtu, 10.05 lbs/hour, and 44.02 tons/year based upon 12-month rolling summation. CO emissions shall not exceed 0.96 lb/hour and 4.21 tons/yr based upon a rolling 12-month summation. SO2 emissions shall not exceed 1.64 lbs/hour and 7.16 tons/yr based upon a rolling 12-month summation. VOC emissions shall not exceed 0.96 lb/hour and 4.21 tons/yr based upon a rolling 12-month summation. See b)(2)a. and b)(2)b. The requirements of this rule also include compliance with the requirements of OAC

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		rule 3745-17-07(A)(1) and OAC rule 3745-21-08.
b.	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-10 thru for 20 for NOx.
c.	OAC 3745-17-11	The emission limitation required by this applicable rule is less stringent than or equivalent to the emission limitation established pursuant to OAC rule 3745-31-10 through OAC rule 3745-31-20.
d.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
e.	OAC rule 3745-18-06	The emission limitation required by this applicable rule is less stringent than or equivalent to the emission limitation established pursuant to OAC rule 3745-31-10 through OAC rule 3745-31-20.
f.	OAC 3745-17-10	See b)(2)c.
g.	OAC rule 3745-21-08	See b)(2)d.
h.	OAC rule 3745-05(A)(3)(a)(ii)	See b)(2)e.

(2) Additional Terms and Conditions

a. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the installation of a venturi scrubber, a caustic liquid packed scrubber, the use of natural gas as fuel, good combustion practices, oxy-fuel natural gas burner technology, acceptance of CO limitation of 0.2 lb/ton, acceptance of SO2 limitation of 3.4 lbs/ton, acceptance of VOC limitation of 0.2 lb/ton, and acceptance of NOx limitation of 0.5 lb/MMBtu constitute BACT for this emissions unit. The emission limitations based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

b. The hourly and annual emission limitations are based upon the potential to emit of this emissions unit and therefore no record keeping and reporting requirements of those limitations are necessary.

c. The burning of fuel in this unit is for the primary purpose of producing heat in which the products of combustion come into direct contact with materials being processed. It is, therefore, exempt from emission limitations and control requirements contained in OAC rule 3745-17-10.

d. The permittee shall satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply

with the best available technology (BAT) requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the BAT requirements.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. On June 24, 2003, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

e. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled PE/PM10, SO2, and VOC emissions from this air contaminant source since the potential to emit for PE/PM10, CO, SO2, and VOC is less than ten tons per year.

c) Operational Restrictions

(1) The emissions from this emissions unit shall be vented to a venturi scrubber and caustic liquid packed tower scrubber at all times the emissions unit is in operation.

d) Monitoring and/or Recordkeeping Requirements

(1) In order to maintain compliance with the applicable emission limitations contained in this permit, the acceptable range or limit for the pressure drop across the scrubbers, and the scrubber liquid flow rates shall be based upon the manufacturer's specifications until such time as any required emission testing is conducted and the appropriate range for each parameter is established to demonstrate compliance.

(2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop across the scrubbers (in pounds per square inch, gauge), and the scrubber liquid flow rates (in gallons per minute) during operation of this emissions unit, including periods of startup and shutdown. The permittee shall record the pressure drop across the scrubbers and the scrubber liquid's flow rates on a once per shift basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s).

Whenever the monitored value for any parameter deviates from the range(s) or minimum limit(s) specified in 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 control equipment parameters within the acceptable range(s), or at or above the minimum limit(s) 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 the 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 and flow rate 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.

These range(s) and/or limit(s) for the pressure drop and liquid flow rate are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA, Northeast District Office. The permittee may request revisions to the permitted range or limit for the pressure drop or liquid flow rate based upon information obtained during future emission tests that demonstrate compliance with the allowable emission rates for this emissions unit. 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 A minor permit modification @.

(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 stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. An EPA Method 9 opacity analysis shall be required upon OEPA request, but is not required for the daily or weekly visible emissions checks. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the 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 minimize or eliminate the visible emissions.

Notwithstanding the frequency of reporting requirements specified above, the permittee may reduce the frequency of visual observations for this emissions unit from daily to weekly if the following conditions are met:

f. for any 3 consecutive calendar months (excluding scheduled maintenance-shut down) this emissions unit's visual observations indicated no visible emissions; and

g. the permittee continues to comply with all the record keeping and monitoring requirements specified above.

The permittee shall revert to daily readings for this emissions unit if visible emissions are observed. The permittee may again reduce the frequency of visible emissions observations from daily to weekly after obtaining 3 consecutive calendar months (excluding scheduled maintenance-shut down) of observations with no visible emissions for this emissions unit.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

e) Reporting Requirements

(1) The permittee shall submit quarterly reports that identify the following information concerning the operation of the venturi scrubber and caustic liquid packed tower scrubber during the operation of the controlled emissions unit(s):

a. each period of time when the pressure drop across the scrubbers, and/or liquid flow rates were outside of the appropriate range or limit specified by the manufacturer and outside of the acceptable range following any required compliance demonstration;

b. an identification of each incident of deviation described in "a" (above) where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in "a" where prompt corrective action, that would bring the pressure drops, and/or liquid flow rates, into compliance with the acceptable range or limit, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in "a" where proper records were not maintained for the investigation and/or the corrective action(s).

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

(2) The permittee shall submit semiannual written reports that (a) identify all weeks during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate any visible particulate emissions. These reports shall be submitted to the Ohio EPA, Northeast District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

f) Testing Requirements

(1) Emission Limitation:

PM/PM10 emissions shall not exceed 0.010 grains per dry standard cubic foot of exhaust gases.

Applicable Compliance Method:

Compliance shall be determined by emission testing as specified in f)(17) .

(2) Emission Limitation:

PM/PM10 emissions shall not exceed 0.5 pound per hour.

Applicable Compliance Method:

Compliance shall be determined by emission testing as specified in f)(17).

(3) Emission Limitation:

PM/PM10 emissions shall not exceed 2.11 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

The annual PM/PM10 emission limitation was developed by multiplying the short-term allowable PM/PM10 emission limitation (0.5 lb/hour) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

(4) Emission Limitation:

SO2 emissions shall not exceed 1.64 pounds per hour.

Applicable Compliance Method:

Compliance shall be determined by emission testing as specified in f)(17).

(5) Emission Limitation:

SO2 emissions shall not exceed 3.4 lbs/ton of product.

Applicable Compliance Method:

Compliance shall be determined by emission testing as specified in f)(17).

(6) Emission Limitation:

SO2 emissions shall not exceed 7.16 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

The annual SO2 emission limitation was developed by multiplying the short-term allowable SO2 emission limitation (1.64 lbs/hour) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

(7) Emission Limitation:

NOx emissions shall not exceed 10.05 pounds per hour.

Applicable Compliance Method:

Compliance shall be determined by emission testing as specified in f)(17).

(8) Emission Limitation:

NOx emissions shall not exceed 0.5 lb/MMBtu.

Applicable Compliance Method:

Compliance shall be determined by emission testing as specified in f)(17).

(9) Emission Limitation:

NOx emissions shall not exceed 44.02 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

The annual NOx emission limitation was developed by multiplying the short-term allowable NOx emission limitation (10.05 lbs/hour) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

(10) Emission Limitation:

CO emissions shall not exceed 0.96 lb/hour.

Applicable Compliance Method:

If required by the Ohio EPA, compliance with the CO emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 10.

(11) Emission Limitation:

CO emissions shall not exceed 0.2 lb/ton of product.

Applicable Compliance Method:

Compliance shall be based upon emission factors from AP-42, Table 11.15-1(10/86 version).

(12) Emission Limitation:

CO emissions shall not exceed 4.21 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

The annual CO emission limitation was developed by multiplying the short-term allowable CO emission limitation (0.96 lb/hour) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

(13) Emission Limitation:

VOC emissions shall not exceed 0.96 lb/hour.

Applicable Compliance Method:

If required by the Ohio EPA, compliance with the VOC emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 25 or 25A.

(14) Emission Limitation:

VOC emissions shall not exceed 0.2 lb/ton of product.

Applicable Compliance Method:

Compliance shall be based upon emission factors from AP-42, Table 11.15-1(10/86 version).

(15) Emission Limitation:

VOC emissions shall not exceed 4.21 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

The annual VOC emission limitation was developed by multiplying the short-term allowable VOC emission limitation (0.96 lb/hour) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

(16) Emission Limitation:

20% opacity of visible emissions as a 6-minute average

Applicable Compliance Method:

Compliance with the visible emission limitation shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(1) of OAC rule 3745-17-03.

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

a. The emission testing shall be conducted within 3 months after startup of this emissions unit.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for PM, NO_X, and SO2, pound per ton limitation for SO2, and lb/MMBtu limitation for NOx.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

PM - Method 5 of 40 CFR Part 60, Appendix A.

NO_X - Method 7, 7E of 40 CFR Part 60, Appendix A.

SO2 - Method 6 of 40 CFR Part 60, Appendix A.

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit 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 Ohio EPA District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office.

g) Miscellaneous Requirements

(1) None.

11. P022, Abrasive Product Hand

Operations, Property and/or Equipment Description:

Finished Abrasive Product Handling; Includes Drying, Storage, Crush Screen, Bagging. Controlled by 20,000 acfm 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 operations(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. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-10 through OAC rule 3745-31-20	PM/PM10 emissions shall not exceed 0.005 gr/dscf, 0.86 lb/hour and 3.75 tons/year based upon a rolling 12-month summation. All PM/PM10 are considered filterable PM. See b)(2)a. and b)(2)b. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), OAC rule 3745-17-07(B), and . OAC rule 3745-17-08(B).
b.	OAC 3745-17-11	The emission limitation required by this applicable rule is less stringent than or equivalent to the emission limitation established pursuant to OAC rule 3745-31-10 through OAC rule 3745-31-20.
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
d.	OAC rule 3745-17-07(B)	Visible fugitive particulate emissions from this emissions unit shall not exceed 20% opacity as a 3-minute average.
e.	OAC rule 3745-17-08(B)	See b)(2)c.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	OAC rule 3745-05(A)(3)(a)(ii)	See b)(2)d.

(2) Additional Terms and Conditions

a. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of a baghouse with a guaranteed maximum outlet gain loading of 0.005 gr/dscf constitutes BACT for this emission unit. The emission limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

b. The hourly and annual emission limitations are based upon the potential to emit of this emissions unit and therefore no record keeping and reporting requirements of those limitations are necessary.

c. The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM). These measures shall include, but not be limited to, the following:

i. the installation and use of hoods, fan, and other equipment to adequately enclose, contain, capture, and vent the fugitive dust to the fabric filter; and,

ii. maintaining a collection efficiency that is sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

d. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled PE/PM10 emissions from this air contaminant source since the potential to emit for PE/PM10 is less than ten tons per year.

c) Operational Restrictions

(1) The emissions from this emissions unit shall be vented to a baghouse at all times the emissions unit is in operation.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall properly install, 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 daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer=s recommendations, instructions, and operating manual(s). The acceptable pressure drop shall be based upon the manufacturer=s specifications until such time as any required emission testing is conducted and the appropriate range is established to demonstrate compliance.

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 Ohio EPA Northeast District Office. 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 A minor permit modification @.

(2) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from any egress point (e.g., windows, doors, roof monitors, etc.) associated with 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 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify the following information concerning the operation of the baghouse during the operation of the emissions unit(s):

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 range specified by the manufacturer and outside of the acceptable range following any required compliance demonstration;

b. an identification of each incident of deviation described in Aa@ (above) where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in Aa@ 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

d. an identification of each incident of deviation described in Aa@ 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.

e. If no deviations/excursions occurred during a calendar quarter, the report shall so state that no deviations occurred during the reporting period.

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

(2) The permittee shall submit semiannual written reports that (a) identify all weeks during which any visible fugitive particulate emissions were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Ohio EPA, Northeast District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

f) Testing Requirements

(1) Emission Limitation:

20% opacity of visible emissions as a 6-minute average.

Applicable Compliance Method:

Compliance with the visible emission limitation shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(1) of OAC rule 3745-17-03.

(2) Emission Limitation:

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

Applicable Compliance Method:

Compliance with the visible emission limitation shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

(3) Emission Limitation:

PM/PM10 emissions shall not exceed 0.005 grains per dry standard cubic foot of exhaust gases.

Applicable Compliance Method:

Compliance shall be determined by emission testing as specified in f)(6) .

(4) Emission Limitation:

PM/PM10 emissions shall not exceed 0.86 pound per hour.

Applicable Compliance Method:

Compliance shall be determined by emission testing as specified in f)(6).

(5) Emission Limitation:

PM/PM10 emissions shall not exceed 3.75 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

The annual PM/PM10 emission limitation was developed by multiplying the short-term allowable PM/PM10 emission limitation (0.86 lb/hour) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

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

a. The emission testing shall be conducted within 3 months after startup of this emissions unit.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for PM/PM10.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

PM - Method 5 of 40 CFR Part 60, Appendix A.

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit 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 Ohio EPA District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office.

g) Miscellaneous Requirements

(1) None.

12. P024, VTD Steam Condenser

Operations, Property and/or Equipment Description:

VTD Steam Jet Vacuum Condenser

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 operations(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. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-10 through OAC rule 3745-31-20	PM/PM10 emissions shall not exceed 0.2 lb per ton of liquid steel production, 0.34 lb/hour and 1.4 tons/year based upon a rolling 12-month summation. All PM/PM10 are considered filterable PM. CO emissions shall not exceed 0.20 lb per ton of liquid steel production, 34.4 lbs/hour and 140 tons/year based upon a rolling 12-month summation. See b)(2)a. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1) and OAC rule 3745-17-07(B)(1).
b.	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-10 thru for 20 for CO and OAC rule 3745-21-08.
c.	OAC rule 3745-17-11	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-10 thru 20.
d.	OAC rule 3745-21-08	See b)(2)b.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the stack shall not exceed twenty-percent opacity, as a six-minute average, except as provided by the rule.
f.	OAC rule 3745-17-07(B)(1)	See b)(2)c.
g.	OAC rule 3745-31-05(E)	PM/PM10 emissions shall not exceed 1.4 tons/year. See b)(2)d.

(2) Additional Terms and Conditions

a. Based on the “Prevention of Significant Determination” (PSD) analysis conducted to ensure the application of “Best Available Control Technology” (BACT), it has been determined that the use of vacuum system design, acceptance of a PM/PM10 limitation of 0.2 lb/ton of steel, and acceptance of a CO limitation of 0.2 lbs/ton of steel produced constitute BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

b. The permit has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08, respectively, by committing to comply with the best available technology requirements established in permit to install P0103995.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. On June 24, 2003, the rule revision was submitted to the U.S. EPA as a revision to Ohio’s State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

c. Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a three-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.

d. Permit to install P0103995 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purposes of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3);

i. the annual liquid steel production of 1,400,000 tons per year.

e. The permittee shall investigate the ability to conduct stack testing on the egress point (steam ejector) in order to determine the CO and PM/PM10 emissions from this emissions unit. If stack testing on the egress point is technically infeasible, the permittee shall develop a parametric monitoring, recordkeeping, and reporting plan to confirm that CO and PM/PM10 emissions are within established limits.

f. The hourly emission limitations listed in b)(1) are based upon the potential to emit of this emissions unit and therefore no record keeping and reporting requirements of those limitations are necessary.

c) Operational Restrictions

(1) The permittee shall restrict the annual liquid steel production to 1,400,000 tons per year, based upon a rolling 12-month summation of the production rates.

d) Monitoring and/or Recordkeeping Requirements.

