

Synthetic Minor Determination and/or **Netting Determination**

Permit To Install **1304176**

A. Source Description

Charter Steel Corporation (CSC) has proposed the construction of a Melt Shop for production of steel billets which includes installation of a 110-ton/hr electric arc furnace (EAF), ladle metallurgical furnace (LMF), Vacuum Oxygen Degasser and boiler, Meltshop Baghouse, Continuous Caster, three (3) tundish preheaters, six (6) ladle preheaters, cut-off torch, three (3) silos for Carbon, Lime and Dust, cooling tower, paved and unpaved roads, process space heater, and Slag processing.

Overall emissions from this project are expected to increase:

PE by 119.25 TPY, PM₁₀ by 105.12 TPY, CO by 1,395.01 TPY, NO_x by 188.51 TPY, SO₂ by 99.53 TPY, VOC by 77.41 TPY, Hg by 0.17 TPY and lead emissions by 1.78 TPY.

With the above emissions increases based on the new installation project, PSD requirements are applicable for the PE, lead, VOC, CO and NO_x increases. Cuyahoga County at the time the application was submitted was designated as non-attainment for SO₂ emissions. Therefore PSD does not apply for SO₂ emissions since the total facility emissions increase for SO₂ will be less than 100 TPY. Additionally, installation of the EAF is subject to the requirements of NSPS subpart AAa.

B. Facility Emissions and Attainment Status

The facility is a major stationary source for CO emissions greater than 250 TPY. NO_x, SO₂, VOC, Pb and particulate emissions are in attainment. Some portions of Cuyahoga County are non-attainment for SO₂ emissions. The plant is undergoing PSD review for CO, NO_x, VOC, Pb and particulate emissions as they exceed the major modification thresholds under PSD.

C. Source Emissions

The above -mentioned new sources in this permit to install have the potential to emit CO emissions in excess of 250 TPY. Therefore, this facility will be subject to PSD permitting. This facility will not be subject to 40 CFR Part 63 Subpart FFFFFF as the potential emission of HAPS does not exceed 10 TPY of a single or 25 TPY of combined. Also the definition of an "iron and steel foundry" as defined in 40 CFR Part 63 Subpart EEEEE does not apply to this facility. Charter is proposing to build a mini-mill which melts steel which is then processed into billets. No pouring of molten metal into molds of final form will be done at this facility.

D. Conclusion

This facility will be subject to PSD permitting. This restriction is to limit the emissions of SO₂ in a non-attainment area to less than 100 TPY in order to avoid Non-attainment New Source Review. The annual SO₂ emission rate for this project will be 99.55 TPY. This will be accomplished by limiting the annual production of resulfurized steel to 28,000 tons based on an emission factor of 2.0 lb/ton of resulfurized steel produced (28 TPY). All other grades of steel will have an annual restriction of 710,600 tons based on an emission factor of 0.2 lb/ton of steel produced (71.04 TPY). The SO₂ emissions for the other sources included in this project and the rest of the facility have a total PTE of 0.94 TPY. This produces a total of 99.98 TPY.

**STAFF DETERMINATION FOR THE APPLICATION TO CONSTRUCT
UNDER THE PREVENTION OF SIGNIFICANT DETERIORATION REGULATIONS
FOR CHARTER STEEL
CLEVELAND, OHIO
PTI NUMBER 13-04176**

March 16, 2004

Ohio Environmental Protection Agency
Division of Air Pollution Control
Lazarus Government Center
122 South Front Street
Columbus, Ohio 43215

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 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 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 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 Cuyahoga Heights (Cleveland), Ohio, located in Cuyahoga County. This area is classified as attainment for all of the criteria pollutants, except S02 (redesignation pending).

Facility Description

Charter Steel is expanding its steel production operations at the current facility, which is located in Cuyahoga Heights, Ohio. They are proposing to install a new melt shop, which will include an electric arc furnace, vacuum oxygen degasser, ladle metallurgical furnace and other associated sources, at the Cleveland area plant.

New Source Review (NSR)/PSD Applicability

This process will generate criteria pollutant emissions of particulate, NO_x, CO, VOC, SO₂ and Lead, as well as Mercury emissions. A PSD analysis is required for any increase in emissions of a pollutant exceeding the PSD threshold emissions level, or the significance levels. Of the pollutants emitted, particulate, NO_x, CO, VOC and Lead will result in a net increase above PSD levels. Nonattainment area New Source Review is not applicable, due to the restriction upon SO₂ emissions.

Potential HAP emissions are below 10 TPY for any single HAP and 25 TPY for combination of HAPs, therefore 112(g) and Maximum Achievable Control Technology (MACT) requirements do not apply to this facility.

Charter Steel has requested restricted operational limits for some emissions units in the project.

TABLE 1

**PRELIMINARY POLLUTANT EMISSION RATES
MODIFICATION TO INCREASE EMISSION RATES
Charter Steel - Melt Shop Project**

Air Pollutant	PTI Allowable (tpy)	PTI Increase (tpy)	PSD/NSR Threshold (tpy)
Particulate (PM)	119.25	119.25	25
PM10	105.12	105.12	15
Volatile Organic Compounds (VOC/OC)	77.41	77.41	40
Nitrogen Oxides (NO _x)	188.51	188.51	40
Carbon Monoxide (CO)	1395.01	1395.01	100

Sulfur Dioxide (SO ₂)	99.53	99.53	100
Lead	1.78	1.78	0.6
Mercury	0.17	0.17	NA

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 Charter Steel 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).

Sources Proposed:

Electric Arc Furnace (EAF) - 110 ton/hr with direct evacuation control (DEC) for capture and a baghouse for control of emissions;

Ladle Metallurgy Furnaces (LMF) - 110 TPH capacity, for alloy mixing and re-sulfurization of molten steel;

Vacuum Oxygen Degasser (VOD) - vessel for Low carbon and Stainless Steel production or degassing and decarburization of the steel;

Continuous Caster;

Charge handling of steel scrap inside of a building;

natural gas boiler for the VOD system - 25 mmBtu/hr, equipped with a low NOx burner;

Carbon Silo, Lime Silo - storage of additives for steel alloying equipped with a bin vents for control of particulate emissions;

250 TPH Slag processing operation;

Dust Silo for the Melt Shop Baghouse, equipped with a bin vent for PM control;

numbers 1-3 natural gas fired tundish preheaters rated at 20 mmBtu/hr

numbers 1-6 natural gas fired ladle preheaters and dryers rated at 10 mmBtu/hr

natural gas fueled cut-off torch rated at 10mmBtu/hr

natural gas fired process space heater rated at 20 mmBtu/hr; and

cooling tower 1.5 MMgallons/hr for cooling of process water;

roadways and parking areas.

Technologies Evaluated:

NO_x

Steel melting and casting (EAF, LMF, VOD, continuous caster)

The largest percent of NO_x (68%) is generated at the EAF and VOD (other units generate no more than 4.5% each), and is the result of high temperature reactions and fuel combustion. The following control technologies were evaluated.

EAF Controls	Description
SCR	This technology requires low particulate concentration, uniform gas flow and a certain exhaust temperature range. It is not possible to maintain stable gas conditions, therefore this technology was found infeasible.
SNCR	This technology requires low particulate concentration, uniform gas flow and a certain exhaust temperature range. It is not possible to maintain stable gas conditions, therefore this technology was found infeasible.
SCONO _x	This system has been used on gas turbine sources, however, furnace exhaust characteristics would lead to catalyst poisoning, therefore, the manufacturer, Goaline, would not quote a system.
DEC	The proposed BACT for the EAF is DEC, monitoring of process variables, and low NO _x /oxy-fuel burners with a resulting limit of 0.33 lbs NO _x /ton of steel. This is consistent with the lowest RBLC limit for which compliance has been demonstrated.
Low-NO _x /Oxy Fuel Burners	see DEC above
Operating Practices	see DEC above

VOD Controls	Description
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Low-NOx Burners (boiler)	The VOD steam boiler generates over half of the VOD NOx emissions. Use of low NOx burner and acceptance of an emission limit of 100 lb/MMCF.
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Boilers, heaters, torches

A number of technologies are available for NOx reduction from these type of units. Charter Steel is proposing to install all technically feasible technologies. BACT is the use of natural gas and Low-NOx Burners with a limit of 100 lb/MMCF.

CO

Steel melting and casting (EAF, LMF, VOD, continuous caster)

CO emissions from the steel making process are generated in the EAF unit (from carbon charge, scrap contaminants, electrodes and foamy slag operation) and the VOD unit (oxygen injection/decarburization process). The following control technologies were evaluated.

EAF Controls	Description
DEC	This is the technology used by sources in the RBLC. The CO limit will be 3.5 pounds/ton of steel, which is below other SBQ Grade steel mills (low carbon grade steel production).
Process Modification	Charter Steel will implement furnace draft controls and foamy slag operator practice process modification when possible.
Oxygen Injection	This technology is not considered to be technically feasible on this type of process.
Duct Burners	This technology is not considered to be technically feasible on this type of process.
Incineration	Particulate fouling would result if installed prior to filtration. The technology is believed to be technically infeasible, due to wide fluctuations in CO levels and potential catalyst poisoning from the process (metal compounds). Incineration has not been applied or successfully demonstrated to reduce CO from EAFs. However, cost effectiveness evaluations were conducted for types of incineration, and the lowest cost option was found to be regenerative catalytic incineration at 8,051 dollars per ton of CO. Due to lack of proven use, secondary NOx and CO from gas combustion and high dollars/ton cost, thermal and catalytic incineration were not considered to be economically feasible.

VOD Controls	Description
Flare	This was found to be the only feasible technology for CO control from the VOD, and is workable during the oxygenation process. The flare will not be used due to safety factors and low uncontrolled CO emissions during the natural decarburization process.
Thermal and Catalytic Oxidation	Resulting pressure restrictions would inhibit proper VOD operation due to its effect on upstream vacuum system operation. Also, explosive CO concentrations are a safety concern.
Good Combustion Practices (boiler)	BACT from the VOD boiler is the practice of good combustion and acceptance of an emission limitation of 84 lb/MMCF.