(1) The permittee shall maintain monthly records of the following information:

a. the liquid steel production rate for each month;

b. the monthly PM/PM10 and CO emissions; and

c. the rolling, 12-month summation of the PM/PM10 and CO emissions.

(2) The permittee shall perform daily checks when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from any egress point (e.g., windows, doors, roof monitors, etc.) associated with this emissions unit. The presence or absence of any visible fugitive particulate emissions shall be noted in an operations log. An EPA Method 9 opacity analysis shall be required upon OEPA request, but is not required for the daily or weekly visible emissions checks. If visible fugitive particulate emissions are observed, the permittee shall also note the following in the operations log:

a. the 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 fugitive particulate emission incident; and

e. any corrective actions taken to eliminate the visible fugitive particulate emissions.

Notwithstanding the frequency of reporting requirements specified in e)(2), the permittee may reduce the frequency of visual observations for this emissions unit from daily to weekly if the following conditions are met:

f. for any 3 consecutive calendar months (excluding scheduled maintenance-shut down) this emissions unit's visual observations indicated no visible emissions; and

g. the permittee continues to comply with all the record keeping and monitoring requirements specified above.

The permittee shall revert to daily readings for this emissions unit if visible emissions are observed. The permittee may again reduce the frequency of visible emissions observations from daily to weekly after obtaining 3 consecutive calendar months (excluding scheduled maintenance-shut down) of observations with no visible emissions for this emissions unit.

(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 stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. An EPA Method 9 opacity analysis shall be required upon OEPA request, but is not required for the daily or weekly visible emissions checks. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the 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 minimize or eliminate the visible emissions.

Notwithstanding the frequency of reporting requirements specified in e)(3), the permittee may reduce the frequency of visual observations for this emissions unit from daily to weekly if the following conditions are met:

f. for any 3 consecutive calendar months (excluding scheduled maintenance-shut down) this emissions unit's visual observations indicated no visible emissions; and

g. the permittee continues to comply with all the record keeping and monitoring requirements specified above.

The permittee shall revert to daily readings for this emissions unit if visible emissions are observed. The permittee may again reduce the frequency of visible emissions observations from daily to weekly after obtaining 3 consecutive calendar months (excluding scheduled maintenance-shut down) of observations with no visible emissions for this emissions unit.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal

operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the PM/PM10 and CO emission limitations listed in b)(1) under OAC rule 3745-31-10 through OAC rule 3745-31-20.

(2) The permittee shall submit semiannual written reports that (a) identify all weeks during which any visible fugitive particulate emissions were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Ohio EPA, Northeast District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

(3) The permittee shall submit semiannual written reports that (a) identify all weeks during which any visible particulate emissions were observed from the vacuum degasser steam ejector stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate any visible particulate emissions. These reports shall be submitted to the Ohio EPA, Northeast District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

f) Testing Requirements

(1) Emission Limitation:

PM/PM10 emissions shall not exceed 0.34 pound per hour.

Applicable Compliance Method:

To determine the hourly particulate emission rate for the vacuum tank degasser the following equation may be used:

E = (A)(B)(1-C)

where:

E = particulate emissions (lb/hr)

A = 0.2 pound of PM/PM10/ton of steel produced emission factor (emission factor provided by permittee in PTI No. P0103995 application).

B = maximum hourly production, 172 tons/hr.

C = control efficiency of capture system, 99%.

If required by the Ohio EPA, compliance with the particulate emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 5.

(2) Emission Limitations:

PE/PM10 emissions shall not exceed 1.4 tons per year.

PM/PM10 emissions shall not exceed 1.4 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

To determine the annual particulate emissions rate for the vacuum tank degasser the following equation shall be used:

E = (A)(B)(1-C)/D

where:

A = annual liquid steel produced based upon the record keeping requirements specified in d)(1) above, in tons/year.

B = 0.2 pound of PM/PM10/ton of steel produced emission factor (emission factor provided by permittee in PTI No. P0103995 application).

C = control efficiency of capture system, 99%.

D = 2000 lbs/ton.

(3) Emission Limitation:

CO shall not exceed 34.4 pounds per hour.

Applicable Compliance Method:

To determine the hourly CO emission rate for the vacuum tank degasser the following equation may be used:

E = (A)(B)

E = (tons of steel/hour) (0.20 pound of CO/ton steel)

where:

E = CO emissions (lb/hr).

A = 0.2 pound of CO/ton of steel produced emission factor (emission factor provided by permittee in PTI No. P0103995 application).

B = maximum hourly production, 172 tons/hr.

If required by the Ohio EPA, compliance with the CO emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 10.

(4) Emission Limitations:

CO emissions shall not exceed 140 tons per year.

CO emissions shall not exceed 140 tons per year based upon a rolling 12-month summation.

Applicable Compliance Method:

To determine the annual CO emissions rate for the vacuum tank degasser the following equation shall be used:

E = (A)(B)/C

E = (tons of steel/year) (0.2 pound of CO/ton steel) (1 ton/2000 pounds)

where:

E = CO emissions (tons/yr).

A = 0.2 pound of CO/ton of steel produced emission factor (emission factor provided by permittee in PTI No. P0103995 application).

B = annual liquid steel produced based upon the record keeping requirements specified in d)(1) above, in tons/year.

C = 2000 lbs/ton.

(5) Emission Limitation:

Visible particulate emissions from the vacuum tank degasser steam ejector stack shall not exhibit twenty (20) percent opacity or greater as a six-minute average.

Applicable Compliance Method:

Compliance with the visible emission limitation shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(1) of OAC rule 3745-17-03.

(6) Emission Limitation

Visible particulate emissions of fugitive dust from the operation of the vacuum tank degasser shall not exhibit twenty (20) percent opacity or greater as a three-minute average.

Applicable Compliance Method:

Compliance with the visible emission limitation shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

g) Miscellaneous Requirements

(1) None.

13. P025, Cooling Tower 7/8

Operations, Property and/or Equipment Description:

Cooling Water Tower with contact and non-contact cells, Cooling Tower 7/8, FQM Contact Water

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 operations(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. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-10 through OAC rule 3745-31-20	PM/PM10 emissions shall not exceed 0.75 lb/hour and 3.29 tons/year based upon a rolling 12-month summation. The permittee shall install a drift eliminator with a maximum drift rate of 0.005% by weight, onto this emissions unit. All PM/PM10 are considered filterable PM. Visible particulate emissions shall not exceed 10% opacity as a 6-minute average. The presence of condensed water vapor shall not deemed a violation for failure of stack emissions meeting this visible emission limitation. See b)(2)a.
b.	OAC rule 3745-05(A)(3)(a)(ii)	See b)(2)b.
c.	OAC rule 3745-17-07(A)(1)	See b)(2)c.
d.	OAC rule 3745-17-11	See b)(2)c.

(2) Additional Terms and Conditions

a. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of high efficiency integral drift eliminators with drift performance of 0.005% of the circulating water flow rate constitute BACT for this emissions unit. The emission limitations are based on the BACT requirements listed under OAC rule 3745-31-(10) thru (20) above.

b. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled PE/PM10 emissions from this air contaminant source since the potential to emit for PE/PM10 is less than ten tons per year.

c. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-10 thru 20.

d. The provisions of 40 CFR Part 63, Subpart Q, apply to all new and existing industrial process cooling towers that are operated with chromium-based water treatment chemicals and are either major sources or are integral part of facilities that are major sources as defined in 40 CFR 63.401. Since chromium-based water treatment chemicals will not be used in this emissions unit, the provisions of this subpart do not apply to this emissions unit.

c) Operational Restrictions

(1) The water flow through the cooling tower shall not exceed 1,800,000 gallons per hour.

(2) The permittee shall not use chromium-based water treatment chemicals in this emissions unit.

d) Monitoring and/or Recordkeeping Requirement

(1) The permittee shall properly operate and maintain equipment to monitor the cooling tower water flow rate. The monitoring device(s) and any recorders shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

(2) The permittee shall monitor and record the cooling tower water flow rate, in gallons per hour, at a minimum frequency of once per day.

(3) The permittee shall sample the cooling tower water at a minimum frequency of once per week and average the weekly values to demonstrate compliance with the monthly average total dissolved solids (TDS) limitation of 1,000 parts per million.

(4) Each cooling tower water sample shall be collected from the discharge side of the water delivery system. The sample shall be collected in a clean plastic bottle. The concentration of total dissolved solids in each sample shall be determined according to section 209(C), "Standard Methods for the Examination of Water and Wastewater," fifteenth edition, using a drying temperature between one hundred three and one hundred five degrees Celsius.

(5) The permittee shall maintain records of the results of the total dissolved solids analysis for each cooling tower water sample, and of the calculated average concentration for each month.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify all days during which the cooling tower water flow rate exceeded 1,800,000 gallons per hour.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify all months during which the monthly average concentration of total dissolved solids (TDS) in the cooling tower water exceeded 1,000 parts per million.

f) Testing Requirements

(1) Emission Limitation:

PM/PM10 emissions shall not exceed 0.75 lb per hour.

Applicable Compliance Method:

Compliance shall be determined by using the following equation:

E = (A)(B)(C) / 1X10E6 (D) / 100

where:

E= PM/PM10 hourly emission rate, in pounds.

A= 1,800,000 gal/hr, maximum cooling tower circulating water rate.

B= collected sample with the highest concentration of total dissolved solids (TDS) in circulating water (PPM by weight), based upon the record keeping requirements specified in d)(5) of this permit.

C= 0.005% drift loss of circulating water (emission factor provided by permittee in PTI No. P0103995 application).

D = 8.34 lbs/gal, density of water.

(2) Emission Limitation:

PM/PM10 emissions shall not exceed 3.29 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance shall be determined by using the following equation:

E = (A)(B)(C)(D) / 100 (8760/2000)

where:

E= PM/PM10 hourly emission rate, in pounds.

A= 1,800,000 gal/hr, maximum cooling tower circulating water rate.

B= collected sample with the highest concentration of total dissolved solids (TDS) in circulating water (PPM by weight), based upon the record keeping requirements specified in d)(5) of this permit.

C= 0.005% drift loss of circulating water (emission factor provided by permittee in PTI No. P0103995 application).

D = 8.34 lbs/gal, density of water.

(3) Emission Limitation:

Visible particulate emissions from any stack shall not exceed 10% opacity as a six-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60 (“Standards of Performance for New Stationary Sources”), Appendix A, U.S. EPA Reference Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

g) Miscellaneous Requirements

(1) None.

14. P026, Cooling Tower 1

Operations, Property and/or Equipment Description:

If Option 1 is chosen, the cooling tower will consist of four cells. One will be contact (designated as 1a) and three will be non-contact cells (designated as 1b). If Option 2 is chosen, the cooling tower will consist of 10 cells and the existing cooling towers 2 (P007) and 2a (Z054) will be removed. Seven cells will be non-contact and three will be contact. The six additional cells will be designated 1c. The emissions reflect this option because of the greater emissions.

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 operations(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. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-10 through OAC rule 3745-31-20	Scenario No. 1: with 4 cells PM/PM10 emissions shall not exceed 0.50 lb/hour and 2.19 tons/year based upon a rolling 12-month summation. Scenario No. 2: with10 cells PM/PM10 emissions shall not exceed 1.25 lbs/hour and 5.48 tons/year based upon a rolling 12-month summation (due to the addition of 6 cells). The permittee shall install a drift eliminator with a maximum drift rate of 0.005% by weight, onto this emissions unit. All PM/PM10 are considered filterable PM. See b)(2)a. and b)(2)b. Visible particulate emissions shall not exceed 10% opacity as a 6-minute average. The presence of condensed

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		water vapor shall not deemed a violation for failure of stack emissions meeting this visible emission limitation.
b.	OAC rule 3745-05(A)(3)(a)(ii)	See b)(2)c.
c.	OAC rule 3745-17-07(A)(1)	See b)(2)d.
d.	OAC rule 3745-17-11	See b)(2)d.

(2) Additional Terms and Conditions

a. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of high efficiency integral drift eliminators with drift performance of 0.005% of the circulating water flow rate constitute BACT for this emissions unit. The emission limitations are based on the BACT requirements listed under OAC rule 3745-31-(10) thru (20) above.

b. This emissions unit (P026) has two operating scenarios:

i. Scenario No. 1:

Emissions units P024 (VTD), F003 (caster), and P909 (LMF) will be installed at the new refining and casting facilities and will require the installation of a new cooling tower (P026) with 4 individual cells. One of the cells will be a contact cooling water cell which will service emissions unit P024. The remaining three cells will be non-contact cooling water cells which will service P909. The maximum water flow rates for contact and non-contact cooling water cells are 300,000 gal/hr and 900,000 gal/hr, respectively. The electric arc furnace (P905) will remain at its current location.

ii. Scenario No. 2:

The permittee may, in the future, opt to install a separate electric arc furnace (P910), as a replacement to emissions unit P905, at the new refining and casting facilities. This will completely relocate all melt shop operations to the new refining and casting facilities. This will require, in addition to the 4 individual cells specified in scenario no. 1, the installation of 6 non-contact cooling water cells. The 6 non-contact cooling water cells will service P910. The maximum water flow rates for contact and non-contact cooling water cells are 2,700,000 gal/hr and 300,000 gal/hr, respectively. Emissions units P007 and Z054 will be decommissioned under this scenario.

c. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled PE/PM10 emissions from this air contaminant source since the potential to emit for PE/PM10 is less than ten tons per year.

d. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-10 thru 20.

e. The provisions of 40 CFR Part 63, Subpart Q, apply to all new and existing industrial process cooling towers that are operated with chromium-based water treatment chemicals and are either major sources or are integral part of facilities that are major sources as defined in 40 CFR 63.401. Since chromium-based water treatment chemicals will not be used in this emissions unit, the provisions of this subpart do not apply to this emissions unit.

c) Operational Restrictions

(1) For scenario no. 1: The water flow rate between the contact and non-contact cooling water through the cooling tower shall not exceed 1,200,000 gallons per hour.

(2) For scenario no. 2: The water flow rate between the contact and non-contact cooling water through the cooling tower shall not exceed 3,000,000 gallons per hour.

(3) The permittee shall not use chromium-based water treatment chemicals in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall properly operate and maintain equipment to monitor the cooling tower water flow rates. The monitoring device(s) and any recorders shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

(2) The permittee shall monitor and record the cooling tower water flow rates, in gallons per hour, at a minimum frequency of once per day.

(3) The permittee shall sample the cooling tower water at a minimum frequency of once per week and average the weekly values to demonstrate compliance with the monthly average total dissolved solids (TDS) limitation of 1,000 parts per million.

(4) Each cooling tower water sample shall be collected from the discharge side of the water delivery system. The sample shall be collected in a clean plastic bottle. The concentration of total dissolved solids in each sample shall be determined according to section 209(C), "Standard Methods for the Examination of Water and Wastewater," fifteenth edition, using a drying temperature between one hundred three and one hundred five degrees Celsius.

(5) The permittee shall maintain records of the results of the total dissolved solids analysis for each cooling tower water sample, and of the calculated average concentration for each month.

e) Reporting Requirements

(1) Under scenario no. 1, the permittee shall submit quarterly deviation (excursion) reports that identify all days during which the cooling tower water flow rate exceeded 1,200,000 gallons per hour.