Boilers, heaters, torches

No add-on technologies were found to be in use for these sources.

VOC

Steel melting and casting (EAF, LMF, VOD, continuous caster)

VOC emissions from the EAF are primarily due to scrap steel contaminants, and the EAF accounts for over 93% of the VOC emissions generated. Several technologies were evaluated for control of VOC emissions. The following table summarizes the results of the evaluation.

EAF Controls	Description
Incineration	Particulate fouling would result if installed prior to filtration. The technology is believed to be technically infeasible, due to potential catalyst poisoning from the process (metal compounds). Due to the low VOC exhaust concentration, the combustion VOC emissions from the large amount of fuel needed would offset any VOC reduction achieved, as well as generate CO and NOx. However, cost effectiveness evaluations were conducted for types of incineration, and the lowest cost option was found to be regenerative catalytic incineration at 100,294 dollars per ton of VOC, therefore, it is not economically feasible.
Oxygen Injection	This technology is not considered to be technically feasible on this type of process.
Duct Burners	This technology is not considered to be technically feasible on this type of process.
DEC	Most of the EAF's at facilities in the RBLC are employing this system to oxidize/combust VOCs in the DEC exhaust duct, along with scrap management. No other type of add-on control has been used. The resulting emissions rate is lbs/ton, which is within the range of limits in the RBLC. A VOC rate of 0.2 lbs/ton of tapped steel will be achieved.
Process Modification	Charter Steel will implement furnace draft controls and good operational practices. Also see DEC above.
Scrap Management	Charter will minimize variations in scrap quality and steel contaminants. Also see DEC above

Boilers, heaters, torches
 VOC emissions are expected to be minimal from these sources.

Particulate

Steel melting and casting (EAF, LMF, VOD, continuous caster)
 Particulate emissions result from the steel making process. Lead emissions are due to the lead contained in the scrap steel. Lead is best controlled by PM control devices. The following feasible control technologies were evaluated. Charter Steel is proposing BACT determinations without conducting a cost effectiveness analysis for each process.

EAF, LMF and Continuous Caster Control	Description
Baghouse	This was the control option utilized by steel operations in the RBLC. The applicant proposes to install a melt shop baghouse with an outlet grain loading of 0.0024 grains/dscf for PM/PM10 and Lead.

Charge Scrap Handling
 Charter Steel will utilize work practices to minimize particulate.

Carbon, Lime and Dust Silos
 Charter Steel is proposing to install bin vents with a rating of 0.01 grains/dscf of PM.

Boilers, heaters, torches
 PM emissions are expected to be minimal from these sources.

Lead

Steel melting and casting (EAF, LMF, VOD, continuous caster)
 Lead emissions, mainly in particulate form, result from the use of lead containing material (scrap steel) in the steel making process. Lead is best controlled by PM control devices. The following feasible control technologies were evaluated. Charter Steel is proposing BACT determinations without conducting a cost effectiveness analysis for each process.

EAF, LMF and Continuous Caster Control	Description
Baghouse	This was the control option utilized by steel operations in the RBLC. The applicant proposes to install a melt shop baghouse with an outlet grain loading of 0.000065 grains/dscf for Lead.

Boilers, heaters, torches
 Lead emissions are expected to be minimal from these sources.

Ambient Air Quality Monitoring Requirements

The Charter Steel facility is located in AQCR 174 in Cuyahoga County in Cuyahoga Heights, Ohio. The area is attainment for all criteria pollutants with the exception of SO2. 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 minimus 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.

Charter Steel 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 minimus levels with the exception of PM10. Ohio EPA has identified representative PM10 data for use by Charter Steel in this project. Therefore, Charter Steel would not be required to perform preconstruction or postconstruction monitoring. The following are the projected impacts:

Pollutant	Averaging Period	Modeled Impact	Monitoring De Minimus
Lead	Quarterly	0.031 ug/m3	0.1 ug/m3
NO2	Annual	5.4 ug/m3	14 ug/m3
PM10	24-hour	23.5 ug/m3	10 ug/m3
CO	8-hour	464 ug/m3	575 ug/m3

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. ISCST3 (version 02035) was used in the regulatory default, urban mode. Five years of representative meteorological data (Cleveland surface data, Buffalo upper air data, 1987-1991) were used. Building downwash was incorporated into the ISCST3 estimates.

Predicted impacts of lead were below the monitoring de minimus. Predicted impacts of CO were below the PSD significant impact levels. There is no significant impact level for lead. Impacts from the modification, though, was compared to the Ohio acceptable incremental impact level for lead which is 25% of the NAAQS (0.375 ug/m3) and were below the PSD monitoring de minimus concentrations.

Peak impacts of NO2 and PM10 were above their respective PSD significant impact levels. Therefore, additional modeling to address PSD increments and NAAQS were necessary.

PSD Increment

Pollutant	Averaging Period	Modeled Impact	PSD Increment
NO2	Annual	5.4 ug/m3	25 ug/m3
PM10	24-hour	23.5 ug/m3	30 ug/m3
	Annual	8.8 ug/m3	17 ug/m3

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, Charter Steel's impact does exceed 50% of the available increment over a limited area but the constraining concentration is below 25 ug/m3.

NAAQS

Existing sources at the facility, existing sources above the PSD significant rates within the Charter Steel 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 <u>Period</u>	Modeled <u>Concentration</u>	NAAQS <u>Concentration</u>	Concentration <u>With Background</u>
NO ₂	Annual	7.5 ug/m ³	100 ug/m ³	55.5 ug/m ³
PM ₁₀	24-hour	97 ug/m ³	150 ug/m ³	125 ug/m ³ *
	Annual	16 ug/m ³	50 ug/m ³	34.4 ug/m ³

* Modeling for PM₁₀ did identify modeled violations to which Charter has demonstrated insignificant impact. A nearby facility, Alcoa, has been identified by Ohio EPA as the sole contributor to the modeled violations. Alcoa has enlisted contractor assistance to verify the inventory and the modeled results and will be submitting revised modeling, and if needed, a proposed control strategy.

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 not exceed one ton/year, therefore, no modeling was conducted. Lead emissions will exceed one ton/year, and are undergoing PSD review as a criteria pollutant. Mercury emissions will be less than one ton/year, and this pollutant is being addressed through Ohio BAT requirements.

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 manufactures have reportedly discontinued the use of mercury switches, so emissions from the EAF due to auto frag scrap are expected to decrease.

No more than 15% of the scrap fed to the EAF will be mercury containing scrap. The permit will specify that the permittee is to work to obtain scrap with the mercury containing components already removed, whenever possible. The technology for mercury reduction is a combination of using the baghouse and scrap management. 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.

Secondary Impact Analysis

Charter Steel 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.

Soil and Vegetation: EPA Air Quality Criteria documents were reviewed for information on pollutants and adverse effects on the type of vegetation and soils in the area. No adverse impact upon soils or vegetation is expected. The modeled concentrations are below the primary and secondary NAAQS limits.

Visibility: The Charter Steel facility is located nearly 200 miles from the closest class I area. Primary or secondary pollutants associated with this project are not anticipated to affect local or class I visibility.

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 Charter Steel for the installation of the new steel production equipment.



State of Ohio Environmental Protection Agency

RE: DRAFT PERMIT TO INSTALL CERTIFIED MAIL
CUYAHOGA COUNTY

Street Address:

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center

Application No: 13-04176

DATE: 3/18/2004

Charter Steel
Ted Rogers
4300 East 49th Street
Cuyahoga Heights, OH 44125

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on 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 proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of \$12350 will be due. Please do not submit any payment now.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Very truly yours,

Michael W. Ahern, Supervisor
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA

CLAA

PA

CUYAHOGA COUNTY

PUBLIC NOTICE PUBLIC HEARING
OHIO ENVIRONMENTAL PROTECTION AGENCY
ISSUANCE OF DRAFT PERMIT TO INSTALL
SUBJECT TO PREVENTION OF SIGNIFICANT DETERIORATION REVIEW
TO CHARTER STEEL

Public notice is hereby given that the Ohio Environmental Protection Agency (EPA) has issued, on March 18, 2004, a draft action of Permit to Install (PTI) application number 13-04176 to Charter Steel, Cuyahoga Heights, Ohio. This draft permit proposes to allow the installation of a new steel melt shop at the facility located at 4300 East 49th Street, Cuyahoga Heights, Ohio, 44125.

Air emissions of several pollutants will result. The proposed allowable criteria pollutant air emission rates which result from net increases at the facility are listed below, in tons per year.

<u>Pollutant</u>	<u>Tons/yr</u>
Particulate	119.25
PM10	105.12
NOx	188.51
CO	1395.01
VOC	77.41
SO2	99.53
Pb	1.78
Hg	0.17

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. This facility has demonstrated that the NO2 impact from the source is less than one half the available increment. The PM10 impact of this source is above one half of the increment, but the areal extent is localized. This facility has demonstrated that the impact from the new source is less than the available increment. Based on this analysis, the project complies with both the federal and state increment requirements for NO2 and PM10.

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 hearing on the draft air permit is scheduled for April 22, 2004, at the Cuyahoga Heights Village Hall, 4363 East 71st Street, Cuyahoga Heights, Ohio. The public hearing will commence at 7:00 p.m. to accept comments on the draft permit. A presiding officer will be present and may limit oral testimony 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 on the draft permit must be received by the close of the business day on April 26, 2004. Comments received after this date will not be considered to be a part of the official record.

Written comments may be submitted at the hearing or sent to: David Hearne of the Cleveland Division of Air Quality, Department of Public Health, 1925 Saint Clair Avenue, Cleveland, Ohio, 44114.

Copies of the draft permit application and technical support information may be reviewed and/or copies made by first calling to make an appointment at the Cleveland Division of Air Quality, located at the above address, telephone number (216) 664-2324.