(2) Under scenario no. 2, the permittee shall submit quarterly deviation (excursion) reports that identify all days during which the cooling tower water flow rate exceeded 3,000,000 gallons per hour.

(3) Under scenarios no. 1 and no. 2, the permittee shall submit quarterly deviation (excursion) reports that identify all months during which the monthly average concentration of total dissolved solids (TDS) in the cooling tower water exceeded 1,000 parts per million.

f) Testing Requirements

(1) Emission Limitation:

Scenario No. 1: PM/PM10 emissions shall not exceed 0.50 lb per hour.

Applicable Compliance Method:

Compliance shall be determined by using the following equation:

E = (A)(B)(C) / 1X10E6 (D) / 100

where:

E= PM/PM10 hourly emission rate, in pounds.

A= 1,200,000 gal/hr, maximum cooling tower circulating water rate.

B= collected sample with the highest concentration of total dissolved solids (TDS) in circulating water (PPM by weight), based upon the record keeping requirements specified in d)(5) of this permit.

C= 0.005% drift loss of circulating water (emission factor provided by permittee in PTI No. P0103995 application).

D = 8.34 lbs/gal, density of water.

(2) Emission Limitation:

Scenario No. 2: PM/PM10 emissions shall not exceed 1.25 lbs per hour.

Applicable Compliance Method:

Compliance shall be determined by using the following equation:

E = (A)(B)(C) / 1X10E6 (D) / 100

where:

E= PM/PM10 hourly emission rate, in pounds.

A= 3,000,000 gal/hr, maximum cooling tower circulating water rate.

B= collected sample with the highest concentration of total dissolved solids (TDS) in circulating water (PPM by weight), based upon the record keeping requirements specified in d)(5) of this permit.

C= 0.005% drift loss of circulating water (emission factor provided by permittee in PTI No. P0103995 application).

D = 8.34 lbs/gal, density of water.

(3) Emission Limitation:

Scenario No. 1: PM/PM10 emissions shall not exceed 2.19 tons per year.

Applicable Compliance Method:

Compliance shall be determined by using the following equation:

E = (A)(B)(C)(D) / 100 (8760/2000)

where:

E= PM/PM10 hourly emission rate, in pounds.

A= 1,200,000 gal/hr, maximum cooling tower circulating water rate.

B= collected sample with the highest concentration of total dissolved solids (TDS) in circulating water (PPM by weight), based upon the record keeping requirements specified in d)(5) of this permit.

C= 0.005% drift loss of circulating water (emission factor provided by permittee in PTI No. P0103995 application).

D = 8.34 lbs/gal, density of water.

(4) Emission Limitation:

Scenario No. 2: PM/PM10 emissions shall not exceed 5.48 tons per year.

Applicable Compliance Method:

Compliance shall be determined by using the following equation:

E = (A)(B)(C)(D) / 100 (8760/2000)

where:

E= PM/PM10 hourly emission rate, in pounds.

A= 3,000,000 gal/hr, maximum cooling tower circulating water rate.

B= collected sample with the highest concentration of total dissolved solids (TDS) in circulating water (PPM by weight), based upon the record keeping requirements specified in d)(5) of this permit.

C= 0.005% drift loss of circulating water (emission factor provided by permittee in PTI No. P0103995 application).

D = 8.34 lbs/gal, density of water.

(5) Emission Limitation:

Visible particulate emissions from any stack shall not exceed 10% opacity as a six-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), Appendix A, U.S. EPA Reference Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

g) Miscellaneous Requirements

(1) None.

15. P905, Electric Arc Furnace

Operations, Property and/or Equipment Description:

Single shell AC electric arc furnace (EAF) with roof canopy hood fume collection/direct evacuation control system and a 1,200,000 acfm fabric filter mono vent baghouse This emissions unit will be removed if the replacement EAF (P910) is installed pursuant to expansion Option 2.

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

(1) d)(8) through d)(11) and e)(7).

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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)	See b)(2)d, b)(2)e, and b)(2)h. The requirements of this rule also include compliance with the requirements of the VE limitations specified in 40 CFR Part 60, Subpart AAa. The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-10 thru 20 for PM/PM10, NOx, SO2, VOC, and CO.
b.	OAC rule 3745-17-11	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-10 through3745-31- 20.
c.	OAC rule 3745-17-07(A)(1) & (B)(3)	The visible emission limitations specified by these rules are less stringent than the visible emission limitation established pursuant to 40 CFR Part 60, Subpart AAa.
d.	OAC rule 3745-17-08	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	OAC rule 3745-18-06	The SO2 emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-10 through 3745-31-20.
f.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)i.
g.	OAC rule 3745-21-08	See b)(2)b.
h.	40 CFR Part 60, Subpart AAa	Visible particulate emissions from the baghouse shall not exhibit three (3) per cent opacity or greater as a six-minute average. Visible particulate emissions of fugitive dust from the electric arc furnace shop due to operation of the EAF shall not exhibit six (6) per cent opacity or greater as a six-minute average. The mass emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-10 through OAC rule 3745-31-20.
i.	OAC rule 3745-31-05 (D)	Pb emissions shall not exceed 1.18 tons per rolling 12-month for emissions units P905 and P909 combined (include stack and fugitive emissions). Note that incremental increase of less than 0.6 tons per year based upon restrictions listed in c)(1).
j.	OAC rule 3745-31-10 through OAC rule 3745-31-20	PM/PM10 emissions shall not exceed 0.0018 gr/dscf, 17.09 lbs/hr and 70.06 tons per year for emissions units P905, P908, and P909 combined (includes stack and fugitive emissions) based upon a rolling 12-month summation. All PM/PM10 are considered filterable PM. NOx emissions shall not exceed 68.8 lbs/hr and 280 tons per year for emissions units P905 and P909

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		combined based upon a rolling 12-month summation. CO emissions shall not exceed 688 lbs/hr and 2,800 tons per year for emissions units P905 and P909 combined based upon a rolling 12-month summation. SO2 emissions shall not exceed 43 lbs/hr and 175 tons per year for emissions units P905 and P909 combined based upon a rolling 12-month summation. VOC emissions shall not exceed 31 lbs/hr and 126 tons per year for emissions units P905 and P909 combined based upon a rolling 12-month summation. See b)(2)c.
k.	40 CFR Part 63, Subpart YYYYY (40 CFR Part 63.10681 -10692) [In accordance with 40 CFR 63.10680(a) and (b)(1), this emissions unit is an electric arc furnace (EAF) that is an area source of hazardous air pollutants (HAPs) and commenced construction on or before September 30, 2008.]	You must achieve compliance with the applicable provisions of 40 CFR Part 63, Subpart YYYYY by no later than June 30, 2008. You must achieve compliance with opacity limit in 40 CFR Part 63.10686(b)(2) or (c)(2) by no later than December 28, 2010.

(2) Additional Terms and Conditions

a. The requirement of this Permit to Install supersedes the requirements of PTI No. P0103660 issued on September 23, 2008

b. The permit has satisfied the "latest available control techniques and operating practices" required pursuant to 3745-21-08, respectively, by committing to comply with the best available technology requirements established in permit to install P0103995.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. On June 24, 2003, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available

control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

c. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of direct-shell evacuation control system (DEC system), good furnace melting practices and proper operation of the EAC oxy-fuel burners, acceptance of a PE limitation of 0.0018 gr/dscf, acceptance of a NOx limitation of 0.40 lb/ton of steel, acceptance of a SO2 limitation of 0.25 lb/ton of steel, acceptance of a VOC limitation of 0.18 lb/ton of steel, and acceptance of a CO limitation of 4.0 lbs/ton of steel produced constitute BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rules 3745-31-(10) thru (20) above.

d. The electric arc furnace shall be installed with a roof canopy hood fume collection system in addition to a direct evacuation control (DEC) system. These systems shall be capable of capturing a minimum of 99 percent of the generated emissions of particulate from the air contaminant source operation including charging, melting, refining, and tapping periods in the steel making cycle.

e. Particulate emissions captured by the fume collection systems for the electric arc furnace shall be exhausted to the EAF/LMF mono vent fabric filter control device.

f. The permittee shall follow the "Scrap Management Program" that was submitted to Ohio EPA, Northeast District Office (NEDO) and that was developed to minimize the use of scrap that contains extraneous materials such as oiled steel, pipes with residues and coatings, enameled materials, transmissions, shock absorbers, tinned materials, rubber, concrete, dirt, or wood that may contaminate the scrap charged into the EAF. The "Scrap Management Program" shall be viewed as part of the operational requirements for the EAF permit. Any change to the "Scrap Management Program" that would increase the amounts of these compounds in the scrap, or result in the emissions of an air contaminant not previously emitted, must be approved by the NEDO.

g. The values for either the fan motor amperes and damper position for each operating fan or the volumetric flow rate through each separately ducted hood, as determined during the most recent visible particulate emission compliance demonstration, shall be maintained at all times when the EAF is operating (40 CFR Part 60.274a(c)).

h. The control system fan motor amperes and all damper position, the volumetric flow rate through each separately ducted hood, or the volumetric flow rate at the control device inlet and all damper positions shall be determined during all periods in which a hood is operated for the purpose of capturing emissions from the affected facility subject to d)(4) of this permit. The owner or operator may petition the Administrator for reestablishment of these parameters whenever the owner or operator can demonstrate to the Administrator's satisfaction that the affected facility operating conditions upon which the parameters were previously established are no longer applicable. The values of these parameters as determined during the most recent demonstration of compliance shall be maintained at the appropriate level for each applicable period (40 CRF Part 60.274a(c).

i. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the lead (Pb) emissions from emissions units P905 and P909, combined, since the uncontrolled potential to emit for Pb is less than ten tons per year.

j. The scrap metals processed in this emissions unit is restricted to only those materials that comply with the scrap acquisition and inspection plan described in d)(7).

k. The permittee may, in the future, opt to install a separate electric arc furnace (P910) at the caster/VDT/LMF building. Should the new electric arc furnace get installed, upon startup of emissions unit P910, the permittee shall cease the liquid steel production from this emissions unit (P905).

c) Operational Restrictions

(1) The permittee shall restrict the annual liquid steel production to 1,400,000 tons per year, based upon a rolling 12-month summation of the production rates. This is an existing emissions unit which has existing records of the amount liquid steel production and therefore does not need to be restricted on a monthly basis.

(2) See 40 CFR Part 63, Subpart YYYYY (40 CFR Part 63.10681 -10692).

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information:

a. the hours of operation for each calendar month;

b. the liquid steel production rate for each calendar month;

c. the rolling, 12-month summation of the hours of operation;

d. the rolling, 12-month summation of the liquid steel production rates; and

e. the rolling, 12-month summation of the PM/PM10, VOC, CO, SO2, NOx and Pb emissions.

(2) Visible particulate emissions observations of the EAF/LMF mono vent positive pressure fabric filter baghouse shall occur at least once per day of operation. Observations shall occur when the EAF is operating in the melting and refining phase of a heat cycle. Additional observations shall be made during the electric arc heating phase of the LMF processing cycle. These observations shall be taken in accordance with Method 9 of 40 CFR Part 60, Appendix A, and shall include at least three six-minute periods during EAF melting and refining and at least one six-minute period of the LMF electric arc heating phase in the processing cycle. The opacity shall be recorded where the greatest opacity of the visible emissions from the vents are observed in accordance with the procedures listed in Method 9 of 40 CFR Part 60, Appendix A. Records shall be maintained of all the visible particulate emissions observed. (40 CFR Part 60 Subpart AAa requires these opacity observations.)

(3) The permittee shall perform observations of shop opacity by a certified visible emission observer in lieu of installing and maintaining a furnace static pressure monitoring device

on the DEC equipped EAF. Shop opacity observations shall be conducted at least once per day when the furnace is operating in the meltdown and refining period (40 CFR Part 60.273a (d)).

(4) The permittee shall either (a) check and record the fabric filter control system fan motor amperes and damper position for each of the operating fans on a once-per-shift basis ; (b) install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through each separately ducted hood; or (c) install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate at the control device inlet and check record damper positions on a once-per-shift basis. The monitoring device(s) shall be installed in a location in the exhaust duct such that reproducible flow rate data may be obtained. The flow rate monitoring device(s) shall have an accuracy of +/- 10 percent over its normal operating range and shall be calibrated according to the manufacturer's instructions. The permittee may be required to demonstrate the accuracy of the monitoring devices relative to Methods 1 and 2 of Appendix A of 40 CFR, Part 60. The values of these parameters as determined during the most recent visible particulate emission compliance demonstration shall be maintained at the appropriate levels for each applicable period. Operation at other than baseline values may be considered unacceptable operation and maintenance of the control system. The permittee may petition for reestablishment of these parameters whenever the permittee can demonstrate satisfactorily that the operating conditions upon which the parameters were previously established are no longer applicable.

Checking and recording of the pressure drop readings across the baghouse will not be required due to additional installation requirements of monitoring device(s), as specified in this section. OEPA, however, reserves the right to request pressure drop readings, if problems arise.

(5) The permittee shall perform monthly operational status inspections of the equipment that are important to the performance of the total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection shall include observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in the ductwork, and fan erosion). Any deficiencies shall be recorded and proper maintenance performed. The permittee may petition for the approval of an alternative to monthly operational status inspections that will provide a continuous record of the operation of each emission capture system.

(6) Shop opacity observations shall be conducted at least once per day for thirty minutes when the furnace is operating in the meltdown and refining period. (The "shop" is the building that houses the EAF.) Shop opacity shall be determined as the arithmetic average of 24 consecutive 15-second opacity observations of emissions from the shop taken in accordance with Method 9. Shop opacity shall be recorded for any point(s) where visible emissions are observed. Where it is possible to determine that a number of visible emission sites relate to only one incident of visible emissions, only one observation of shop opacity will be required. In this case, the shop opacity observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident. (40 CFR Part 60 Subpart AAa requires these shop opacity observations.) The shop opacity observations shall be taken at the shop roofline.

(7) The permittee shall develop and write a Scrap Management Plan (Plan) for the selection and inspection of iron and steel scrap received for charge in the EAF. This plan shall provide for and define effective procedures to eliminate or minimize, to the extent practicable, mercury and organics charged to the electric arc furnace. The Plan is subject to approval by Ohio EPA and must be submitted to Ohio EPA, Northeast District Office, within 90 days of permit issuance. A copy of the plan must be maintained onsite and made readily available to all plant personnel having materials acquisition or inspection duties. A copy of the material specifications must be provided to all scrap suppliers. The Plan, at a minimum, shall include the following components:

a. A materials acquisition program which shall include:

i. Specifications for the supplier/marketer of the scrap metals that will minimize organic contaminants and mercury from the scrap received for charge to the electric arc furnace. The plan, at a minimum, shall call for the identification and removal of the following materials:

used oil filters,

plastic parts,

organic liquids (transmission fluid, motor oil, etc.),

metal containers with residual organic liquids, and

free liquids.

This program shall be applicable for scrap charged to this emissions unit.

ii. Specifications for the supplier/marketer of automotive bodies requiring the removal of readily accessible mercury-containing devices from under the trunks and hoods and removal of lead components such as batteries and wheel weights.

A copy of the procedures used by the scrap supplier must be obtained and maintained onsite for either removing accessible mercury switches or for purchasing automobile bodies that have had readily accessible mercury switches removed, as applicable.

b. Procedures for visual inspection of scrap metals which shall include:

i. procedures to document the amount (by weight) of each shipment of scrap received and the estimated percent of each shipment inspected; a representative portion of not less than 10 percent of each shipment of scrap metal received for charge into any scrap preheater and the electric arc furnace shall be inspected for the specifications contained in "i." above;

ii. identification of the location(s) where inspections are to be performed for each type of shipment, which shall provide a reasonable vantage point for visual inspections, with the consideration of worker safety; and

iii. provisions for rejecting or returning entire or partial scrap shipments that do not meet specifications and, unless satisfactory corrective measures are taken, limiting purchases whose shipments fail to meet specifications. The Plan shall describe what corrective actions are acceptable and when purchases will be limited.

iv. Record keeping requirements which shall include the following for each shipment:

(a) the amount, date received, type of scrap, and the supplier/marketer or each shipment of scrap metal received;

(b) the amount of material inspected, the date of inspection, and the inspector's name;

(c) the results of the inspection on a shipment-by-shipment basis, to include a description and estimated amount of any material not meeting the specifications in "i" above and the marketer/supplier of the rejected scrap metals;

(d) documentation of the return or disposal of the material rejected during each inspection;

(e) certification, in writing, that each supplier/marketer of any scrap metals charged to this emissions unit has received the specifications of the Plan and agrees to these requirements; and

(f) documentation that each supplier/marketer of scrap metals charged to this emissions unit has removed required materials in i.(a) and i.(b) above; or if the materials are not readily accessible, a description as to why the material could not be removed.

Note that this term shall not supersede the provisions and compliance dates listed in 40 CFR Part 63, Subpart YYYYY (40 CFR Part 63.10681 -10692). The permittee is required to comply with the most stringent of the terms and sections of the term and the provisions of 40 CFR Part 63, Subpart YYYYY (40 CFR Part 63.10681 -10692) whichever the case maybe after the compliance dates of 40 CFR Part 63, Subpart YYYYY (40 CFR Part 63.10681 -10692) for this emissions unit.

The permittee shall update their Plan after the compliance dates of 40 CFR Part 63, Subpart YYYYY (40 CFR Part 63.10681-10692) for this emissions unit to include which terms are the most stringent, but no later than the compliance date listed in 40 CFR Part 63, Subpart YYYYY (40 CFR Part 63.10681 -10692) for this emissions unit for submitting the Scrap Management Plan listed in 40 CFR Part 63, Subpart YYYYY (40 CFR Part 63.10681-10692).

(8) The permit-to-install (PTI) application for this/these emissions units, P905 and P909, were evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee. The AToxic Air Contaminant Statute@, ORC 3704.03(F), was applied to these emissions units for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit

application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled AReview of New Sources of Air Toxic Emissions, Option A@, as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

   i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists= (ACGIH) AThreshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices@; or

   ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists= (ACGIH) AThreshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices@; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., A**X**@ hours per day and A**Y**@ days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

   TLV/10 x 8/X x 5/Y = 4 TLV/XY = MAGLC

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or Aworst case@ toxic contaminant(s):

   Toxic Contaminant: Zinc Oxide

   TLV (mg/m3): 10

   Maximum Hourly Emission Rate (lbs/hr): 2.80

   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 9.69

   MAGLC (ug/m3): 238.10

The permittee, has demonstrated that emissions of Zinc Oxide, from emissions unit(s) P906 and P909, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the AToxic Air Contaminant Statute@, ORC 3704.03(F).

(9) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration@, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and

c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the AToxic Air Contaminant Statute@ will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the AToxic Air Contaminant Statute@, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a “modification”, the permittee shall apply for and obtain a final PTI, PTIO, or FEPTIO (as applicable) prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

(10) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the AToxic Air Contaminant Statute@, ORC 3704.03(F):

a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the AToxic Air Contaminant Statute@, ORC 3704.03(F);

c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the AToxic Air Contaminant Statute@, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

d. the documentation of the initial evaluation of compliance with the AToxic Air Contaminant Statute@, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

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

(12) See 40 CFR Part 63, Subpart YYYYY (40 CFR Part 63.10681 -10692).

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month liquid steel production rate limitation and, for the first 12 calendar months of operation following start-up, all exceedances of the allowable cumulative liquid steel production levels for this emissions unit.

(2) The permittee shall submit deviation (excursion) reports that identify all exceedances of the visible particulate emission limit for the fabric filter control device. For the purpose of these reports, an exceedance is defined as any six-minute period during which the average opacity is three percent or greater.

(3) The permittee shall submit deviation (excursion) reports that identify all exceedances of the fugitive visible particulate emission limit for the electric arc furnace shop. For the purpose of these reports, an exceedance is defined as any six-minute period during which the average opacity is six percent or greater.

(4) The permittee shall submit deviation (excursion) reports that identify either operation of control system fan motor amperes at values exceeding + or - 15 percent of the value established during the most recent demonstration of compliance or operation at volumetric flow rates lower than those established during the compliance demonstration, when the EAF was operating (40 CFR Part 60.276a(c)).

(5) The permittee shall submit deviation (excursion) reports that identify all instances when any portion of the Scrap Management Plan was not followed or the information required to be documented was not recorded.

(6) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month summation of the PM/PM10, VOC, CO, SO2, NOx and Pb emissions.

(7) The permittee shall submit annual reports to the appropriate Ohio EPA District Office or local air agency, documenting any changes made to a parameter or value used in the

dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

(8) See 40 CFR Part 63, Subpart YYYYY (40 CFR Part 63.10681 -10692).

f) Testing Requirements

(1) Emission Limitation:

PM/PM10 emissions shall not exceed 0.0018 grains per dry standard cubic foot for emissions units P905, P908, and P909, combined.

Applicable Compliance Method:

Compliance shall be determined by emission testing as specified in f)(15).

(2) Emission Limitation:

PM/PM10 emissions shall not exceed 17.09 pounds per hour (includes stack and fugitive emissions) for emissions units P905, P908, and P909, combined.

Applicable Compliance Method:

To determine the hourly particulate emission rate for P905, P908 and P909 (combined), the following equations shall be used:

a. E1(emissions from baghouse) = (980,000 dscfm) (tested emission rate in gr/scf) (1 pound/7000 grains) (60 minutes/hr)

where:

E1 = particulate emissions from baghouse (lbs/hour).

980,000 dscfm = maximum baghouse flow rate.

b. E2 (fugitive emissions) = (tons of steel produced/hour) (1.4 pounds PE/ton of steel) (1-0.99)(0.76)

where:

E2 = fugitive particulate emissions (lbs/hour)

1.4 pounds PE/ton steel = emission factor (AP-42 Section 12.5, Table 12.5-1, electric arc furnace charging, tapping, and slagging, Iron and Steel Production, 10/86)

0.99 = capture efficiency for direct evacuation fume collection system

0.76 = fraction of total PM emissions assumed to be PM10 (factor supplied by the company in the application for PTI 02-22398 and is based upon a test of a similar EAF at CSC).

c. E3 (emissions from additive, alloy, flux handling, & silos) = A*B

Where:

E3 = particulate emissions from additive, alloy, flux handling, & silos (lbs/hr)

A = alloy, additives, flux handling, and silos emission factor, 8.0 E-04 lb/ton (emission factor provided by facility)

B = maximum material throughput per hour, 172 tons/hr.

d. E total = E1 + E2 + E3

where:

E total = total hourly PM10 emissions from P908, P909, and P905 or P910, combined (lbs/hour)

E1 = particulate emissions from baghouse (lbs/hour)

E2 = fugitive particulate emissions (lbs/hour)

E3 = particulate emissions from additive, alloy, flux handling, & silos (lb/hour).

If required by the Ohio EPA, compliance with the PM/PM10 emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 5D.

(3) Emission Limitation:

PM/PM10 emissions shall not exceed 70.06 tons per year (includes stack and fugitive emissions) for emissions units P908, P909, and P905 or, if installed in the future as a replacement to P905, P910, combined.

Applicable Compliance Method:

To determine the annual particulate emission rate for P905, P908 and P909 (combined), the following equations shall be used:

a. E1(stack emissions) = (980,000 dscfm) (tested emission rate in gr/scf) (1 pound/7000 grains) (60 minutes/hr) (actual hours of operation/year) (1 ton/2000 pounds)

where:

E1 = particulate emissions from baghouse (tons/year)

980,000 dscfm = maximum baghouse flow rate.

b. E2 (fugitive emissions) = (tons of steel produced/year) (1.4 pounds PE/ton of steel)(1-0.99) (1 ton/2000 pounds)(0.76)

where:

E2 = fugitive particulate emissions (tons/year)

1.4 pounds PE/ton steel = emission factor (AP-42 Section 12.5, Table 12.5-1, electric arc furnace charging, tapping, and slagging, Iron and Steel Production, 10/86)

0.99 = capture efficiency for direct evacuation fume collection system

0.76 = fraction of total PE emissions assumed to be PM10 (factor supplied by the company in the application for PTI 02-22398 and is based upon a test of a similar EAF at CSC).

c. E3 (emissions from additive, alloy, flux handling, & silos) = A*B/2000 lbs

Where:

E3 = particulate emissions from additive, alloy, flux handling, & silos (tons/year)

A = alloy, additives, and flux handling system's emission factor, 8.0 E-04 lb/ton

B = maximum material throughput per year, 1,400,000 tons.

d. E total = E1 + E2 + E3

where:

E total = total annual PM/PM10 emissions from P905 and P906, combined (tons/year)

E1 = particulate emissions from baghouse (tons/year)

E2 = fugitive particulate emissions (tons/year)

E3 = particulate emissions from additive, alloy, flux handling, & silos.

(4) Emission Limitation:

NOx emissions shall not exceed 68.8 pounds per hour and 0.40 pound per ton of steel (includes stack and fugitive emissions) for emissions units P905 and P909, combined.

Applicable Compliance Method:

If required by the Ohio EPA, compliance with the NOx emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 7 or 7E.

(5) Emission Limitation:

NOx emissions shall not exceed 280 tons per rolling 12-month period (includes stack and fugitive emissions) for emissions units P905 and P909, combined.

Applicable Compliance Method:

To determine the yearly NOx emission rate for P905 and P906 (combined), the following equation shall be used:

E = (0.40 pound NOx/ton of steel) (tons of steel produced/yr) (1 ton/2000 pounds)

where:

E = NOx emissions (tons/yr)

0.40 pound NOx/ton of steel = permit allowable emission rate for NOx.

(6) CO emissions shall not exceed 688 pounds per hour and 4.0 pounds per ton of steel (includes stack and fugitive emissions) for emissions units P905 and P909, combined.

Applicable Compliance Method:

If required by the Ohio EPA, compliance with the CO emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 10.

(7) Emission Limitation:

CO emissions shall not exceed 2,800 tons per rolling 12-month period (includes stack and fugitive emissions) for emissions units P905 and P909, combined.

Applicable Compliance Method:

To determine the annual CO emission rate for emissions units P905 and P906 (combined), the following equation shall be used:

E = (4.0 pounds CO/ton of steel) (tons of steel produced/year) (1 ton/2000 pounds)

where:

E = CO emissions (tons/yr)

4.0 pounds CO/ton of steel = permit allowable emission rate for CO.

(8) Emission Limitation:

SO2 emissions shall not exceed 43 pounds per hour and 0.25 pound per ton of steel (includes stack and fugitive emissions) for emissions units P905 and P909, combined.

Applicable Compliance Method:

If required by the Ohio EPA, compliance with the SO2 emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 6 or 6C.

(9) Emission Limitation:

SO2 emissions shall not exceed 175 tons per rolling 12-month period (includes stack and fugitive emissions) for emissions units P905 and P909, combined.

Applicable Compliance Method:

To determine the annual SO2 emission rate for P905 and P909 (combined), the following equation shall be used:

E = (0.25 pound SO2/ton of steel) (tons of steel produced/year) (1 ton/2000 pounds)

where:

E = SO2 emissions (tons/yr)

0.25 pound SO2/ton of steel = permit allowable emission rate for SO2.

(10) Emission Limitation:

VOC emissions shall not exceed 31 pounds per hour and 0.18 pound per ton of steel (includes stack and fugitive emissions) for emissions units P905 and P909, combined.

Applicable Compliance Method:

If required by the Ohio EPA, compliance with the VOC emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Methods 18, 25 or 25A.

(11) Emission Limitation:

VOC emissions shall not exceed 126 tons per rolling 12-month period (includes stack and fugitive emissions) for emissions units P905 and P909, combined.

Applicable Compliance Method:

To determine the annual VOC emission rate for P905 and P909 (combined), the following equation shall be used:

E = (0.18 pound VOC/ton of steel) (tons of steel produced/year) (1 ton/2000 pounds)

where:

E = VOC emissions (ton/yr)

0.18 pound VOC/ton of steel = permit allowable emission rate for VOC.

(12) Emission Limitation:

Pb emissions shall not exceed 1.18 tons per rolling 12-month period (includes stack and fugitive emissions) for emissions units P905 and P909, combined.

Applicable Compliance Method:

To determine the annual Pb emission rate for the EAF the following equation shall be used:

E = (E total /yr) (0.017)

where:

E = Pb emissions (tons/yr)

E total /yr = total annual PM/PM10 emissions from EAF, as determined in f)(3).

0.017 = the average Pb content of the baghouse dust, as a weight fraction.

(13) Emission Limitation:

Visible particulate emissions of fugitive dust from the electric arc furnace shop due to operation of the EAF shall not exhibit six (6) percent opacity or greater as a six-minute average.

Applicable Compliance Method:

Compliance with the allowable visible emissions limitations shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures in OAC rule 3745-17-03.

(14) Emission Limitation:

Visible particulate emissions from the baghouse shall not exhibit three (3) percent opacity or greater as a six-minute average.

Applicable Compliance Method:

Compliance with the visible emission limitation for the operation(s) identified above shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

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

a. The emission testing shall be conducted within 3 months after startup of this emissions unit.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for PM/PM10, NO_X, CO, VOC, and SO_2.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

PM/PM10 - Method 5D of 40 CFR Part 60, Appendix A

NO_X - Method 7, 7E of 40 CFR Part 60, Appendix A

CO - Method 10 of 40 CFR Part 60, Appendix A

VOC - Method 18, 25, or 25A of 40 CFR Part 60, Appendix A

SO_2 - Method 6A of 40 CFR Part 60, Appendix A

d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

(1) None.

16. P907, Alloy, Additives and Flux Handling

Operations, Property and/or Equipment Description:

Alloy, additives, and flux handling system (with three storage silos [for flux and ladle carbon] equipped with bin vents, six alloy trim vents, and five alloy batch holding bins). This emissions unit will be removed from service if EAF (P910) is installed in the future.

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 operations(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. 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 (E)	See b)(2)h. below.
b.	OAC rule 3745-31-10 through OAC rule 3745-31-20	PM/PM10 emissions shall not exceed 0.01 gr/dscf, 0.14 pound per hour, and 0.56 ton per year (includes stack and fugitive emissions) based upon a rolling 12-month summation. All PM/PM10 are considered filterable PM. See b)(2)b. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-17-07(B)(1), and 3745-17-08.
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the stack shall not exceed twenty-percent opacity, as a six-minute average, except as provided by the rule.
d.	OAC rule 3745-17-07(B)(1)	Visible particulate emissions from fugitive dust source shall not exceed twenty-percent opacity as a three-minute average, except as provided by the rule.
e.	OAC rule 3745-17-08	See b)(2)c. thru g. below.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	OAC rule 3745-17-11	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-10 thru 20.