**Permit To Install
Terms and
Conditions**

**Issue Date: To be entered upon final issuance
Effective Date: To be entered upon final issuance**

DRAFT PERMIT TO INSTALL 13-04176

Application Number: 13-04176
APS Premise Number: 1318171623
Permit Fee: **To be entered upon final issuance**
Name of Facility: Charter Steel
Person to Contact: Ted Rogers
Address: 4300 East 49th Street
Cuyahoga Heights, OH 44125

Location of proposed air contaminant source(s) [emissions unit(s)]:
**4300 East 49th Street
Cuyahoga Heights, Ohio**

Description of proposed emissions unit(s):
Melt shop.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) 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 above described 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

Director

Charter Steel

Facility ID: 1318171623

PTI Application: 13-04176

Issued: To be entered upon final issuance

Part I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install General Terms and Conditions

1. Monitoring and Related Recordkeeping 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:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. 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:
 - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. 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 appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.9 below if no deviations occurred during the quarter.

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- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., 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.
- iv. 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.

2. 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 appropriate Ohio EPA District Office or local air agency 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).

3. 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.

4. 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.

5. Severability Clause

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.

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6. 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 reissuance, or modification, or for denial of a permit renewal application.
- 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, reopened, 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, reopening 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.

7. 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 this Permit To Install.

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit

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shall not be federally enforceable and shall be enforceable under State law only.

9. Compliance Requirements

- a. 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.
- b. 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:
 - i. 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.
 - ii. 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.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. 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.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency 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:
 - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - ii. 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.

10. Permit To Operate Application

- a. If 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

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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).

- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

12. 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.

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B. State Only Enforceable Permit To Install General Terms and Conditions

1. Compliance Requirements

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

2. 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 appropriate Ohio EPA District Office or local air agency.
- 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 appropriate Ohio EPA District Office or local air agency. 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., 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.)

3. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

4. Termination of Permit To Install

This permit to install shall terminate within eighteen months of the effective date of the permit to install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may

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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.

5. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. 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 the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install 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.

6. 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.

7. Applicability

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are

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required for any emissions unit for which a Permit To Install is required.

8. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit To Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

9. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

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., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

C. Permit To Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

**SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS**

<u>Pollutant</u>	<u>Tons Per Year</u>
PM	119.25
PM10	105.12
NOx	188.51
CO	1395.01
SO2	99.53
VOC	77.41
Pb	1.78
Hg	0.17

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Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

None.

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

None.

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
B008 - 25 mmBtu/hr natural gas boiler for the VOD system equipped with a low NOx burner	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-17-10(B)(1)
	OAC rule 3745-18-06(A)
	OAC rule 3745-31-10 thru 20
	OAC rule 3745-21-08(B)
	OAC rule 3745-23-06(B)
	40 CFR 60 Subpart Dc

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<u>Applicable Emissions Limitations/Control Measures</u>	
Sulfur dioxide (SO ₂) emissions shall not exceed 0.01 lb/hr and 0.06 ton/year.	also include compliance with the requirements of OAC rule 3745-17-07(A).
The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20), OAC rule 3745-18-06(A) and OAC rule 3745-17-07(A)(1).	See Section A.2.c. below. Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
PM/PM ₁₀ emissions shall not exceed 0.19 lb/hr and 0.83 ton/year.	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
Carbon monoxide (CO) emissions shall not exceed 2.06 lbs/hr and 9.02 tons/year.	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas
Organic compound (OC) emissions shall not exceed 0.27 lbs/hr and 1.18 tons/year.	See Section A.2.a. below.
Nitrogen oxide (NO _x) emissions shall not exceed 2.45 lbs/hr and 10.7 tons/year.	See Section A.2.a. below.
Volatile Organic Compounds (VOC) emissions shall not exceed 0.13 lb/hr and 0.59 ton/year.	See Section A.2.b. below.
The requirements of this rule	

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

- 2.a** The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.
- 2.b** So long as only natural gas fuel is burned, this emissions unit is not subject to the emission limits listed in 40 CFR Part 60, Subpart Dc.
- 2.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 natural gas as fuel, acceptance of a NO_x limitation of 100 lb of NO_x/MMcf and acceptance of a CO limitation of 84 lb of CO/MMcf constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

II. Operational Restrictions

- 1. The permittee shall burn only natural gas in this emissions unit.

III. 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 and quantity of fuel burned in this emissions unit.

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1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

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

- a. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- b. Emission Limitation:

PM/PM10 emissions shall not exceed 0.19 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0245 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9) while firing natural gas.

- c. Emission Limitation:

0.83 TPY of PM/PM10

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000

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pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- d Emission Limitation:
CO emissions shall not exceed 2.06 lbs/hr.

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Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0245 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10 while firing natural gas.

- e. Emission Limitation:
9.02 TPY of CO emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- f. Emission Limitation:
NO_x emissions shall not exceed 2.45 lbs/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NO_x/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0245 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7 while firing natural gas.

- g. Emission Limitation:
10.7 TPY of NO_x emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly NO_x emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton.

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Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- h. Emission Limitation:
OC emissions shall not exceed 0.27 lb/hr.

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Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 11 lbs of OC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0245 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

- i. Emission Limitation:
1.18 TPY of OC emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- j. Emission Limitation:
VOC emissions shall not exceed 0.13 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0245 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 25 or 25A while firing natural gas.

- k. Emission Limitation:
0.59 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- l. Emission Limitation:
SO2 emissions shall not exceed 0.01 lb/hr.

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Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO₂/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0245 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6 while firing natural gas.

- m. Emission Limitation:
0.06 TPY of SO₂ emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly SO₂ emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

VI. Miscellaneous Requirements

None.

Chart

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Emissions Unit ID: B008

Issued: To be entered upon final issuance**B. State Only Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B008 - 25 mmBtu/hr natural gas boiler for the VOD system	None.	None.

2. Additional Terms and Conditions

2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

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Emissions Unit ID: F001

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
F001 - 250 TPH slag processing operation	OAC rule 3745-31-05(A)(3)
drop ball crushing material handling, dumping	OAC rule 3745-31-10 thru 20
slag storage pile load-in and wind erosion of storage piles (see Section A.2.c for identification of storage pile)	OAC rule 3745-17-07(B)(1)
	OAC rule 3745-17-08(B)

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OAC rule 3745-31-05(A)(3)	Applicable Emissions <u>Limitations/Control Measures</u>	no visible emissions except for 3 minutes in any hour
OAC rule 3745-31-10 thru 20	<p>The requirements of this rule also include compliance with the requirements and OAC rule 3745-31-(10) thru (20).</p> <p>PM 1.98 lbs/hr and 1.31 TPY PM₁₀ 0.79 lb/hr and 0.56 TPY</p> <p>Visible emissions of fugitive dust shall not exceed 15% opacity as a six-minute average.</p> <p>best available technology control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see A.2.).</p>	<p>See section A.2.g</p> <p>The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> <p>The control measures specified by this rule are equivalent to the control measures established pursuant to OAC rule 3745-31-05(A)(3).</p>
OAC rule 3745-17-07 (B)(6)	See section A.2.g	
OAC rule 3745-17-08 (B), (B)(6)	<p>The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> <p>The control measures specified by this rule are less stringent than the control measures established pursuant to OAC rule 3745-31-05(A)(3).</p> <p>The requirements of this rule also include compliance with the requirements and OAC rule 3745-31-(10) thru (20),</p> <p>PM emissions, 0.84 TPY PM₁₀ emissions, 0.39 TPY</p> <p>best available technology control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.2.d, A.2.e and A.2.f) ;</p>	

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

2.a The permittee shall employ best available technology control measures for the slag crushing operation(s) for the purpose of ensuring compliance with the applicable requirements. In accordance with the permittee's permit application, the permittee has committed to perform the following control measure(s) to ensure compliance:

- use of an enclosure where practical
- use of water to sufficiently minimize particulate emissions

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

2.b For each material handling operation that is not adequately enclosed, the control measure(s) shall be implemented if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) is (are) necessary to ensure compliance with the applicable requirements. Any required implementation of the control measure(s) shall continue during the operation of the material handling operation(s) until further observation confirms that use of the control measure(s) is unnecessary.

2.c The storage piles associated with this source and subject to the requirements of OAC rule 3745-31-05(A)(3) are slag storage piles.

2.d The permittee shall employ best available technology control measures on all loading and wind erosion operations associated with the storage piles for the purpose of ensuring compliance with the above-mentioned applicable requirements. The permittee shall reduce the drop height of the front-end loader and apply water if necessary, to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

2.e The above-mentioned control measure(s) shall be employed for each loading operation of each storage pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measure(s) shall continue during any such operation until further observation confirms that use of the measure(s) is unnecessary.

2.f Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-17-08.

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- 2.g 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 partial enclosure when practical and water to minimize particulate emissions constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

II. Operational Restrictions

- The permittee shall apply water at all emission points to minimize or eliminate, at all times, visible emissions of fugitive dust generated by the slag crushing operation. The water shall be applied on a continuous basis. This term and condition shall be waived during wet conditions when there is sufficient moisture to prevent visible emissions of fugitive dust.
- The maximum annual production rate for this emissions unit shall not exceed 112,500 tons, based upon a rolling, 12-month summation of the tons of slag processed per month. In order to ensure federal enforceability during the first twelve months of operation after the permit issuance, the permittee shall comply with the following monthly process restrictions:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Production Totals (Tons)</u>
1	9,375
1-2	18,750
1-3	28,125
1-4	37,500
1-5	46,875
1-6	56,250
1-7	65,625
1-8	75,000
1-9	84,375
1-10	93,750
1-11	103,125
1-12	112,500

After the first 12 calendar months of operation after the issuance of this permit, compliance with the annual slag processing limitation shall be based upon a rolling, 12-month summation of the slag processed.

III. Monitoring and/or Recordkeeping Requirements

- Except as otherwise provided in this section, the permittee shall perform daily inspections of loading operations and wind erosion at each storage pile.
- No inspection shall be necessary for wind erosion from the surface of a storage pile when the pile

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is covered with snow and/or ice and for any storage pile activity 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 purpose of the inspections is to determine the need for implementing the control measures specified in this permit for loading operations of a storage pile, and wind erosion from the surface of a storage pile. The inspections shall be performed during representative, normal storage pile operating conditions.
4. The permittee may, upon receipt of written approval from the Cleveland Division of Air Quality (Cleveland DAQ), modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.
5. 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 days the control measures were implemented and, for wind erosion from pile surfaces, the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measure(s).