(2) Additional Terms and Conditions

a. The requirement of this Permit to Install supersedes the requirements of PTI No. P0103660 issued on September 23, 2008

b. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of a silo bin vent filter with an emission limitation of 0.01 gr/dscf of exhaust gases constitutes BACT for this emissions unit. The emission limitations based on the BACT requirements are listed under OAC rules 3745-31-10 thru 20 above.

c. The flux and ladle carbon are transferred pneumatically to storage. The pneumatic system shall be adequately enclosed so as to eliminate, at all times, visible emissions of fugitive dust. Any visible emissions of dust emanating from the delivery vehicle shall be cause for the immediate halt of the unloading process and the refusal of the material load until the situation is corrected.

d. The flux and ladle carbon silos shall be adequately enclosed and vented to bin vent fabric filters. The enclosures shall be sufficient to eliminate, at all times, any visible emissions of fugitive dust from the enclosure.

e. Alloys, additives, and charge carbon are dumped into a receiving hopper. The receiving hopper shall be enclosed on all sides with an opening for the truck. At the opening, overlapping plastic sheets shall be draped to allow for passage of the truck while maintaining the enclosure.

f. The six alloy storage bins shall be loaded by an enclosed conveyor. The six alloy trim bins shall be loaded by means of an enclosed conveyor and a movable hopper. The five alloy batch holding bins shall be loaded by means of an enclosed conveyor and a rotary loading spout. After loading, the storage bins, trim bins, and batch holding bins shall be covered. The enclosures shall be sufficient to minimize, at all times, visible emissions of fugitive dust at all transfer points.

g. The permittee shall make certain that all emissions from the silos shall be vented to the respective silo bin vent control devices.

h. Permit to install P0103995 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purposes of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3);

i. the annual liquid steel production of 1,400,000 tons per year; and

ii. silo bin vent filter(s) for PM/PM10.

i. The permittee may, in the future, opt to install a separate electric arc furnace (P910) at the caster/VDT/LMF building. Should the new electric arc furnace get installed, upon startup of the new electric arc furnace, the permittee shall cease the operation of this emissions unit (P907).

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the quantities of all alloys, additives, and flux materials received during each calendar year. The records may be maintained in computerized form.

(2) The permittee shall maintain records of all the time periods when the silos were not vented to the silo bin vent control devices.

(3) The permittee shall perform weekly checks when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from any non-stack egress point (e.g., windows, doors, roof monitors, conveyors, hopper, etc.) and/or from the storage silo bin vents associated with this emissions unit. The presence or absence of any visible particulate emissions shall be noted in an operations log. An EPA Method 9 opacity analysis shall be required upon OEPA request, but is not required for the daily or weekly visible emissions checks. If visible particulate emissions are observed, the permittee shall also note the following in the operations log:

a. the 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.

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports which identify all time periods when the silos were not vented to the silo bin vent control devices. These reports shall be submitted by January 31 and July 31 of each year and shall cover the previous 6-month period.

(2) The permittee shall submit semiannual written reports which:

a. identify all days during which any visible particulate emissions were observed from any non-stack egress point and/or the storage silo bin vents associated with 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.

f) Testing Requirements

(1) Emission Limitation:

PM/PM10 emissions shall not exceed 0.01 grain per dry standard cubic foot of exhaust gases from the storage silo bin vents.

Applicable Compliance Method:

If required by the Ohio EPA, compliance with the particulate emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures in OAC rule 3745-17-03.

(2) Emission Limitation:

PM/PM10 emissions shall not exceed 0.14 pound per hour.

Applicable Compliance Method:

Compliance shall be determined by using company supplied emission factor of 8.0 E-04 lb per ton of liquid steel produced by 172 tons per hour of liquid steel produced.

(3) Emission Limitation:

PM/PM10 emissions shall not exceed 0.56 ton per year based upon a rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be determined by multiplying the alloy, additives, and flux handling system's emission factor of 8.0 E-04 lb/ton of PM/PM10 by the maximum material throughput per year of 1,400,000 tons, and dividing by 2000 lbs/ton.

(4) Emission Limitation:

Visible particulate emissions from the storage silo bin vent exhausts shall not exceed 20 percent opacity, as a six-minute average.

Applicable Compliance Method:

Compliance with the allowable visible emissions limitation shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures in OAC rule 3745-17-03 (B)(1).

(5) Emission Limitation:

Visible emissions of fugitive dust from the dumping of alloy and charge carbon into the receiving hopper shall not exceed 20 percent opacity, as a six-minute average.

Applicable Compliance Method:

Compliance with the allowable visible emissions limitation shall be determined in accordance with 40CFR Part 60, Appendix A, Method 9 and the procedures in OAC rule 3745-17-03 (B)(3).

(6) Emission Limitation:

Visible emissions of fugitive dust from the alloy handling operations (i.e., the storage bins, trim bins, and batch holding bins) shall not exceed 20 percent opacity, as a six-minute average.

Applicable Compliance Method:

Compliance with the allowable visible emissions limitation shall be determined in accordance with 40CFR Part 60, Appendix A, Method 9 and the procedures in OAC rule 3745-17-03 (B)(3).

g) Miscellaneous Requirements

(1) None.

17. P908, LMF AAFL Handling

Operations, Property and/or Equipment Description:

Ladle Metallurgy Furnace Alloy, Additives, Flux, and Lime Handling, exhausts to EAF/LMF 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 operations(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. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-10 through OAC rule 3745-31-20	PM/PM10 emissions shall not exceed 0.0018 gr/dscf, 17.09 lbs/hr and 70.06 tons per year for emissions units P908, P909, and P905 or, if installed in the future as a replacement to P905, P910 combined (includes stack and fugitive emissions) based upon a rolling 12-month summation. All PM/PM10 are considered filterable PM. See b)(2)c. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-17-07(B)(1), and 3745-17-08.
b.	OAC rule 3745-17-07(A)(1)	See b)(2)g.
c.	OAC rule 3745-17-07(B)(1)	Visible particulate emissions from fugitive dust source shall not exceed twenty-percent opacity as a three-minute average, except as provided by the rule.
d.	OAC rule 3745-17-08	See b)(2)d. thru f. below.
e.	OAC rule 3745-17-11	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		rules 3745-31-10 thru 20.

(2) Additional Terms and Conditions

a. The permittee may, in the future, opt to install a separate electric arc furnace (P910) at the caster/VDT/LMF building. Should this new electric arc furnace get installed, the permittee will incorporate three storage silos into this emissions unit (P908). The addition of three storage silos is necessary to hold additional materials that will be added into the scrap charge.

b. Particulate emissions from this emissions unit were evaluated as though P908 was already equipped with three storage silos. Therefore, it is not necessary to evaluate the incremental increase of particulate emissions from the three storage silos, if installed in the future.

c. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of bulk material bin system, with an emission limitation of 0.0018 gr/dscf of exhaust gases, and the use of silo bin vent filters, with an emission limitation of 0.005 gr/dscf of exhaust gas, constitute BACT for this emissions unit. The emission limitations based on the BACT requirements are listed under OAC rules 3745-31-10 thru 20 above.

d. Alloys, additives, and charge carbon are dumped into a receiving hopper. The receiving hopper shall be enclosed on all sides with an opening for the truck. At the opening, overlapping plastic sheets shall be draped to allow for passage of the truck while maintaining the enclosure.

e. The alloy batch holding bins shall be loaded by means of an enclosed belt conveyor and a rotary loading spout or shuttle conveyor for bin loading. After loading, the storage bins, trim bins, and batch holding bins shall be covered. The enclosures shall be sufficient to minimize, at all times, visible emissions of fugitive dust at all transfer points.

f. The permittee shall make certain that all emissions from the silos shall be vented to the respective silo bin vent control devices.

g. Pursuant to OAC rule 3745-17-07(A)(1), this emissions unit is subject to a visible emission limit of 20% opacity, as a six-minute average, from the baghouse vents. Since particulate emissions from this emissions unit exhaust through the positive pressure baghouse, along with the emissions from P909 and P905 or, if installed in the future as a replacement to P905, emissions unit P910, and these units are subject to a much more stringent visible emission limitation of three (3) percent, as a six-minute average, this emissions unit (P908), therefore, will default to the much more stringent opacity limitation of three (3) percent, as a six-minute average.

h. The hourly emission limitation listed in b)(1) is based upon the potential to emit of this emissions unit and therefore no record keeping and reporting requirements of this limitation is necessary.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the quantities of all alloys, additives, and flux materials received during each calendar year. The records may be maintained in computerized form.

(2) The permittee shall maintain records of all the time periods when the silos were not vented to the silo bin vent control devices.

(3) The permittee shall perform weekly checks when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from any non-stack egress point (e.g., windows, doors, roof monitors, conveyors, hopper, etc.) and/or from the storage silo bin vents associated with this emissions unit. The presence or absence of any visible particulate emissions shall be noted in an operations log. An EPA Method 9 opacity analysis shall be required upon OEPA request, but is not required for the daily or weekly visible emissions checks. If visible particulate emissions are observed, the permittee shall also note the following in the operations log:

a. the 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.

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports which identify all time periods when the silos were not vented to the silo bin vent control devices. These reports shall be submitted by January 31 and July 31 of each year and shall cover the previous 6-month period.

(2) The permittee shall submit semiannual written reports which:

a. identify all days during which any visible particulate emissions were observed from any non-stack egress point and/or the storage silo bin vents associated with 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.

f) Testing Requirements

(1) Emission Limitation:

PM/PM10 emissions shall not exceed 0.0018 grains per dry standard cubic foot for emissions units P908, P909, and P905 or, if installed in the future as a replacement to P905, P910, combined.

Applicable Compliance Method:

If required by the Ohio EPA, compliance with the PM/PM10 emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 5.

(2) Emission Limitation:

PM/PM10 emissions shall not exceed 17.09 pounds per hour (includes stack and fugitive emissions) for emissions units P908, P909, and P905 or, if installed in the future as a replacement to P905, P910, combined.

Applicable Compliance Method:

To determine the hourly particulate emission rate for P908, P909, and P905 or P910 (combined), the following equations shall be used:

a. E1(emissions from baghouse) = (980,000 dscfm) (tested emission rate in gr/scf) (1 pound/7000 grains) (60 minutes/hr)

where:

E1 = particulate emissions from baghouse (lbs/hour).

980,000 dscfm = maximum baghouse flow rate.

b. E2 (fugitive emissions) = (tons of steel produced/hour) (1.4 pounds PE/ton of steel) (1-0.99)(0.76)

where:

E2 = fugitive particulate emissions (lbs/hour)

1.4 pounds PE/ton steel = emission factor (AP-42 Section 12.5, Table 12.5-1, electric arc furnace charging, tapping, and slagging, Iron and Steel Production, 10/86)

0.99 = capture efficiency for direct evacuation fume collection system

0.76 = fraction of total PM emissions assumed to be PM10 (factor supplied by the company in the application for PTI 02-22398 and is based upon a test of a similar EAF at CSC).

c. E3 (emissions from additive, alloy, flux handling, & silos) = A*B

Where:

E3 = particulate emissions from additive, alloy, flux handling, & silos (lbs/hr)

A = alloy, additives, flux handling, and silos emission factor, 8.0 E-04 lb/ton (emission factor provided by facility)

B = maximum material throughput per hour, 172 tons/hr.

d. E total = E1 + E2 + E3

where:

E total = total hourly PM10 emissions from P908, P909, and P905 or P910, combined (lbs/hour)

E1 = particulate emissions from baghouse (lbs/hour)

E2 = fugitive particulate emissions (lbs/hour)

E3 = particulate emissions from additive, alloy, flux handling, & silos (lb/hour).

(3) Emission Limitation:

PM/PM10 emissions shall not exceed 70.06 tons per year (includes stack and fugitive emissions) for emissions units P908, P909, and P905 or, if installed in the future as a replacement to P905, P910, combined.

Applicable Compliance Method:

To determine the annual particulate emission rate for P905, P908 and P909 or, if installed in the future as a replacement to P905, P910, (combined), the following equations shall be used:

a. E1(stack emissions) = (980,000 dscfm) (tested emission rate in gr/scf) (1 pound/7000 grains) (60 minutes/hr) (actual hours of operation/year) (1 ton/2000 pounds)

where:

E1 = particulate emissions from baghouse (tons/year)

980,000 dscfm = maximum baghouse flow rate

b. E2 (fugitive emissions) = (tons of steel produced/year) (1.4 pounds PE/ton of steel)(1-0.99) (1 ton/2000 pounds)(0.76)

where:

E2 = fugitive particulate emissions (tons/year)

1.4 pounds PE/ton steel = emission factor (AP-42 Section 12.5, Table 12.5-1, electric arc furnace charging, tapping, and slagging, Iron and Steel Production, 10/86)

0.99 = capture efficiency for direct evacuation fume collection system

0.76 = fraction of total PE emissions assumed to be PM10 (factor supplied by the company in the application for PTI 02-22398 and is based upon a test of a similar EAF at CSC).

c. E3 (emissions from additive, alloy, flux handling, & silos) = A*B/2000 lbs

Where:

E3 = particulate emissions from additive, alloy, flux handling, & silos (tons/year)

A = alloy, additives, and flux handling system's emission factor, 8.0 E-04 lb/ton

B = maximum material throughput per year, 1,400,000 tons.

d. E total = E1 + E2 + E3

where:

E total = total annual PM/PM10 emissions from P905, P908 and P909 or, if installed in the future as a replacement to P905, P910, combined (tons/year)

E1 = particulate emissions from baghouse (tons/year)

E2 = fugitive particulate emissions (tons/year)

E3 = particulate emissions from additive, alloy, flux handling, & silos.

(4) Emission Limitation:

Visible particulate emissions from the storage silo bin vent exhausts shall not exceed 20 percent opacity, as a six-minute average.

Applicable Compliance Method:

Compliance with the allowable visible emission limitation shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures in OAC rule 3745-17-03 (B)(1).

(5) Emission Limitation:

Visible emissions of fugitive dust from the dumping of alloy and charge carbon into the receiving hopper shall not exceed 20 percent opacity, as a six-minute average.

Applicable Compliance Method:

Compliance with the allowable visible emission limitation shall be determined in accordance with 40CFR Part 60, Appendix A, Method 9 and the procedures in OAC rule 3745-17-03 (B)(3).

(6) Emission Limitation:

Visible emissions of fugitive dust from the alloy handling operations (i.e., the storage bins, trim bins, and batch holding bins) shall not exceed 20 percent opacity, as a six-minute average.

Applicable Compliance Method:

Compliance with the allowable visible emissions limitation shall be determined in accordance with 40CFR Part 60, Appendix A, Method 9 and the procedures in OAC rule 3745-17-03 (B)(3).

g) Miscellaneous Requirements

(1) None.

18. P909, LMF

Operations, Property and/or Equipment Description:

LMF (EAF/LMF 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) d)(5) thru d)(7) and e)(5).

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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)	See b)(2)c., b)(2)d., and b)(2)e. The requirements of this rule also include compliance with the requirements of the VE limitations specified in 40 CFR Part 60, Subpart AAa. The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-10 thru 20 for PM/PM10, NOx, SO2, VOC, and CO.
b.	OAC rule 3745-17-11	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rules 3745-31-10 thru 20.
c.	OAC rule 3745-17-07(A)(1) & (B)(3)	The visible emission limitations specified by these rules are less stringent than the visible emission limitation established pursuant to 40 CFR Part 60, Subpart AAa.
d.	OAC rule 3745-17-08	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
e.	OAC rule 3745-18-06	The SO2 emission limitation specified by this rule is less stringent than the SO2 emission limitation established pursuant

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		to OAC rules 3745-31-10 thru 20.
f.	OAC rule 3745-21-08	See b)(2)a.
g.	40 CFR Part 60, Subpart AAa	Visible particulate emissions from the baghouse shall not exhibit three (3) per cent opacity or greater as a six-minute average. Visible particulate emissions of fugitive dust from the ladle metallurgy furnace shop due to operation of the LMF shall not exhibit six (6) per cent opacity or greater as a six-minute average. The mass emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-10 through OAC rule 3745-31-20.
h.	OAC rule 3745-31-05(D)	Pb emissions shall not exceed 1.18 tons per rolling 12-month for emissions units P905 and P909 combined period (includes stack and fugitive emissions) or 1.11 tons per rolling 12-month for emissions unit P909 and, if installed in the future as a replacement to P905, P910 combined period (includes stack and fugitive emissions). Note that incremental increase of less than 0.6 ton per year based upon restrictions listed in c)(1).
i.	OAC rule 3745-05(A)(3)(a)(ii)	See b)(2)g.
j.	OAC rule 3745-31-10 through OAC rule 3745-31-20	PM/PM10 emissions shall not exceed 0.0018 gr/dscf, 17.09 lbs/hr and 70.06 tons per year for emissions units P908, P909, and P905 or, if installed in the future as a replacement to P905, P910 combined (includes stack and fugitive emissions) based upon a rolling 12-month summation. All PM/PM10 are considered filterable PM.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		NOx emissions shall not exceed 68.8 lbs/hr and 280 tons per year for emissions units P909, and P905 or, if installed in the future as a replacement to P905, P910, combined, based upon a rolling 12-month summation. CO emissions shall not exceed 688 lbs/hr and 2,800 tons per year for emissions units P909, and P905 or, if installed in the future as a replacement to P905, P910, combined, based upon a rolling 12-month summation. SO2 emissions shall not exceed 43 lbs/hr and 175 tons per year for emissions units P909, and P905 or, if installed in the future as a replacement to P905, P910, combined, based upon a rolling 12-month summation. VOC emissions shall not exceed 31 lbs/hr and 126 tons per year for emissions units P909, and P905 or, if installed in the future as a replacement to P905, P910, combined, based upon a rolling 12-month summation. See b)(2)b.

(2) Additional Terms and Conditions

a. The permit has satisfied the "latest available control techniques and operating practices" required pursuant to 3745-21-08, respectively, by committing to comply with the best available technology requirements established in permit to install P0103995.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. On June 24, 2003, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

b. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of direct-shell evacuation control system (DEC system), good furnace melting practices and proper operation of the EAC oxy-fuel burners, acceptance of a PE limitation of 0.0018 gr/dscf, acceptance of a NOx limitation of 0.40 lb/ton of steel, acceptance of a SO2 limitation of 0.25 lb/ton of steel, acceptance of a VOC limitation of 0.18 lb/ton of steel, and acceptance of a CO limitation of 4.0 lbs/ton of steel produced constitute BACT for this emissions unit. The emissions limits are based on the BACT requirements listed under OAC rules 3745-31-(10) thru (20) above.

c. The ladle metallurgy furnace (LMF) shall be installed with a roof canopy hood fume collection system in addition to a direct evacuation control (DEC) system. These systems shall be capable of capturing a minimum of 99 percent of the generated emissions of particulate from the air contaminant source operation including charging, melting, refining, and tapping periods in the steel making cycle.

d. Particulate emissions captured by the fume collection systems for the electric arc furnace shall be exhausted to the existing EAF/LMF fabric filter control device.

e. The permittee shall follow the "Scrap Management Program" that was submitted to Ohio EPA, Northeast District Office (NEDO) and that was developed to minimize the use of scrap that contains extraneous materials such as oiled steel, pipes with residues and coatings, enameled materials, transmissions, shock absorbers, tinned materials, rubber, concrete, dirt, or wood that may contaminate the scrap charged into the EAF. The "Scrap Management Program" shall be viewed as part of the operational requirements for the EAF permit. Any change to the "Scrap Management Program" that would increase the amounts of these compounds in the scrap, or result in the emissions of an air contaminant not previously emitted, must be approved by the NEDO.

f. The hourly emission limitations listed in b)(1) are based upon the potential to emit of this emissions unit and therefore no record keeping and reporting requirements of those limitations are necessary.

g. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the lead (Pb) emissions from emissions units P909, and P905 or, if installed in the future as a replacement to P905, P910, combined, since the uncontrolled potential to emit for Pb is less than ten tons per year.

h. The permittee may, in the future, opt to install a separate electric arc furnace (P910) at the caster/VDT/LMF building. Should the new electric arc furnace get installed, upon startup of the new electric arc furnace, the permittee shall cease the operation of emissions unit (P907).

c) Operational Restrictions

(1) The permittee shall restrict the annual liquid steel production to 1,400,000 tons per year, based upon a rolling 12-month summation of the production rates. This is an existing emissions unit which has existing records of the amount liquid steel production and therefore does not need to be restricted on a monthly basis.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information:

a. the liquid steel production rate for each month;

b. the rolling, 12-month summation of the liquid steel production rates; and

c. the rolling, 12-month summation of the PM, PM10, CO, NOx, VOC, SO2 and Pb emissions.

(2) Visible particulate emissions observations of the EAF/LMF mono vent positive pressure fabric filter baghouse shall occur at least once per day of operation. Observations shall occur when the EAF is operating in the melting and refining phase of a heat cycle. Additional observations shall be made during the electric arc heating phase of the LMF processing cycle. These observations shall be taken in accordance with Method 9 of 40 CFR Part 60, Appendix A, and shall include at least three six-minute periods during EAF melting and refining and at least one six-minute period of the LMF electric arc heating phase in the processing cycle. The opacity shall be recorded where the greatest opacity of the visible emissions from the vents are observed in accordance with the procedures listed in Method 9 of 40 CFR Part 60, Appendix A. Records shall be maintained of all the visible particulate emissions observed. (40 CFR Part 60 Subpart AAa requires these opacity observations.)

(3) The permittee shall either (a) check and record the fabric filter control system fan motor amperes and damper position for each of the operating fans on a once-per-shift basis; (b) install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through each separately ducted hood; or (c) install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate at the control device inlet and check record damper positions on a once-per-shift basis. The monitoring device(s) shall be installed in a location in the exhaust duct such that reproducible flow rate data may be obtained. The flow rate monitoring device(s) shall have an accuracy of +/- 10 percent over its normal operating range and shall be calibrated according to the manufacturer's instructions. The permittee may be required to demonstrate the accuracy of the monitoring devices relative to Methods 1 and 2 of Appendix A of 40 CFR, Part 60. The values of these parameters as determined during the most recent visible particulate emission compliance demonstration shall be maintained at the appropriate levels for each applicable period. Operation at other than baseline values may be considered unacceptable operation and maintenance of the control system. The permittee may petition for reestablishment of these parameters whenever the permittee can demonstrate satisfactorily that the operating conditions upon which the parameters were previously established are no longer applicable.

Checking and recording of the pressure drop readings across the baghouse will not be required due to additional installation requirements of monitoring device(s), as specified in this section. OEPA, however, reserves the right to request pressure drop readings, if problems arise.

(4) The permit-to-install (PTI) application for this/these emissions units, P909, and P905 or, if installed in the future as a replacement to P905, P910, were evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee. The AToxic Air Contaminant Statute@, ORC 3704.03(F), was

applied to these emissions units for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled AReview of New Sources of Air Toxic Emissions, Option A@, as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

   i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists= (ACGIH) AThreshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices@; or

   ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists= (ACGIH) AThreshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices@; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., A**X**@ hours per day and A**Y**@ days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

   TLV/10 x 8/X x 5/Y = 4 TLV/XY = MAGLC

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or Aworst case@ toxic contaminant(s):

   Toxic Contaminant: Zinc Oxide

   TLV (mg/m3): 10

   Maximum Hourly Emission Rate (lbs/hr): 2.80

   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 9.69

   MAGLC (ug/m3): 238.10

The permittee, has demonstrated that emissions of Zinc Oxide, from emissions unit(s) P909 and P905 or, if installed in the future as a replacement to P905, P910 is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

(5) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration", the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and

c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI, PTIO, or FEPTIO (as applicable) prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

(6) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);

c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the AToxic Air Contaminant Statute@, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

d. the documentation of the initial evaluation of compliance with the AToxic Air Contaminant Statute@, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

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

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month liquid steel production rate limitation and, for the first 12 calendar months of operation following start-up, all exceedances of the allowable cumulative liquid steel production levels for this emissions unit.

(2) The permittee shall submit deviation (excursion) reports that identify all exceedances of the visible particulate emission limit for the fabric filter control device. For the purpose of these reports, an exceedances is defined as any six-minute period during which the average opacity is three percent or greater.

(3) The permittee shall submit deviation (excursion) reports that identify either operation of control system fan motor amperes at values exceeding + or - 15 percent of the value established during the most recent demonstration of compliance or operation at volumetric flow rates lower than those established during the compliance demonstration, when the LRS was operating.

(4) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month summation of the PM, PM10, CO, NOx, VOC, SO2 and Pb emissions.

(5) The permittee shall submit annual reports to the appropriate Ohio EPA District Office or local air agency, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the AToxic Air Contaminant Statute@, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

f) Testing Requirements

(1) Emission Limitation:

PM/PM10 emissions shall not exceed 0.0018 grains per dry standard cubic foot for emissions units P908, P909, and P905 or, if installed in the future as a replacement to P905, P910, combined.

Applicable Compliance Method:

Compliance shall be determined by emission testing as specified in f)(16).

(2) Emission Limitation:

PM/PM10 emissions shall not exceed 17.09 pounds per hour (includes stack and fugitive emissions) for emissions units P908, P909, and P905 or, if installed in the future as a replacement to P905, P910, combined.

Applicable Compliance Method:

To determine the hourly particulate emission rate for P908, P909, and P905 or P910 if installed (combined), the following equations shall be used:

a. E1(emissions from baghouse) = (980,000 dscfm) (tested emission rate in gr/scf) (1 pound/7000 grains) (60 minutes/hr)

where:

E1 = particulate emissions from baghouse (lbs/hour).

980,000 dscfm = maximum baghouse flow rate.

b. E2 (fugitive emissions) = (tons of steel produced/hour) (1.4 pounds PE/ton of steel) (1-0.99)(0.76)

where:

E2 = fugitive particulate emissions (lbs/hour)

1.4 pounds PE/ton steel = emission factor (AP-42 Section 12.5, Table 12.5-1, electric arc furnace charging, tapping, and slagging, Iron and Steel Production, 10/86)

0.99 = capture efficiency for direct evacuation fume collection system

0.76 = fraction of total PM emissions assumed to be PM10 (factor supplied by the company in the application for PTI 02-22398 and is based upon a test of a similar EAF at CSC).

c. E3 (emissions from additive, alloy, flux handling, & silos) = A*B

Where:

E3 = particulate emissions from additive, alloy, flux handling, & silos (lbs/hr)

A = alloy, additives, flux handling, and silos emission factor, 8.0 E-04 lb/ton (emission factor provided by facility)

B = maximum material throughput per hour, 172 tons/hr.

d. E total = E1 + E2 + E3

where:

E total = total hourly PM10 emissions from P908, P909, and P905 or P910, combined (lbs/hour)

E1 = particulate emissions from baghouse (lbs/hour)

E2 = fugitive particulate emissions (lbs/hour)

E3 = particulate emissions from additive, alloy, flux handling, & silos (lb/hour).

(3) Emission Limitation:

PM/PM10 emissions shall not exceed 70.06 tons per year (includes stack and fugitive emissions) for emissions units P908, P909, and P905 or, if installed in the future as a replacement to P905, P910, combined.

Applicable Compliance Method:

To determine the annual particulate emission rate for P908, P909, and P905 or P910 if installed (combined), the following equations shall be used:

a. E1(stack emissions) = (980,000 dscfm) (tested emission rate in gr/scf) (1 pound/7000 grains) (60 minutes/hr) (actual hours of operation/year) (1 ton/2000 pounds)

where:

E1 = particulate emissions from baghouse (tons/year)

980,000 dscfm = maximum baghouse flow rate.

b. E2 (fugitive emissions) = (tons of steel produced/year) (1.4 pounds PE/ton of steel)(1-0.99) (1 ton/2000 pounds)(0.76)

where:

E2 = fugitive particulate emissions (tons/year)

1.4 pounds PE/ton steel = emission factor (AP-42 Section 12.5, Table 12.5-1, electric arc furnace charging, tapping, and slagging, Iron and Steel Production, 10/86)

0.99 = capture efficiency for direct evacuation fume collection system

0.76 = fraction of total PE emissions assumed to be PM10 (factor supplied by the company in the application for PTI 02-22398 and is based upon a test of a similar EAF at CSC).

c. E3 (emissions from additive, alloy, flux handling, & silos) = A*B/2000 lbs

Where:

E3 = particulate emissions from additive, alloy, flux handling, & silos (tons/year)

A = alloy, additives, and flux handling system's emission factor, 8.0 E-04 lb/ton

B = maximum material throughput per year, 1,400,000 tons.

d. E total = E1 + E2 + E3

where:

E total = total annual PM/PM10 emissions from P908, P909, and P905 or P910, combined (tons/year)

E1 = particulate emissions from baghouse (tons/year)

E2 = fugitive particulate emissions (tons/year)

E3 = particulate emissions from additive, alloy, flux handling, & silos.

(4) Emission Limitation:

NOx emissions shall not exceed 68.8 pounds per hour and 0.40 pound per ton of steel (includes stack and fugitive emissions) for emissions units P909, and P905 or, if installed in the future as a replacement to P905, P910, combined.

Applicable Compliance Method:

If required by the Ohio EPA, compliance with the NOx emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 7 or 7E.

(5) Emission Limitation:

NOx emissions shall not exceed 280 tons per year (includes stack and fugitive emissions) for emissions units P909, and P905 or, if installed in the future as a replacement to P905, P910, combined.

Applicable Compliance Method:

To determine the yearly NOx emission rate for P909, and P905 or, if installed in the future as a replacement to P905, P910, combined, the following equation shall be used:

E = (0.40 pound NOx/ton of steel) (tons of steel produced/yr) (1 ton/2000 pounds)

where:

E = NOx emissions (tons/yr)

0.40 pound NOx/ton of steel = permit allowable emission rate for NOx

CO emissions shall not exceed 688 pounds per hour and 4.0 pounds per ton of steel (includes stack and fugitive emissions) for emissions units P909, and P905 or, if installed in the future as a replacement to P905, P910, combined.

(6) Applicable Compliance Method:

If required by the Ohio EPA, compliance with the CO emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 10.

(7) Emission Limitation:

CO emissions shall not exceed 2,800 tons per year (includes stack and fugitive emissions) for emissions units P909, and P905 or, if installed in the future as a replacement to P905, P910, combined.

Applicable Compliance Method:

To determine the annual CO emission rate for P909, and P905 or, if installed in the future as a replacement to P905, P910, combined, the following equation shall be used:

E = (4.0 pounds CO/ton of steel) (tons of steel produced/year) (1 ton/2000 pounds).

where:

E = CO emissions (tons/yr)

4.0 pounds CO/ton of steel = permit allowable emission rate for CO.