The information required in 5.d. shall be kept separately for the loading operations and the pile surfaces (wind erosion), and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.
6. The permittee shall maintain monthly production records for the tons of slag processed in this emissions unit.

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IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month slag process rate limitation. Each report shall be submitted to the Cleveland DAQ within 30 days after the deviation occurs.
2. The permittee shall submit deviation reports that identify any of the following occurrences:
 - a. each day 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.
3. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

V. Testing Requirements

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

- a. Emission Limitation
Visible emissions shall not exceed 15% opacity as a six-minute average.

Applicable Compliance Method

Compliance shall be determined by visible emission observations performed in accordance with U.S. EPA Reference Method 9 and the procedures specified in OAC rule 3745-17-03 (B)(1).

- b. Emission Limitation crusher emissions
PM emissions 1.98 lbs/hr
PM-10 emissions 0.79 lb/hr

Applicable Compliance Method

The lb/hr emission limitation shall be based on calculations using the controlled emission factors for Crushed Stone Processing taken from U.S. EPA reference document AP-42, 5th edition, Compilation of Air Pollution Emission Factors, Section 13.2.4 (1/95) to establish the emission factor in lb/ton. The emission factors are:

0.00010 lb per ton of materials handled for PM emissions,
0.00178 lb per ton of materials screened for PM emissions,
0.00124 lb per ton of materials crushed for PM emissions,

0.00005 lb per ton of materials handled for PM10 emissions,
0.00084 lb per ton of materials screened for PM10 emissions,

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0.00059 lb per ton of materials crushed for PM10 emissions,

- c. Emission Limitation crusher emissions
 PM emissions 1.31 TPY
 PM-10 emissions 0.56 TPY

Applicable Compliance Method

The TPY emission limitation shall be based on calculations using the controlled emission factors in section A.V.1.b. This emission factor is multiplied by the annual tons of material handled, screened and crushed and divided by the factor of 2000 lbs/ton.

- d. Emission Limitation: storage piles
 no visible emissions except for 3 minutes in any hour

Applicable Compliance Method

Compliance with the visible emission limitations for the storage piles identified 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)(c) of OAC rule 3745-17-03.

- e. Emission Limitation -
 PM emissions, 0.84 TPY from loading operations and wind erosion of storage
 piles
 PM10 emissions, 0.39 TPY

Applicable Compliance Method

The TPY emission limitation shall be based on calculations using the equation 1 for Aggregate Handling and Storage Piles taken from U.S. EPA reference document AP-42, 5th edition, Compilation of Air Pollution Emission Factors, Section 13.2.4 (1/95) to establish the emission factor in lb/ton. The calculated emission factors are: 0.015 lb per ton of materials handled for PM emissions and 0.007 lb per ton of materials handled for PM10 emissions. This emission factor is multiplied by the annual tons of material handled and (1-0.50) to account for the 50% watering emission control efficiency. The calculated value is then divided by 2000 lbs/ton to determine emissions in tons/year.

VI. Miscellaneous Requirements

1. None.

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Issued: To be entered upon final issuance

Facility ID: 1318171623

Emissions Unit ID: F001

B. State Only Enforceable Section**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F001 - Slag material handling, dumping, drop ball crushing, processing and storage	None.	None.

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

Chart
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Emissions Unit ID: F002

Issued: To be entered upon final issuance

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>		<u>Applicable Rules/Requirements</u>
F002 -paved roadways and parking areas (see Section A.2.a)	unpaved roadways and parking areas (see Section A.2.b)	OAC rule 3745-31-05(A)(3)
		OAC rule 3745-31-10 thru 20
		OAC rule 3745-17-07 (B)(4)
		OAC rule 3745-17-08 (B), (B)(8), (B)(9)

**Chart
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	Applicable Emissions <u>Limitations/Control Measures</u>	
OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements and OAC rule 3745-31-(10) thru (20).	4.43 tons/year of PM emissions 2.40 tons/year of PM ₁₀ emissions no visible emissions, except for three minutes during any 60-minute period
OAC rule 3745-31-10 thru 20	6.40 tons/year of PM emissions 3.62 tons/year of PM ₁₀ emissions no visible particulate emissions except for 1 minute during any 60-minute period best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.2.c, and A.2.e through A.2.i) See section A.2.j	best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.2.d through A.2.i) See section A.2.j The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-07 (B)(5)	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).	The control measures specified by these rules are less stringent than the control measures established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-08 (B), (B)(2)	The control measures specified by these rules are less stringent than the control measures established pursuant to OAC rule 3745-31-05(A)(3). The requirements of this rule also include compliance with the requirements and OAC rule 3745-31-(10) thru (20).	

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

- 2.a** The paved roadways and parking areas that are covered by this permit and subject to the above-mentioned requirements are listed below:

paved roadways:

2.98 miles

- 2.b** The unpaved roadways and parking areas that are covered by this permit and subject to the above-mentioned requirements are listed below:

unpaved roadways:

0.22 miles

- 2.c** The permittee shall employ best available control measures on all paved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the paved roadways and parking areas by flushing with water at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

- 2.d** The permittee shall employ best available control measures on all unpaved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the unpaved roadways and parking areas with water at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

- 2.e** 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 a paved or unpaved 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. Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.

- 2.f** Any unpaved roadway or parking area, which during the term of this permit is paved or takes the characteristics of a paved surface due to the application of

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certain types of dust suppressants, may be controlled with the control measure(s) specified above for paved surfaces. Any unpaved roadway or parking area that takes the characteristics of a paved roadway or parking area due to the application of certain types of dust suppressants shall remain subject to the visible emission limitation for unpaved roadways and parking areas. Any unpaved roadway or parking area that is paved shall be subject to the visible emission limitation for paved roadways and parking areas.

- 2.g** 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.
- 2.h** 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.
- 2.i** 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 3745-31-05.
- 2.j** 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 reduced speed limits and water flushing for control constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

II. Operational Restrictions

None.

Issued: To be entered upon final issuance**III. Monitoring and/or Recordkeeping Requirements**

1. Except as otherwise provided in this section, the permittee shall perform daily inspections of all the roadways and parking areas.
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 may, upon receipt of written approval from the appropriate Ohio EPA District Office or local air agency, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.
4. 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 days the control measures were implemented and the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measures.

The information required in 4.d. shall be kept separately for (i) the paved roadways and parking areas and (ii) the unpaved roadways and parking areas, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

IV. Reporting Requirements

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1. The permittee shall submit deviation reports that identify any of the following occurrences:
 - a. each day 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 General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
no visible particulate emissions except for 1 minute during any 60-minute period for paved roadways

Applicable Compliance Method:
Compliance with the emission limitation for the paved roadways and parking areas identified 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.
 - b. Emission Limitation:
no visible particulate emissions except for 3 minutes during any 60-minute period for unpaved roadways

Applicable Compliance Method:
Compliance with the emission limitation for the unpaved roadways and parking areas identified 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.
 - c. Emission Limitation -
Unpaved Roads
PM emissions, 4.43 TPY
PM10 emissions, 2.4 TPY

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Applicable Compliance Method -

The TPY emission limitation shall be based on calculations using the equation 1 for Unpaved Roadways and Parking areas taken from U.S. EPA reference document AP-42, 5th edition, **Compilation of Air Pollution Emission Factors, Section 12.5-4 (1/95)** to establish the emission factor in lb/VMT. The emission factors are 14.0 lb/VMT for PM emissions and 7.6 lb/VMT for PM10 emissions. This emission factor is multiplied by the annual vehicle miles traveled (VMT) and (1-0.50) to account for the 50% watering emission control efficiency and (1-0.80) to account for the 80% vehicle speed control efficiency and divided by the factor of 2000 lbs/ton.

Chart**PTI A**

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- d. Emission Limitation -
Paved Roads
PM emissions, 6.4 TPY
PM10 emissions, 3.62 TPY

Applicable Compliance Method -

The TPY emission limitation shall be based on calculations using the equation 1 for Paved Roadways and Parking areas taken from U.S. EPA reference document AP-42, 5th edition, **Compilation of Air Pollution Emission Factors, Section 12.5-4 (1/95)** to establish the emission factor in lb/VMT. The calculated emission factors are; 0.78 lb/VMT for PM emissions and 0.44 lb/VMT for PM10 emissions. This emission factor is multiplied by the annual vehicle miles traveled (VMT) and (1-0.80) to account for the 80% watering emission control efficiency.

VI. Miscellaneous Requirements

None.

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Emissions Unit ID: F002

B. State Only Enforceable Section**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F002 - facility roadways and parking areas	None.	None.

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

Chart
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Emissions Unit ID: F003

Issued: To be entered upon final issuance

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	OAC rule 3745-17-08(B)
F003 - Charge handling of steel scrap Handling of steel scrap is conducted inside of a building.	OAC rule 3745-31-05(A)(3) OAC rule 3745-31-10 thru 20	
	OAC rule 3745-17-07(B)(1)	
	OAC rule 3745-17-11	

Chart

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Emissions Unit ID: F003

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Applicable Emissions
Limitations/Control
Measures

equivalent to the control measures established pursuant to OAC rule 3745-31-05(A)(3).

The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20).

2.52 lbs/hr and 8.12 TPY of PM/PM10 emissions

Visible emissions of fugitive dust shall not exceed 5% opacity as a six-minute average.

best available technology control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust

See section A.2.a below

The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

The control measures specified by this rule are

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Chart

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Emissions Unit ID: F003

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

- 2.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 building for partial capture along with work practices constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

II. Operational Restrictions

1. The maximum annual charge rate for this emissions unit shall not exceed 772,351 tons, based upon a rolling, 12-month summation of the tons of scrap steel charged per month. In order to ensure federal enforceability during the first twelve months of operation after the permit issuance, the permittee shall comply with the following monthly production restrictions:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Production Totals (Tons)</u>
1	64,363
1-2	128,726
1-3	193,089
1-4	257,452
1-5	321,815
1-6	386,178
1-7	450,541
1-8	514,904
1-9	579,267
1-10	643,630
1-11	707,993
1-12	772,351

After the first 12 calendar months of operation after the issuance of this permit, compliance with the annual steel scrap charge limitation shall be based upon a rolling, 12-month summation.