(8) Emission Limitation:

SO2 emissions shall not exceed 43 pounds per hour and 0.25 pound per ton of steel (includes stack and fugitive emissions) for emissions units P909, and P905 or, if installed in the future as a replacement to P905, P910, combined.

Applicable Compliance Method:

If required by the Ohio EPA, compliance with the SO2 emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 6 or 6C.

(9) Emission Limitation:

SO2 emissions shall not exceed 175 tons per rolling 12-month period (includes stack and fugitive emissions) for emissions units P909, and P905 or, if installed in the future as a replacement to P905, P910, combined.

Applicable Compliance Method:

To determine the annual SO2 emission rate for P909, and P905 or, if installed in the future as a replacement to P905, P910, combined, the following equation shall be used:

E = (0.25 pound SO2/ton of steel) (tons of steel produced/year) (1 ton/2000 pounds)

where:

E = SO2 emissions (tons/yr)

0.25 pound SO2/ton of steel = permit allowable emission rate for SO2.

(10) Emission Limitation:

VOC emissions shall not exceed 31 pounds per hour and 0.18 pound per ton of steel (includes stack and fugitive emissions) for emissions units P909, and P905 or, if installed in the future as a replacement to P905, P910, combined.

Applicable Compliance Method:

If required by the Ohio EPA, compliance with the VOC emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Methods 18, 25 or 25A.

(11) Emission Limitation:

VOC emissions shall not exceed 126 tons per rolling 12-month period (includes stack and fugitive emissions) for emissions units P909, and P905 or, if installed in the future as a replacement to P905, P910, combined.

Applicable Compliance Method:

To determine the annual VOC emission rate for P909, and P905 or, if installed in the future as a replacement to P905, P910, combined, the following equation shall be used:

E = (0.18 pound VOC/ton of steel) (tons of steel produced/year) (1 ton/2000 pounds)

where:

E = VOC emissions (ton/yr)

0.18 pound VOC/ton of steel = permit allowable emission rate for VOC.

(12) Emission Limitation:

Pb emissions shall not exceed 1.18 tons per rolling 12-month period (includes stack and fugitive emissions) for emissions units P905 and P909 combined.

Applicable Compliance Method:

To determine the annual Pb emission rate for the EAF the following equation shall be used:

E = (E total /yr) (0.017)

where:

E = Pb emissions (tons/yr)

E total /yr = total annual PM/PM10 emissions from EAF, as determined in f)(3).

0.017 = the average Pb content of the baghouse dust, as a weight fraction.

(13) Emission Limitation:

Pb emissions shall not exceed 1.11 tons per rolling 12-month period (includes stack and fugitive emissions) for emissions units P909 and P910, is installed in the future as a replacement to P905, combined.

Applicable Compliance Method:

To determine the annual Pb emission rate for the EAF the following equation shall be used:

E = (E total /yr) (0.017)

where:

E = Pb emissions (tons/yr)

E total /yr = total annual PM/PM10 emissions from EAF, as determined in f)(3).

0.017 = the average Pb content of the baghouse dust, as a weight fraction.

(14) Emission Limitation:

Visible particulate emissions of fugitive dust from the electric arc furnace shop due to operation of the EAF shall not exhibit six (6) percent opacity or greater as a six-minute average.

Applicable Compliance Method:

Compliance with the allowable visible emissions limitations shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures in OAC rule 3745-17-03.

(15) Emission Limitation:

Visible particulate emissions from the baghouse shall not exhibit three (3) percent opacity or greater as a six-minute average.

Applicable Compliance Method:

Compliance with the visible emission limitation for the operation(s) identified above shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

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

a. The emission testing shall be conducted within 3 months after startup of this emissions unit.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for PM/PM10, NO_X, CO, VOC, and SO_2.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

PM/PM10 - Method 5D of 40 CFR Part 60, Appendix A

NO_X - Method 7 , 7E of 40 CFR Part 60, Appendix A

CO - Method 10 of 40 CFR Part 60, Appendix A

VOC - Method 18, 25, or 25A of 40 CFR Part 60, Appendix A

SO_2 - Method 6A of 40 CFR Part 60, Appendix A

d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

(1) None.

19. P910, Electric Arc Furnace

Operations, Property and/or Equipment Description:

An EAF melts steel scrap with electrodes in a batch operation. Expanded Meltshop Baghouse will be 1,200,000 acfm (980,000 dscfm).

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

(1) d)(5) through d)(7) and e)(5).

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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)	See b)(2)d, b)(2)e, and b)(2)h. The requirements of this rule also include compliance with the requirements of the VE limitations specified in 40 CFR Part 60, Subpart AAa. The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-10 thru 20 for PM/PM10, NOx, SO2, VOC, and CO.
b.	OAC rule 3745-17-11	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-10 thru 20.
c.	OAC rule 3745-17-07(A)(1) & (B)(3)	The visible emission limitations specified by these rules are less stringent than the visible emission limitation established pursuant to 40 CFR Part 60, Subpart AAa.
d.	OAC rule 3745-17-08	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
e.	OAC rule 3745-18-06	The SO2 emission limitation specified by this rule is less stringent than the emission limitation established pursuant

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		to OAC rule 3745-31-10 thru 20.
f.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)i.
g.	OAC rule 3745-21-08	See b)(2)b.
h.	40 CFR Part 60, Subpart AAa	Visible particulate emissions from the baghouse shall not exhibit three (3) per cent opacity or greater as a six-minute average. Visible particulate emissions of fugitive dust from the electric arc furnace shop due to operation of the EAF shall not exhibit six (6) per cent opacity or greater as a six-minute average. The mass emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-10 through OAC rule 3745-31-20.
i.	OAC rule 3745-31-05 (D)	Pb emissions shall not exceed 1.11 tons per rolling 12-month for emissions units P909 and P910, if installed in the future as a replacement to P905, combined (include stack and fugitive emissions). Note that incremental increase of less than 0.6 tons per year based upon restrictions listed in c)(1).
j.	OAC rule 3745-31-10 through OAC rule 3745-31-20	PM/PM10 emissions shall not exceed 0.0018 gr/dscf, 17.09 lbs/hr and 70.06 tons per year for emissions units P908, P909, and P905 or, if installed in the future as a replacement to P905, P910, combined (includes stack and fugitive emissions) based upon a rolling 12-month summation. All PM/PM10 are considered filterable PM. NOx emissions shall not exceed 68.8 lbs/hr and 280 tons per year for emissions units P909 and P910, if installed in the future as a replacement to

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		P905, combined based upon a rolling 12-month summation. CO emissions shall not exceed 688 lbs/hr and 2,800 tons per year for emissions units P909 and P910, if installed in the future as a replacement to P905, combined based upon a rolling 12-month summation. SO2 emissions shall not exceed 43 lbs/hr and 175 tons per year for emissions units P909 and P910, if installed in the future as a replacement to P905, combined based upon a rolling 12-month summation. VOC emissions shall not exceed 31 lbs/hr and 126 tons per year for emissions units P909 and P910, if installed in the future as a replacement to P905, combined based upon a rolling 12-month summation. See b)(2)c.
k.	40 CFR Part 63, Subpart YYYYY (40 CFR Part 63.10681 -10692) [In accordance with 40 CFR 63.10680(a) and (b)(1), this emissions unit is an electric arc furnace (EAF) that is an area source of hazardous air pollutants (HAPs) and commenced construction on or before September 30, 2008.]	You must achieve compliance with the applicable provisions of 40 CFR Part 63, Subpart YYYYY by no later than June 30, 2008. You must achieve compliance with opacity limit in 40 CFR Part 63.10686(b)(2) or (c)(2) by no later than December 28, 2010.

(2) Additional Terms and Conditions

a. The permittee may, in the future, opt to install an electric arc furnace (P910) at the caster/VDT/LMF building. Should the new electric arc furnace get installed, upon startup of this emissions unit P910, the permittee shall cease the liquid steel production from emissions unit (P905).

b. The permit has satisfied the "latest available control techniques and operating practices" required pursuant to 3745-21-08, respectively, by committing to

comply with the best available technology requirements established in permit to install P0103995.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. On June 24, 2003, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

c. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of direct-shell evacuation control system (DEC system), good furnace melting practices and proper operation of the EAC oxy-fuel burners, acceptance of a PE limitation of 0.0018 gr/dscf, acceptance of a NOx limitation of 0.40 lb/ton of steel, acceptance of a SO2 limitation of 0.25 lb/ton of steel, acceptance of a VOC limitation of 0.18 lb/ton of steel, and acceptance of a CO limitation of 4.0 lbs/ton of steel produced constitute BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rules 3745-31-(10) thru (20) above.

d. The electric arc furnace shall be installed with a roof canopy hood fume collection system in addition to a direct evacuation control (DEC) system. These systems shall be capable of capturing a minimum of 99 percent of the generated emissions of particulate from the air contaminant source operation including charging, melting, refining, and tapping periods in the steel making cycle.

e. Particulate emissions captured by the fume collection systems for the electric arc furnace shall be exhausted to the EAF/LMF mono vent fabric filter control device.

f. The permittee shall follow the "Scrap Management Program" that was submitted to Ohio EPA, Northeast District Office (NEDO) and that was developed to minimize the use of scrap that contains extraneous materials such as oiled steel, pipes with residues and coatings, enameled materials, transmissions, shock absorbers, tinned materials, rubber, concrete, dirt, or wood that may contaminate the scrap charged into the EAF. The "Scrap Management Program" shall be viewed as part of the operational requirements for the EAF permit. Any change to the "Scrap Management Program" that would increase the amounts of these compounds in the scrap, or result in the emissions of an air contaminant not previously emitted, must be approved by the NEDO.

g. The values for either the fan motor amperes and damper position for each operating fan or the volumetric flow rate through each separately ducted hood, as determined during the most recent visible particulate emission compliance demonstration, shall be maintained at all times when the EAF is operating (40 CFR Part 60.274a(c)).

h. The control system fan motor amperes and all damper position, the volumetric flow rate through each separately ducted hood, or the volumetric flow rate at the control device inlet and all damper positions shall be determined during all periods in which a hood is operated for the purpose of capturing emissions from

the affected facility subject to d)(4) of this permit. The owner or operator may petition the Administrator for reestablishment of these parameters whenever the owner or operator can demonstrate to the Administrator's satisfaction that the affected facility operating conditions upon which the parameters were previously established are no longer applicable. The values of these parameters as determined during the most recent demonstration of compliance shall be maintained at the appropriate level for each applicable period (40 CRF Part 60.274a(c).

i. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the lead (Pb) emissions from emissions units P909, and P905 or, if installed in the future as a replacement to P905, P910, combined, since the uncontrolled potential to emit for Pb is less than ten tons per year.

j. The scrap metals processed in this emissions unit is restricted to only those materials that comply with the scrap acquisition and inspection plan described in d)(7).

c) Operational Restrictions

(1) The permittee shall restrict the annual liquid steel production to 1,400,000 tons per year, based upon a rolling 12-month summation of the production rates. This is an existing emissions unit which has existing records of the amount liquid steel production and therefore does not need to be restricted on a monthly basis.

(2) See 40 CFR Part 63, Subpart YYYYY (40 CFR Part 63.10681 -10692).

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information:

a. the hours of operation for each calendar month;

b. the liquid steel production rate for each calendar month;

c. the rolling, 12-month summation of the hours of operation;

d. the rolling, 12-month summation of the liquid steel production rates; and

e. the rolling, 12-month summation of the PM/PM10, VOC, CO, SO2, NOx and Pb emissions.

(2) Visible particulate emissions observations of the EAF/LMF mono vent positive pressure fabric filter baghouse shall occur at least once per day of operation. Observations shall occur when the EAF is operating in the melting and refining phase of a heat cycle. Additional observations shall be made during the electric arc heating phase of the LMF processing cycle. These observations shall be taken in accordance with Method 9 of 40 CFR Part 60, Appendix A, and shall include at least three six-minute periods during EAF melting and refining and at least one six-minute period of the LMF electric arc heating phase in the processing cycle. The opacity shall be recorded where the greatest opacity of the visible emissions from the vents are observed in accordance with the procedures listed in Method 9 of 40 CFR Part 60, Appendix A. Records shall be maintained of all

the visible particulate emissions observed. (40 CFR Part 60 Subpart AAa requires these opacity observations.)

(3) The permittee shall perform observations of shop opacity by a certified visible emission observer in lieu of installing and maintaining a furnace static pressure monitoring device on the DEC equipped EAF. Shop opacity observations shall be conducted at least once per day when the furnace is operating in the meltdown and refining period (40 CFR Part 60.273a (d)).

(4) The permittee shall either (a) check and record the fabric filter control system fan motor amperes and damper position for each of the operating fans on a once-per-shift basis ; (b) install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through each separately ducted hood; or (c) install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate at the control device inlet and check record damper positions on a once-per-shift basis. The monitoring device(s) shall be installed in a location in the exhaust duct such that reproducible flow rate data may be obtained. The flow rate monitoring device(s) shall have an accuracy of +/- 10 percent over its normal operating range and shall be calibrated according to the manufacturer's instructions. The permittee may be required to demonstrate the accuracy of the monitoring devices relative to Methods 1 and 2 of Appendix A of 40 CFR, Part 60. The values of these parameters as determined during the most recent visible particulate emission compliance demonstration shall be maintained at the appropriate levels for each applicable period. Operation at other than baseline values may be considered unacceptable operation and maintenance of the control system. The permittee may petition for reestablishment of these parameters whenever the permittee can demonstrate satisfactorily that the operating conditions upon which the parameters were previously established are no longer applicable.

Checking and recording of the pressure drop readings across the baghouse will not be required due to additional installation requirements of monitoring device(s), as specified in this section. OEPA, however, reserves the right to request pressure drop readings, if problems arise.

(5) The permittee shall perform monthly operational status inspections of the equipment that are important to the performance of the total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection shall include observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in the ductwork, and fan erosion). Any deficiencies shall be recorded and proper maintenance performed. The permittee may petition for the approval of an alternative to monthly operational status inspections that will provide a continuous record of the operation of each emission capture system.

(6) Shop opacity observations shall be conducted at least once per day for thirty minutes when the furnace is operating in the meltdown and refining period. (The "shop" is the building that houses the EAF.) Shop opacity shall be determined as the arithmetic average of 24 consecutive 15-second opacity observations of emissions from the shop taken in accordance with Method 9. Shop opacity shall be recorded for any point(s) where visible emissions are observed. Where it is possible to determine that a number of visible emission sites relate to only one incident of visible emissions, only one observation of shop opacity will be required. In this case, the shop opacity observations

must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident. (40 CFR Part 60 Subpart AAa requires these shop opacity observations.) The shop opacity observations shall be taken at the shop roofline.

(7) The permittee shall develop and write a Scrap Management Plan (Plan) for the selection and inspection of iron and steel scrap received for charge in the EAF. This plan shall provide for and define effective procedures to eliminate or minimize, to the extent practicable, mercury and organics charged to the electric arc furnace. The Plan is subject to approval by Ohio EPA and must be submitted to Ohio EPA, Northeast District Office, within 90 days of permit issuance. A copy of the plan must be maintained onsite and made readily available to all plant personnel having materials acquisition or inspection duties. A copy of the material specifications must be provided to all scrap suppliers. The Plan, at a minimum, shall include the following components:

a. A materials acquisition program which shall include:

i. Specifications for the supplier/marketer of the scrap metals that will minimize organic contaminants and mercury from the scrap received for charge to the electric arc furnace. The plan, at a minimum, shall call for the identification and removal of the following materials:

used oil filters,

plastic parts,

organic liquids (transmission fluid, motor oil, etc.),

metal containers with residual organic liquids, and

free liquids.