2. Prior to the installation of this emissions unit, the permittee shall submit a Scrap Management Plan (SMP) to the Cleveland DAQ for review and approval. The main focus of the SMP will be to ensure that the purchase of excessively oily scrap and other combustible material will be minimized to the greatest extent possible. All grades of scrap shall be free of excessive dirt, oil, and grease. Heavily oiled scrap shall not be used. As part of the SMP, the permittee shall install a radionuclide detector which will be used to inspect all incoming scrap material into the facility.

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Radioactive scrap material shall not be used at this facility. Any scrap material which is determined to be radioactive shall be disposed of in accordance with the Nuclear Regulatory Commission's (NRC) requirements.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily charge rate records for this emissions unit. These records, at a minimum, shall contain the following information:
 - a. the number of hours this emissions unit was in operation; and
 - b. the tons of steel scrap charged.
2. The permittee shall maintain monthly records of the tons of steel scrap charged during each calendar month.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland DAQ which identify all exceedances of the rolling, 12-month steel scrap charge rate limitation for the first 12 calendar months of operation following the issuance of this permit. Each report shall be submitted to the Cleveland DAQ within 30 days after the deviation occurs.

V. Testing Requirements

1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
2.52 lbs/hr of PM/PM10 emissions

Applicable Compliance Method:
Compliance with the hourly emission limitation may be determined through the use of the emission factor taken from the "Inventory of Iron Foundry Emissions", A.T.Kearney Report for Raw material handling and Charge make-up (0.07 lb/ton) which is multiplied by the maximum hourly charge rate for the emissions unit (120 tons/hr) and (1-0.70) which is the 70% control efficiency of scrap steel handling conducted inside of the building enclosure as well as work practices.
 - b. Emission Limitation:
8.12 TPY of PM/PM10 emissions

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Applicable Compliance Method:

The ton per year emissions shall be determined by multiplying the emission factor taken from the "Inventory of Iron Foundry Emissions", A.T.Kearney Report for Raw material handling and Charge make-up (0.07 lb/ton) by the actual annual steel scrap charge rate for the emissions unit, (1-0.70) which is the 70% control efficiency of scrap steel handling conducted inside of the building enclosure as well as work practices and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance with the annual steel scrap charge limitation based upon a rolling, 12-month summation is met.

- c. **Emission Limitation:**
Visible emissions of fugitive dust shall not exceed 5% opacity as a six-minute average.

Chart

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Emissions Unit ID: F003

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Applicable Compliance Method

Compliance with the visible emission limitations may 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)(4)(a) through (B)(4)(c) of OAC rule 3745-17-03.

VI. Miscellaneous Requirements

None.

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F003 - Charge handling of steel scrap	None.	None.

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

Chart**PTI A**

Emissions Unit ID: F004

Issued: To be entered upon final issuance**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F004 - Dust silo equipped with a bin vent for control of particulate emissions from the Melt Shop Baghouse	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and 40 CFR Part 60 Subpart AAa.
	OAC rule 3745-31-10 thru 20	0.01 grain/dry standard cubic feet of exhaust gases and 0.10 pounds/hour and 0.45 TPY of PM/PM ₁₀ emissions See A.2.a
	OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(A)	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to 40 CFR Part 60 Subpart AAa.
	40 CFR Part 60 Subpart AAa	Visible particulate emissions shall not exceed 10% opacity as a 6-minute average.

Emissions Unit ID: F004

2. Additional Terms and Conditions

- 2.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 bin vent filter with an emission limit of 0.01 gr/dscf of exhaust gases constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. 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. If visible emissions are observed, the permittee shall also note the following in the operations log:
- the color of the emissions;
 - whether the emissions are representative of normal operations;
 - if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - the total duration of any visible emission incident; and
 - any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

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

V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):
- Emission Limitation:
Visible PE shall not exceed 10% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations

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performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- b. Emission Limitation:
PM/PM10 emissions shall not exceed 0.01 grain/dry standard cubic feet of exhaust gases and 0.10 pounds/hour

Applicable Compliance Method:

Compliance with the emission limitation may be determined by the use of the calculation below using the control equipment manufacturer's outlet rate of 0.01 gr/dscf and gas flow rate of 1200 acfm at ambient temperature.

$$(0.01 \text{ grains/dscf}) * (1200 \text{ acfm}) * (70+460) / (70+460) * (1 \text{ lb}/7000 \text{ grains}) * (60 \text{ min}/1 \text{ hr}) = 0.10 \text{ lb/hr}$$

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

- c. Emission Limitation:
0.45 TPY OF PM/PM10 emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

VI. Miscellaneous Requirements

None.

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Emissions Unit ID: F004

B. State Only Enforceable Section**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F004 - Dust silo	None.	None.

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

Chart
PTI A

Emissions Unit ID: P032

Issued: To be entered upon final issuance

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P032 - number 1 natural gas fired tundish preheater rated at 20 mmBtu/hr	OAC rule 3745-31-05(A)(3)	OAC rule 3745-17-07(A)(1)
		OAC rule 3745-17-10(B)(1)
	OAC rule 3745-31-10 thru 20	
		OAC rule 3745-18-06(A)
		OAC rule 3745-21-08(B)
		OAC rule 3745-23-06(B)

Chart

PTI A

Emissions Unit ID: P032

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<u>Applicable Emissions Limitations/Control Measures</u>	
Sulfur dioxide (SO ₂) emissions shall not exceed 0.01 lb/hr and 0.05 ton/year.	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-18-06(A).	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
PM/PM ₁₀ emissions shall not exceed 0.15 lb/hr and 0.66 ton/year.	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas
Carbon monoxide (CO) emissions shall not exceed 1.64 lbs/hr and 7.18 tons/year.	See Section A.2.a. below.
Nitrogen oxide (NO _x) emissions shall not exceed 1.96 lbs/hr and 8.58 tons/year.	See Section A.2.a. below.
Volatile Organic Compounds (VOC) emissions shall not exceed 0.11 lb/hr and 0.47 ton/year.	
Organic compound (OC) emissions shall not exceed 0.22 lb/hr and 0.96 ton/year.	
See section A.2.b below.	
See section A.2.c. below.	

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

2.a The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.

2.b The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following from the baghouse outlet:

PM/PM10 emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO₂) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NO_x) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

2.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 natural gas as fuel, acceptance of a NO_x emission limitation of 100 lbs/MMcf and acceptance of a CO emission limitation of 84 lbs/MMcf constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

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Emissions Unit ID: P032

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.
2. The emissions from P032 shall be vented to the melt shop baghouse.

III. 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 and quantity of fuel burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

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

- a. Emission Limitation:
3 percent opacity from the meltshop baghouse stack exit

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- b. Emission Limitation:
PM/PM10 emissions shall not exceed 0.15 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for sources P900-P902.

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- c. Emission Limitation:
0.66 TPY of PM/PM10 emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- d. Emission Limitation:
CO emissions shall not exceed 1.64 lbs/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- e. Emission Limitation:
7.18 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- f. Emission Limitation:
NOx emissions shall not exceed 1.96 lbs/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NOx/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section

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Facility ID: 1318171623

Emissions Unit ID: P032

1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

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- g. Emission Limitation:
8.58 TPY of NOx emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- h. Emission Limitation:
VOC emissions shall not exceed 0.11 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- i. Emission Limitation:
0.47 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- j. Emission Limitation:
SO2 emissions shall not exceed 0.01 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO2/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table

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1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

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- k. Emission Limitation:
0.05 TPY of SO₂ emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly SO₂ emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- l. Emission Limitation:
OC emissions shall not exceed 0.22 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 11 lbs of OC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0198 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

- m. Emission Limitation:
0.96 TPY of OC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

VI. Miscellaneous Requirements

None.

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Facility ID: 1318171623

Emissions Unit ID: P032

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P032 - number 1 natural gas fired tundish preheater rated at 20 mmBtu/hr	None.	None.

2. Additional Terms and Conditions

2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

Chart
PTI A

Emissions Unit ID: P033

Issued: To be entered upon final issuance

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P033 - number 2 natural gas fired tundish preheater rated at 20 mmBtu/hr	OAC rule 3745-31-05(A)(3)	OAC rule 3745-17-07(A)(1)
		OAC rule 3745-17-10(B)(1)
	OAC rule 3745-31-10 thru 20	
		OAC rule 3745-18-06(A)
		OAC rule 3745-21-08(B)
		OAC rule 3745-23-06(B)

Chart**PTI A**

Emissions Unit ID: P033

Issued: To be entered upon final issuance

Applicable Emissions Limitations/Control Measures	
Sulfur dioxide (SO ₂) emissions shall not exceed 0.01 lb/hr and 0.05 ton/year.	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-18-06(A).	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
PM/PM ₁₀ emissions shall not exceed 0.15 lb/hr and 0.66 ton/year.	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas
Carbon monoxide (CO) emissions shall not exceed 1.64 lbs/hr and 7.18 tons/year.	See Section A.2.a. below.
Nitrogen oxide (NO _x) emissions shall not exceed 1.96 lbs/hr and 8.58 tons/year.	See Section A.2.a. below.
Volatile Organic Compounds (VOC) emissions shall not exceed 0.11 lb/hr and 0.47 ton/year.	
Organic compound (OC) emissions shall not exceed 0.22 lb/hr and 0.96 ton/year.	
See section A.2.b below	
See section A.2.c below	

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

2.a The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.

2.b The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following from the baghouse outlet:

PM/PM10 emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO₂) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NO_x) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

2.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 natural gas as fuel, acceptance of a NO_x limitation of 100 lb of NO_x/MMcf and acceptance of a CO limitation of 84 lb of CO/MMcf constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.
2. The emissions from P033 shall be vented to the melt shop baghouse.