This program shall be applicable for scrap charged to this emissions unit.

ii. Specifications for the supplier/marketer of automotive bodies requiring the removal of readily accessible mercury-containing devices from under the trunks and hoods and removal of lead components such as batteries and wheel weights.

A copy of the procedures used by the scrap supplier must be obtained and maintained onsite for either removing accessible mercury switches or for purchasing automobile bodies that have had readily accessible mercury switches removed, as applicable.

b. Procedures for visual inspection of scrap metals which shall include:

i. procedures to document the amount (by weight) of each shipment of scrap received and the estimated percent of each shipment inspected; a representative portion of not less than 10 percent of each shipment of scrap metal received for charge into any scrap preheater and the electric arc furnace shall be inspected for the specifications contained in "i." above;

ii. identification of the location(s) where inspections are to be performed for each type of shipment, which shall provide a reasonable vantage point for visual inspections, with the consideration of worker safety; and

iii. provisions for rejecting or returning entire or partial scrap shipments that do not meet specifications and, unless satisfactory corrective measures are taken, limiting purchases whose shipments fail to meet specifications. The Plan shall describe what corrective actions are acceptable and when purchases will be limited.

iv. Record keeping requirements which shall include the following for each shipment:

(a) the amount, date received, type of scrap, and the supplier/marketer or each shipment of scrap metal received;

(b) the amount of material inspected, the date of inspection, and the inspector's name;

(c) the results of the inspection on a shipment-by-shipment basis, to include a description and estimated amount of any material not meeting the specifications in "i" above and the marketer/supplier of the rejected scrap metals;

(d) documentation of the return or disposal of the material rejected during each inspection;

(e) certification, in writing, that each supplier/marketer of any scrap metals charged to this emissions unit has received the specifications of the Plan and agrees to these requirements; and

(f) documentation that each supplier/marketer of scrap metals charged to this emissions unit has removed required materials in i.(a) and i.(b) above; or if the materials are not readily accessible, a description as to why the material could not be removed.

Note that this term shall not supersede the provisions and compliance dates listed in 40 CFR Part 63, Subpart YYYYY (40 CFR Part 63.10681 -10692). The permittee is required to comply with the most stringent of the terms and sections of the term and the provisions of 40 CFR Part 63, Subpart YYYYY (40 CFR Part 63.10681 -10692) whichever the case maybe after the compliance dates of 40 CFR Part 63, Subpart YYYYY (40 CFR Part 63.10681 -10692) for this emissions unit.

The permittee shall update their Plan after the compliance dates of 40 CFR Part 63, Subpart YYYYY (40 CFR Part 63.10681-10692) for this emissions unit to include which terms are the most stringent, but no later than the compliance date listed in 40 CFR Part 63, Subpart YYYYY (40 CFR Part 63.10681 -10692) for this emissions unit for submitting the Scrap Management Plan listed in 40 CFR Part 63, Subpart YYYYY (40 CFR Part 63.10681-10692).

(8) The permit-to-install (PTI) application for this/these emissions units, P909 and P905 or, if installed in the future as a replacement to P905, P910, were evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee. The AToxic Air Contaminant Statute@, ORC 3704.03(F), was applied to these emissions units for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled AReview of New Sources of Air Toxic Emissions, Option A@, as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

   i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists= (ACGIH) AThreshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices@; or

   ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists= (ACGIH) AThreshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices@; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., A**X**@ hours per day and A**Y**@ days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

   TLV/10 x 8/X x 5/Y = 4 TLV/XY = MAGLC

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or Aworst case@ toxic contaminant(s):

   Toxic Contaminant: Zinc Oxide

   TLV (mg/m3): 10

   Maximum Hourly Emission Rate (lbs/hr): 2.80

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 9.69

MAGLC (ug/m3): 238.10

The permittee, has demonstrated that emissions of Zinc Oxide, from emissions unit(s) P906 and P909, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the AToxic Air Contaminant Statute@, ORC 3704.03(F).

(9) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration@, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and

c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the AToxic Air Contaminant Statute@ will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the AToxic Air Contaminant Statute@, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a “modification”, the permittee shall apply for and obtain a final PTI, PTIO, or FEPTIO (as applicable) prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

(10) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the AToxic Air Contaminant Statute@, ORC 3704.03(F):

a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);

c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

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

(12) See 40 CFR Part 63, Subpart YYYYY (40 CFR Part 63.10681 -10692).

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month liquid steel production rate limitation and, for the first 12 calendar months of operation following start-up, all exceedances of the allowable cumulative liquid steel production levels for this emissions unit.

(2) The permittee shall submit deviation (excursion) reports that identify all exceedances of the visible particulate emission limit for the fabric filter control device. For the purpose of these reports, an exceedance is defined as any six-minute period during which the average opacity is three percent or greater.

(3) The permittee shall submit deviation (excursion) reports that identify all exceedances of the fugitive visible particulate emission limit for the electric arc furnace shop. For the purpose of these reports, an exceedance is defined as any six-minute period during which the average opacity is six percent or greater.

(4) The permittee shall submit deviation (excursion) reports that identify either operation of control system fan motor amperes at values exceeding + or - 15 percent of the value established during the most recent demonstration of compliance or operation at volumetric flow rates lower than those established during the compliance demonstration, when the EAF was operating (40 CFR Part 60.276a(c)).

(5) The permittee shall submit deviation (excursion) reports that identify all instances when any portion of the Scrap Management Plan was not followed or the information required to be documented was not recorded.

(6) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month summation of the PM/PM10, VOC, CO, SO2, NOx and Pb emissions.

(7) The permittee shall submit annual reports to the appropriate Ohio EPA District Office or local air agency, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

(8) See 40 CFR Part 63, Subpart YYYYY (40 CFR Part 63.10681 -10692).

f) Testing Requirements

(1) Emission Limitation:

PM/PM10 emissions shall not exceed 0.0018 grains per dry standard cubic foot for emissions units P908, P909, and P905 or, if installed in the future as a replacement to P905, P910, combined.

Applicable Compliance Method:

Compliance shall be determined by emission testing as specified in f)(15).

(2) Emission Limitation:

PM/PM10 emissions shall not exceed 17.09 pounds per hour (includes stack and fugitive emissions) for emissions units P908, P909, and P905 or, if installed in the future as a replacement to P905, P910, combined.

Applicable Compliance Method:

To determine the hourly particulate emission rate for P908, P909, and P905 or if installed P910 (combined), the following equations shall be used:

a. E1(emissions from baghouse) = (980,000 dscfm) (tested emission rate in gr/scf) (1 pound/7000 grains) (60 minutes/hr)

where:

E1 = particulate emissions from baghouse (lbs/hour).

980,000 dscfm = maximum baghouse flow rate.

b. E2 (fugitive emissions) = (tons of steel produced/hour) (1.4 pounds PE/ton of steel) (1-0.99)(0.76)

where:

E2 = fugitive particulate emissions (lbs/hour)

1.4 pounds PE/ton steel = emission factor (AP-42 Section 12.5, Table 12.5-1, electric arc furnace charging, tapping, and slagging, Iron and Steel Production, 10/86)

0.99 = capture efficiency for direct evacuation fume collection system

0.76 = fraction of total PM emissions assumed to be PM10 (factor supplied by the company in the application for PTI 02-22398 and is based upon a test of a similar EAF at CSC).

c. E3 (emissions from additive, alloy, flux handling, & silos) = A*B

Where:

E3 = particulate emissions from additive, alloy, flux handling, & silos (lbs/hr)

A = alloy, additives, flux handling, and silos emission factor, 8.0 E-04 lb/ton (emission factor provided by facility)

B = maximum material throughput per hour, 172 tons/hr.

d. E total = E1 + E2 + E3

where:

E total = total hourly PM10 emissions from P908, P909, and P905 or if installed P910, combined (lbs/hour)

E1 = particulate emissions from baghouse (lbs/hour)

E2 = fugitive particulate emissions (lbs/hour)

E3 = particulate emissions from additive, alloy, flux handling, & silos (lb/hour).

(3) Emission Limitation:

PM/PM10 emissions shall not exceed 70.06 tons per year (includes stack and fugitive emissions) for emissions units P908, P909, and P905 or, if installed in the future as a replacement to P905, P910, combined.

Applicable Compliance Method:

To determine the annual particulate emission rate for P908, P909, and P905 or, if installed in the future as a replacement to P905, P910, combined, the following equations shall be used:

a. E1(stack emissions) = (980,000 dscfm) (tested emission rate in gr/scf) (1 pound/7000 grains) (60 minutes/hr) (actual hours of operation/year) (1 ton/2000 pounds)

where:

E1 = particulate emissions from baghouse (tons/year)

980,000 dscfm = maximum baghouse flow rate.

b. E2 (fugitive emissions) = (tons of steel produced/year) (1.4 pounds PE/ton of steel)(1-0.99) (1 ton/2000 pounds)(0.76)

where:

E2 = fugitive particulate emissions (tons/year)

1.4 pounds PE/ton steel = emission factor (AP-42 Section 12.5, Table 12.5-1, electric arc furnace charging, tapping, and slagging, Iron and Steel Production, 10/86)

0.99 = capture efficiency for direct evacuation fume collection system

0.76 = fraction of total PE emissions assumed to be PM10 (factor supplied by the company in the application for PTI 02-22398 and is based upon a test of a similar EAF at CSC).

c. E3 (emissions from additive, alloy, flux handling, & silos) = A*B/2000 lbs

Where:

E3 = particulate emissions from additive, alloy, flux handling, & silos (tons/year)

A = alloy, additives, and flux handling system's emission factor, 8.0 E-04 lb/ton

B = maximum material throughput per year, 1,400,000 tons.

d. E total = E1 + E2 + E3

where:

E total = total annual PM/PM10 emissions from P905 and P906, combined (tons/year)

E1 = particulate emissions from baghouse (tons/year)

E2 = fugitive particulate emissions (tons/year)

E3 = particulate emissions from additive, alloy, flux handling, & silos.

(4) Emission Limitation:

NOx emissions shall not exceed 68.8 pounds per hour and 0.40 pound per ton of steel (includes stack and fugitive emissions) for emissions units P909 and P910, if installed in the future as a replacement to P905, combined.

Applicable Compliance Method:

If required by the Ohio EPA, compliance with the NOx emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 7 or 7E.

(5) Emission Limitation:

NOx emissions shall not exceed 280 tons per year (includes stack and fugitive emissions) for emissions units P909 and P910, if installed in the future as a replacement to P905, combined.

Applicable Compliance Method:

To determine the yearly NOx emission rate for P909 and P910, if installed in the future as a replacement to P905, combined, the following equation shall be used:

E = (0.40 pound NOx/ton of steel) (tons of steel produced/yr) (1 ton/2000 pounds)

where:

E = NOx emissions (tons/yr)

0.40 pound NOx/ton of steel = permit allowable emission rate for NOx.

(6) CO emissions shall not exceed 688 pounds per hour and 4.0 pounds per ton of steel (includes stack and fugitive emissions) for emissions units P909, and P905 or, if installed in the future as a replacement to P905, P910, combined.

Applicable Compliance Method:

If required by the Ohio EPA, compliance with the CO emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 10.

(7) Emission Limitation:

CO emissions shall not exceed 2,800 tons per year (includes stack and fugitive emissions) for emissions units P909 and P910, if installed in the future as a replacement to P905, combined.

Applicable Compliance Method:

To determine the annual CO emission rate for P909 and P910, if installed in the future as a replacement to P905, combined, the following equation shall be used:

E = (4.0 pounds CO/ton of steel) (tons of steel produced/year) (1 ton/2000 pounds)

where:

E = CO emissions (tons/yr)

4.0 pounds CO/ton of steel = permit allowable emission rate for CO.

(8) Emission Limitation:

SO2 emissions shall not exceed 43 pounds per hour and 0.25 pound per ton of steel (includes stack and fugitive emissions) for emissions units P909 and P910, if installed in the future as a replacement to P905, combined.

Applicable Compliance Method:

If required by the Ohio EPA, compliance with the SO2 emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 6 or 6C.

(9) Emission Limitation:

SO2 emissions shall not exceed 175 tons per rolling 12-month period (includes stack and fugitive emissions) for emissions units P909 and P910, if installed in the future as a replacement to P905, combined.

Applicable Compliance Method:

To determine the annual SO2 emission rate for P909 and P910, if installed in the future as a replacement to P905, combined, the following equation shall be used:

E = (0.25 pound SO2/ton of steel) (tons of steel produced/year) (1 ton/2000 pounds)

where:

E = SO2 emissions (tons/yr)

0.25 pound SO2/ton of steel = permit allowable emission rate for SO2.

(10) Emission Limitation:

VOC emissions shall not exceed 31 pounds per hour and 0.18 pound per ton of steel (includes stack and fugitive emissions) for emissions units P909 and P910, if installed in the future as a replacement to P905, combined.

Applicable Compliance Method:

If required by the Ohio EPA, compliance with the VOC emission rate shall be determined in accordance with 40 CFR Part 60, Appendix A, Methods 18, 25 or 25A.

(11) Emission Limitation:

VOC emissions shall not exceed 126 tons per rolling 12-month period (includes stack and fugitive emissions) for emissions units P909 and P910, if installed in the future as a replacement to P905, combined.

Applicable Compliance Method:

To determine the annual VOC emission rate for P909 and P910, if installed in the future as a replacement to P905, combined, the following equation shall be used:

E = (0.18 pound VOC/ton of steel) (tons of steel produced/year) (1 ton/2000 pounds)

where:

E = VOC emissions (ton/yr)

0.18 pound VOC/ton of steel = permit allowable emission rate for VOC.

(12) Emission Limitation:

Pb emissions shall not exceed 1.11 tons per rolling 12-month period (includes stack and fugitive emissions) for emissions units P909 and P910, if installed in the future as a replacement to P905, combined.

Applicable Compliance Method:

To determine the annual Pb emission rate for the EAF the following equation shall be used:

E = (E total /yr) (0.017)

where:

E = Pb emissions (tons/yr)

E total /yr = total annual PM/PM10 emissions from EAF, as determined in f)(3).

0.017 = the average Pb content of the baghouse dust, as a weight fraction.

(13) Emission Limitation:

Visible particulate emissions of fugitive dust from the electric arc furnace shop due to operation of the EAF shall not exhibit six (6) percent opacity or greater as a six-minute average.

Applicable Compliance Method:

Compliance with the allowable visible emissions limitations shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures in OAC rule 3745-17-03.

(14) Emission Limitation:

Visible particulate emissions from the baghouse shall not exhibit three (3) percent opacity or greater as a six-minute average.

Applicable Compliance Method:

Compliance with the visible emission limitation for the operation(s) identified above shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

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

a. The emission testing shall be conducted within 3 months after startup of this emissions unit.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for PM/PM10, NO_X, CO, VOC, and SO_2.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

PM/PM10 - Method 5D of 40 CFR Part 60, Appendix A

NO_X - Method 7 , 7E of 40 CFR Part 60, Appendix A

CO - Method 10 of 40 CFR Part 60, Appendix A

VOC - Method 18, 25, or 25A of 40 CFR Part 60, Appendix A

SO_2 - Method 6A of 40 CFR Part 60, Appendix A.

d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

(1) None.