III. 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 and quantity of fuel burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

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

- a. Emission Limitation:
3 percent opacity from the meltshop baghouse stack exit

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- b. Emission Limitation:
PM/PM10 emissions shall not exceed 0.15 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- c. Emission Limitation:

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0.66 TPY of PM/PM10 emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- d Emission Limitation:
CO emissions shall not exceed 1.64 lbs/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- e. Emission Limitation:
7.18 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- f. Emission Limitation:
NOx emissions shall not exceed 1.96 lbs/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NOx/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

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If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- g. Emission Limitation:
8.58 TPY of NO_x emissions

Issued: To be entered upon final issuance

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- h. Emission Limitation:
VOC emissions shall not exceed 0.11 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- i. Emission Limitation:
0.47 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- j. Emission Limitation:
SO₂ emissions shall not exceed 0.01 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO₂/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in

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Emissions Unit ID: P033

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accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- k. Emission Limitation:
0.05 TPY of SO₂ emissions

Issued: To be entered upon final issuance**Applicable Compliance Method(s):**

The ton per year limitation was developed by multiplying the hourly SO₂ emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- l. **Emission Limitation:**
OC emissions shall not exceed 0.22 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 11 lbs of OC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0198 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

- m. **Emission Limitation:**
0.96 TPY of OC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

VI. Miscellaneous Requirements

None.

Emissions Unit ID: P033

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P033 - number 2 natural gas fired tundish preheater rated at 20 mmBtu/hr	None.	None.

2. Additional Terms and Conditions

2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

Chart
PTI A

Emissions Unit ID: P034

Issued: To be entered upon final issuance

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P034 - number 3 natural gas fired tundish preheater rated at 20 mmBtu/hr	OAC rule 3745-31-05(A)(3)	OAC rule 3745-17-07(A)(1)
		OAC rule 3745-17-10(B)(1)
	OAC rule 3745-31-10 thru 20	
		OAC rule 3745-18-06(A)
		OAC rule 3745-21-08(B)
		OAC rule 3745-23-06(B)

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Emissions Unit ID: P034

Issued: To be entered upon final issuance

<u>Applicable Emissions Limitations/Control Measure</u>	
Sulfur dioxide (SO ₂) emissions shall not exceed 0.01 lb/hr and 0.05 ton/year.	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-18-06(A).	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
PM/PM ₁₀ emissions shall not exceed 0.15 lb/hr and 0.66 ton/year.	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas See Section A.2.a. below.
Carbon monoxide (CO) emissions shall not exceed 1.64 lbs/hr and 7.18 tons/year.	See Section A.2.a. below.
Nitrogen oxide (NO _x) emissions shall not exceed 1.96 lbs/hr and 8.58 tons/year.	
Volatile Organic Compounds (VOC) emissions shall not exceed 0.11 lb/hr and 0.47 ton/year.	
Organic compound (OC) emissions shall not exceed 0.22 lb/hr and 0.96 ton/year.	
See section A.2.b below	
See section A.2.c below	

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

2.a The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.

2.b The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following:

PM/PM10 emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO₂) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NO_x) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

2.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 natural gas as fuel, acceptance of a NO_x limitation of 100 lb of NO_x/MMcf and acceptance of a CO limitation of 84 lb of CO/MMcf constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.
2. The emissions from P034 shall be vented to the melt shop baghouse.

III. 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 and quantity of fuel burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

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

- a. Emission Limitation:
3 percent opacity from the meltshop baghouse stack exit

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- b. Emission Limitation:
PM/PM10 emissions shall not exceed 0.15 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- c. Emission Limitation:

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0.66 TPY of PM/PM10 emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- d Emission Limitation:
CO emissions shall not exceed 1.64 lbs/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- e. Emission Limitation:
7.18 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- f. Emission Limitation:
NOx emissions shall not exceed 1.96 lbs/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NOx/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

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PTI Application: 13-04176

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If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- g. Emission Limitation:
8.58 TPY of NO_x emissions

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Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- h. Emission Limitation:
VOC emissions shall not exceed 0.11 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- i. Emission Limitation:
0.47 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- j. Emission Limitation:
SO₂ emissions shall not exceed 0.01 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO₂/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in

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Emissions Unit ID: P034

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accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- k. Emission Limitation:
0.05 TPY of SO₂ emissions

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The ton per year limitation was developed by multiplying the hourly SO₂ emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- l. **Emission Limitation:**
OC emissions shall not exceed 0.22 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 11 lbs of OC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0198 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

- m. **Emission Limitation:**
0.96 TPY of OC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

VI. Miscellaneous Requirements

None.

**Chart
PTI A**

Emissions Unit ID: P034

Issued: To be entered upon final issuance

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P034 - number 3 natural gas fired tundish preheater rated at 20 mmBtu/hr	None.	None.

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P035 - number 1 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr	OAC rule 3745-31-05(A)(3)	OAC rule 3745-17-10(B)(1)
		OAC rule 3745-18-06(A)
	OAC rule 3745-31-10 thru 20	OAC rule 3745-21-08(B)
		OAC rule 3745-23-06(B)
	OAC rule 3745-17-07(A)(1)	

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Emissions Unit ID: P035

Issued: To be entered upon final issuance

Applicable Emissions Limitations/Control Measures	See section A.2.c below
Sulfur dioxide (SO ₂) emissions shall not exceed 0.006 lb/hr and 0.03 ton/year.	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-18-06(A).	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
PM/PM ₁₀ emissions shall not exceed 0.074 lb/hr and 0.32 ton/year.	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas
Carbon monoxide (CO) emissions shall not exceed 0.82 lb/hr and 3.59 tons/year.	See Section A.2.a. below.
Nitrogen oxide (NO _x) emissions shall not exceed 0.98 lb/hr and 4.29 tons/year.	See Section A.2.a. below.
Volatile Organic Compounds (VOC) emissions shall not exceed 0.05 lb/hr and 0.24 ton/year.	
Organic compound (OC) emissions shall not exceed 0.10 lb/hr and 0.44 ton/year.	
See section A.2.b below	

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

2.a The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.

2.b The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following:

PM/PM10 emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO₂) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NO_x) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

2.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 natural gas as fuel, acceptance of a NO_x limitation of 100 lb of NO_x/MMcf and acceptance of a CO limitation of 84 lb of CO/MMcf constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.
2. The emissions from P035 shall be vented to the melt shop baghouse.

III. 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 and quantity of fuel burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

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

- a. Emission Limitation:
3 percent opacity from the meltshop baghouse stack exit

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- b. Emission Limitation:
PM/PM10 emissions shall not exceed 0.074 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- c. Emission Limitation:

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0.32 TPY of PM/PM10 emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- d Emission Limitation:
CO emissions shall not exceed 0.82 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- e. Emission Limitation:
3.59 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- f. Emission Limitation:
NOx emissions shall not exceed 0.98 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NOx/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

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Issued: To be entered upon final issuance

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- g. Emission Limitation:
4.29 TPY of NOx emissions

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Emissions Unit ID: P035

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- h. **Emission Limitation:**
VOC emissions shall not exceed 0.05 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- i. **Emission Limitation:**
0.24 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- j. **Emission Limitation:**
SO₂ emissions shall not exceed 0.006 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO₂/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- k. **Emission Limitation:**
0.03 TPY of SO₂ emissions

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Emissions Unit ID: P035

Issued: To be entered upon final issuance**Applicable Compliance Method:**

The ton per year limitation was developed by multiplying the hourly SO₂ emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- l. **Emission Limitation:**
OC emissions shall not exceed 0.10 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 11 lbs of OC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

- m. **Emission Limitation:**
0.44 TPY of OC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

VI. Miscellaneous Requirements

None.

Issued: To be entered upon final issuance

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P035 - number 1 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr	None.	None.

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P036 - number 2 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr	OAC rule 3745-31-05(A)(3)	OAC rule 3745-17-10(B)(1)
		OAC rule 3745-18-06(A)
	OAC rule 3745-31-10 thru 20	OAC rule 3745-21-08(B)
		OAC rule 3745-23-06(B)
	OAC rule 3745-17-07(A)(1)	

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Emissions Unit ID: P036

Issued: To be entered upon final issuance

<u>Applicable Emissions Limitations/Control Measures</u>	See section A.2.c below
Sulfur dioxide (SO ₂) emissions shall not exceed 0.006 lb/hr and 0.03 ton/year.	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-18-06(A).	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
PM/PM ₁₀ emissions shall not exceed 0.074 lb/hr and 0.32 ton/year.	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas
Carbon monoxide (CO) emissions shall not exceed 0.82 lb/hr and 3.59 tons/year.	See Section A.2.a. below.
Nitrogen oxide (NO _x) emissions shall not exceed 0.98 lb/hr and 4.29 tons/year.	See Section A.2.a. below.
Volatile organic compounds (VOC) emissions shall not exceed 0.05 lb/hr and 0.24 ton/year.	
Organic compound (OC) emissions shall not exceed 0.10 lb/hr and 0.44 ton/year.	
See section A.2.b below	

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

2.a The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.

2.b The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following from the baghouse outlet:

PM/PM10 emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO₂) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NO_x) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

2.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 natural gas as fuel, acceptance of a NO_x limitation of 100 lb of NO_x/MMcf and acceptance of a CO limitation of 84 lb of CO/MMcf constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.
2. The emissions from P036 shall be vented to the melt shop baghouse.

III. Monitoring and/or Recordkeeping Requirements

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Emissions Unit ID: P036

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

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

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

- a. Emission Limitation:
3 percent opacity from the meltshop baghouse stack exit

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- b. Emission Limitation:
PM/PM10 emissions shall not exceed 0.074 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- c. Emission Limitation:
0.32 TPY of PM/PM10 emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

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- d. Emission Limitation:
CO emissions shall not exceed 0.82 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- e. Emission Limitation:
3.59 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- f. Emission Limitation:
NOx emissions shall not exceed 0.98 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NOx/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- g. Emission Limitation:
4.29 TPY of NOx emissions

Applicable Compliance Method(s):

Emissions Unit ID: P036

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- h. Emission Limitation:
VOC emissions shall not exceed 0.05 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- i. Emission Limitation:
0.24 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- j. Emission Limitation:
SO₂ emissions shall not exceed 0.006 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO₂/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- k. Emission Limitation:
0.03 TPY of SO₂ emissions

Applicable Compliance Method:

Chart**PTI A**

Emissions Unit ID: P036

Issued: To be entered upon final issuance

The ton per year limitation was developed by multiplying the hourly SO₂ emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

1. Emission Limitation:
OC emissions shall not exceed 0.10 lb/hr.

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Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 11 lbs of OC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

- m. Emission Limitation:
0.44 TPY of OC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

VI. Miscellaneous Requirements

None.

Issued: To be entered upon final issuance

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P036 - number 2 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr	None.	None.

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P037 - number 3 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr	OAC rule 3745-31-05(A)(3)	OAC rule 3745-17-10(B)(1)
		OAC rule 3745-18-06(A)
	OAC rule 3745-31-10 thru 20	OAC rule 3745-21-08(B)
		OAC rule 3745-23-06(B)
	OAC rule 3745-17-07(A)(1)	

**Chart
PTI A**

Issued: To be entered upon final issuance

Applicable Emissions Limitations/Control Measures	See section A.2.c below
Sulfur dioxide (SO ₂) emissions shall not exceed 0.006 lb/hr and 0.03 ton/year.	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-18-06(A).	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
PM/PM ₁₀ emissions shall not exceed 0.074 lb/hr and 0.32 ton/year.	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas
Carbon monoxide (CO) emissions shall not exceed 0.82 lb/hr and 3.59 tons/year.	See Section A.2.a. below.
Nitrogen oxide (NO _x) emissions shall not exceed 0.98 lb/hr and 4.29 tons/year.	See Section A.2.a. below.
Volatile Organic Compounds (VOC) emissions shall not exceed 0.05 lb/hr and 0.24 ton/year.	
Organic compound (OC) emissions shall not exceed 0.10 lb/hr and 0.44 ton/year.	
See section A.2.b below	

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

2.a The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.

2.b The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following from the baghouse outlet:

PM/PM10 emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO₂) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NO_x) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

2.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 natural gas as fuel, acceptance of a NO_x limitation of 100 lb of NO_x/MMcf and acceptance of a CO limitation of 84 lb of CO/MMcf constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

Issued: To be entered upon final issuance**II. Operational Restrictions**

1. The permittee shall burn only natural gas in this emissions unit.
2. The emissions from P037 shall be vented to the melt shop baghouse.

III. 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 and quantity of fuel burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

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

- a. Emission Limitation:
3 percent opacity from the meltshop baghouse stack exit

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- b. Emission Limitation:
Particulate emissions shall not exceed 0.074 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

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Emissions Unit ID: P037

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- c. Emission Limitation:
0.32 TPY of particulate emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- d. Emission Limitation:
CO emissions shall not exceed 0.82 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- e. Emission Limitation:
3.59 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- f. Emission Limitation:
NOx emissions shall not exceed 0.98 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NOx/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

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Emissions Unit ID: P037

Issued: To be entered upon final issuance

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- g. Emission Limitation:
4.29 TPY of NOx emissions

Emissions Unit ID: P037

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- h. **Emission Limitation:**
VOC emissions shall not exceed 0.05 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- i. **Emission Limitation:**
0.24 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- j. **Emission Limitation:**
SO₂ emissions shall not exceed 0.006 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO₂/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- k. **Emission Limitation:**
0.03 TPY of SO₂ emissions

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Emissions Unit ID: P037

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Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly SO₂ emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- l. Emission Limitation:
OC emissions shall not exceed 0.10 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 11 lbs of OC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

- m. Emission Limitation:
0.44 TPY of OC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

VI. Miscellaneous Requirements

None.

Issued: To be entered upon final issuance

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P037 - number 3 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr	None.	None.

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P038 - number 4 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr	OAC rule 3745-31-05(A)(3)	OAC rule 3745-17-10(B)(1)
		OAC rule 3745-18-06(A)
	OAC rule 3745-31-10 thru 20	OAC rule 3745-21-08(B)
		OAC rule 3745-23-06(B)
	OAC rule 3745-17-07(A)(1)	

Chart

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Emissions Unit ID: P038

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Applicable Emissions Limitations/Control Measures	See section A.2.c below
Sulfur dioxide (SO ₂) emissions shall not exceed 0.006 lb/hr and 0.03 ton/year.	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-18-06(A).	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
PM/PM ₁₀ emissions shall not exceed 0.074 lb/hr and 0.32 ton/year.	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas
Carbon monoxide (CO) emissions shall not exceed 0.82 lb/hr and 3.59 tons/year.	See Section A.2.a. below.
Nitrogen oxide (NO _x) emissions shall not exceed 0.98 lb/hr and 4.29 tons/year.	See Section A.2.a. below.
Volatile Organic Compounds (VOC) emissions shall not exceed 0.05 lb/hr and 0.24 ton/year.	
Organic compound (OC) emissions shall not exceed 0.10 lb/hr and 0.44 ton/year.	
See section A.2.b below	

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

2.a The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.

2.b The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following from the baghouse outlet:

PM/PM10 emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO₂) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NO_x) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

2.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 natural gas as fuel, acceptance of a NO_x limitation of 100 lb of NO_x/MMcf and acceptance of a CO limitation of 84 lb of CO/MMcf constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

Issued: To be entered upon final issuance**II. Operational Restrictions**

1. The permittee shall burn only natural gas in this emissions unit.
2. The emissions from P038 shall be vented to the melt shop baghouse.

III. 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 and quantity of fuel burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

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

- a. Emission Limitation:
3 percent opacity from the meltshop baghouse stack exit

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- b. Emission Limitation:
PM/PM10 emissions shall not exceed 0.074 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

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Emissions Unit ID: P038

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- c. Emission Limitation:
0.32 TPY of PM/PM10 emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- d. Emission Limitation:
CO emissions shall not exceed 0.82 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- e. Emission Limitation:
3.59 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- f. Emission Limitation:
NOx emissions shall not exceed 0.98 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NOx/mm cu .ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

Chart

PTI A

Emissions Unit ID: P038

Issued: To be entered upon final issuance

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- g. Emission Limitation:
4.29 TPY of NOx emissions

Emissions Unit ID: P038

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- h. **Emission Limitation:**
VOC emissions shall not exceed 0.05 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- i. **Emission Limitation:**
0.24 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- j. **Emission Limitation:**
SO₂ emissions shall not exceed 0.006 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO₂/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- k. **Emission Limitation:**
0.03 TPY of SO₂ emissions

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Emissions Unit ID: P038

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Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly SO₂ emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- l. Emission Limitation:
OC emissions shall not exceed 0.10 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 11 lbs of OC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

- m. Emission Limitation:
0.44 TPY of OC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

VI. Miscellaneous Requirements

None.

Issued: To be entered upon final issuance

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P038 - number 4 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr	None.	None.

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

Charter Steel

Facility ID: 1318171623

PTI Application: 13-04176

Issued: To be entered upon final issuance

Emissions Unit ID: P039

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P039 - number 5 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr	OAC rule 3745-31-05(A)(3)	OAC rule 3745-17-10(B)(1)
		OAC rule 3745-18-06(A)
	OAC rule 3745-31-10 thru 20	OAC rule 3745-21-08(B)
		OAC rule 3745-23-06(B)
	OAC rule 3745-17-07(A)(1)	

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Emissions Unit ID: P039

Issued: To be entered upon final issuance

Applicable Emissions Limitations/Control Measures	See section A.2.c below
Sulfur dioxide (SO ₂) emissions shall not exceed 0.006 lb/hr and 0.03 ton/year.	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-18-06(A).	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
PM/PM ₁₀ emissions shall not exceed 0.074 lb/hr and 0.32 ton/year.	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas
Carbon monoxide (CO) emissions shall not exceed 0.82 lb/hr and 3.59 tons/year.	See Section A.2.a. below.
Nitrogen oxide (NO _x) emissions shall not exceed 0.98 lb/hr and 4.29 tons/year.	See Section A.2.a. below.
Volatile Organic Compounds (VOC) emissions shall not exceed 0.05 lb/hr and 0.24 ton/year.	
Organic compound (OC) emissions shall not exceed 0.10 lb/hr and 0.44 ton/year.	
See section A.2.b below	

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

2.a The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.

2.b The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following from the baghouse outlet:

PM/PM10 emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO₂) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NO_x) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

2.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 natural gas as fuel, acceptance of a NO_x limitation of 100 lb of NO_x/MMcf and acceptance of a CO limitation of 84 lb of CO/MMcf constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

Issued: To be entered upon final issuance**II. Operational Restrictions**

1. The permittee shall burn only natural gas in this emissions unit.
2. The emissions from P039 shall be vented to the melt shop baghouse.

III. 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 and quantity of fuel burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

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

- a. Emission Limitation:
3 percent opacity from the meltshop baghouse stack exit

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- b. Emission Limitation:
PM/PM10 emissions shall not exceed 0.074 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

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Emissions Unit ID: P039

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- c. Emission Limitation:
0.32 TPY of PM/PM10 emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- d. Emission Limitation:
CO emissions shall not exceed 0.82 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- e. Emission Limitation:
3.59 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- f. Emission Limitation:
NOx emissions shall not exceed 0.98 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NOx/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

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Emissions Unit ID: P039

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If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- g. Emission Limitation:
4.29 TPY of NOx emissions

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Emissions Unit ID: P039

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- h. **Emission Limitation:**
VOC emissions shall not exceed 0.05 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- i. **Emission Limitation:**
0.24 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- j. **Emission Limitation:**
SO₂ emissions shall not exceed 0.006 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO₂/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- k. **Emission Limitation:**
0.03 TPY of SO₂ emissions

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Emissions Unit ID: P039

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Emissions Unit ID: P039

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Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly SO₂ emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- l. Emission Limitation:
OC emissions shall not exceed 0.10 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 11 lbs of OC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

- m. Emission Limitation:
0.44 TPY of OC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

VI. Miscellaneous Requirements

None.

Issued: To be entered upon final issuance

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P039 - number 5 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr	None.	None.

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

Charter Steel

Facility ID: 1318171623

PTI Application: 13-04176

Issued: To be entered upon final issuance

Emissions Unit ID: P040

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P040 - number 6 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr	OAC rule 3745-31-05(A)(3)	OAC rule 3745-17-10(B)(1)
		OAC rule 3745-18-06(A)
	OAC rule 3745-31-10 thru 20	OAC rule 3745-21-08(B)
		OAC rule 3745-23-06(B)
	OAC rule 3745-17-07(A)(1)	

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Emissions Unit ID: P040

Issued: To be entered upon final issuance

Applicable Emissions Limitations/Control Measures	See section A.2.c below
Sulfur dioxide (SO ₂) emissions shall not exceed 0.006 lb/hr and 0.03 ton/year.	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-18-06(A).	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
PM/PM ₁₀ emissions (PE) shall not exceed 0.074 lb/hr and 0.32 ton/year.	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas
Carbon monoxide (CO) emissions shall not exceed 0.82 lb/hr and 3.59 tons/year.	See Section A.2.a. below.
Nitrogen oxide (NO _x) emissions shall not exceed 0.98 lb/hr and 4.29 tons/year.	See Section A.2.a. below.
Volatile Organic Compounds (VOC) emissions shall not exceed 0.05 lb/hr and 0.24 ton/year.	
Organic compound (OC) emissions shall not exceed 0.10 lb/hr and 0.44 ton/year.	
See section A.2.b below	

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

2.a The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.

2.b The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following from the baghouse outlet:

PM/PM10 emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO₂) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NO_x) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

2.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 natural gas as fuel, acceptance of a NO_x limitation of 100 lb of NO_x/MMcf and acceptance of a CO limitation of 84 lb of CO/MMcf constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

Issued: To be entered upon final issuance**II. Operational Restrictions**

1. The permittee shall burn only natural gas in this emissions unit.
2. The emissions from P040 shall be vented to the melt shop baghouse.

III. 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 and quantity of fuel burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

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

- a. Emission Limitation:
3 percent opacity from the meltshop baghouse stack exit

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- b. Emission Limitation:
PM/PM10 emissions shall not exceed 0.074 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

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Emissions Unit ID: P040

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- c. Emission Limitation:
0.32 TPY of PM/PM10 emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- d. Emission Limitation:
CO emissions shall not exceed 0.82 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- e. Emission Limitation:
3.59 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- f. Emission Limitation:
NOx emissions shall not exceed 0.98 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NOx/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

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Emissions Unit ID: P040

Issued: To be entered upon final issuance

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- g. Emission Limitation:
4.29 TPY of NOx emissions

Emissions Unit ID: P040

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- h. Emission Limitation:
VOC emissions shall not exceed 0.05 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- i. Emission Limitation:
0.24 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- j. Emission Limitation:
SO₂ emissions shall not exceed 0.006 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO₂/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- k. Emission Limitation:
0.03 TPY of SO₂ emissions

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Issued: To be entered upon final issuance

Emissions Unit ID: P040

Chart**PTI A**

Emissions Unit ID: P040

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Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly SO₂ emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- l. Emission Limitation:
OC emissions shall not exceed 0.10 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 11 lbs of OC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

- m. Emission Limitation:
0.44 TPY of OC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

VI. Miscellaneous Requirements

None.

Issued: To be entered upon final issuance

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P040 - number 6 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr	None.	None.

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P041 - natural gas fueled cut-off torch rated at 10mmBtu/hr	OAC rule 3745-31-05(A)(3)	OAC rule 3745-17-10(B)(1)
		OAC rule 3745-18-06(A)
	OAC rule 3745-31-10 thru 20	OAC rule 3745-21-08(B)
		OAC rule 3745-23-06(B)
	OAC rule 3745-17-07(A)(1)	

Chart

PTI A

Emissions Unit ID: P041

Issued: To be entered upon final issuance

Applicable Emissions Limitations/Control Measures	See section A.2.c below
Sulfur dioxide (SO ₂) emissions shall not exceed 0.006 lb/hr and 0.03 ton/year.	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-18-06(A).	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
PM/PM ₁₀ emissions (PE) shall not exceed 0.074 lb/hr and 0.32 ton/year.	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas
Carbon monoxide (CO) emissions shall not exceed 0.82 lb/hr and 3.59 tons/year.	See Section A.2.a. below.
Nitrogen oxide (NO _x) emissions shall not exceed 0.98 lb/hr and 4.29 tons/year.	See Section A.2.a. below.
Volatile Organic Compounds (VOC) emissions shall not exceed 0.05 lb/hr and 0.24 ton/year.	
Organic compound (OC) emissions shall not exceed 0.10 lb/hr and 0.44 ton/year.	
See section A.2.b below	

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

2.a The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.

2.b The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following from the baghouse outlet:

PM/PM10 emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO₂) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NO_x) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

2.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 natural gas as fuel, acceptance of a NO_x limitation of 100 lb of NO_x/MMcf and acceptance of a CO limitation of 84 lb of CO/MMcf constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

Issued: To be entered upon final issuance**II. Operational Restrictions**

1. The permittee shall burn only natural gas in this emissions unit.
2. The emissions from P041 shall be vented to the melt shop baghouse.

III. 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 and quantity of fuel burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

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

- a. Emission Limitation:
3 percent opacity from the meltshop baghouse stack exit

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- b. Emission Limitation:
PM/PM10 emissions shall not exceed 0.074 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

Emissions Unit ID: P041

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- c. Emission Limitation:
0.32 TPY of PM/PM10 emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- d. Emission Limitation:
CO emissions shall not exceed 0.82 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- e. Emission Limitation:
3.59 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- f. Emission Limitation:
NOx emissions shall not exceed 0.98 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NOx/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

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Emissions Unit ID: P041

Issued: To be entered upon final issuance

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- g. Emission Limitation:
4.29 TPY of NOx emissions

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Emissions Unit ID: P041

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- h. **Emission Limitation:**
VOC emissions shall not exceed 0.05 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- i. **Emission Limitation:**
0.24 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- j. **Emission Limitation:**
SO₂ emissions shall not exceed 0.006 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO₂/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- k. **Emission Limitation:**
0.03 TPY of SO₂ emissions

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Emissions Unit ID: P041

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Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly SO₂ emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- l. Emission Limitation:
OC emissions shall not exceed 0.10 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 11 lbs of OC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

- m. Emission Limitation:
0.44 TPY of OC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

VI. Miscellaneous Requirements

None.

Issued: To be entered upon final issuance

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P041 - natural gas fueled cut-off torch rated at 10mmBtu/hr	None.	None.

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

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Emissions Unit ID: P042

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P042 - natural gas fired process space heater rated at 20 mmBtu/hr	OAC rule 3745-31-05(A)(3)	OAC rule 3745-18-06(A)
		OAC rule 3745-21-08(B)
		OAC rule 3745-23-06(B)
	OAC rule 3745-31-10 thru 20	
	OAC rule 3745-17-10(B)(1)	

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Emissions Unit ID: P042

Issued: To be entered upon final issuance

Applicable Emissions Limitations/Control Measures	
Sulfur dioxide (SO ₂) emissions shall not exceed 0.01 lb/hr and 0.05 ton/year.	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-18-06(A).	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas
PM/PM ₁₀ emissions shall not exceed 0.15 lb/hr and 0.66 ton/year.	See Section A.2.a. below. See Section A.2.a. below.
Carbon monoxide (CO) emissions shall not exceed 1.64 lbs/hr and 7.18 tons/year.	
Nitrogen oxide (NO _x) emissions shall not exceed 1.96 lbs/hr and 8.58 tons/year.	
Volatile Organic Compounds (VOC) emissions shall not exceed 0.11 lb/hr and 0.47 ton/year.	
Organic compound (OC) emissions shall not exceed 0.22 lb/hr and 0.96 ton/year.	
See section A.2.b below	
See section A.2.c below	

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

2.a The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.

2.b The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following from the baghouse outlet:

PM/PM10 emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO₂) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NO_x) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

2.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 natural gas as fuel, acceptance of a NO_x limitation of 100 lb of NO_x/MMcf and acceptance of a CO limitation of 84 lb of CO/MMcf constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall

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Emissions Unit ID: P042

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maintain a record of the type and quantity of fuel burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

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

- a. Emission Limitation:
PM/PM10 emissions shall not exceed 0.15 lb/hr

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr) and dividing by the emissions unit's total heat input capacity (20.0 mmBtu/hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- b. Emission Limitation:
0.66 TPY of PM/PM10 emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- c. Emission Limitation:
CO emissions shall not exceed 1.64 lbs/hr.

Applicable Compliance Method:

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Emissions Unit ID: P042

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- d. Emission Limitation:
7.18 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- e. Emission Limitation:
NOx emissions shall not exceed 1.96 lbs/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NOx/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- f. Emission Limitation:
8.58 TPY of NOx emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- g. Emission Limitation:
VOC emissions shall not exceed 0.11 lb/hr.

Applicable Compliance Method:

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When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- h. Emission Limitation:
0.47 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- i. Emission Limitation:
SO₂ emissions shall not exceed 0.01 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO₂/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- j. Emission Limitation:
0.05 TPY of SO₂ emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly SO₂ emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

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Emissions Unit ID: P042

- k. Emission Limitation:
OC emissions shall not exceed 0.22 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 11 lbs of OC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0198 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- l. Emission Limitation:
0.96 TPY of OC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- m. Emission Limitation:
3 percent opacity from the meltshop baghouse stack exit

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

VI. Miscellaneous Requirements

None.

Issued: To be entered upon final issuance

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P042 - natural gas fired process space heater rated at 20 mmBtu/hr	None.	None.

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P043 - Vacuum Oxygen Degasser (VOD) vessel for Low carbon and Stainless Steel production or degassing and decarburization of the steel	OAC rule 3745-31-05(A)(3)	
CO emissions are controlled by a flare during the oxygen lancing degassing process for Low carbon and Stainless Steel production.	OAC rule 3745-31-10 thru 20	OAC rule 3745-17-11(B)
Flare will not be operational during the natural decarburization process of steel.		OAC rule 3745-17-10(B)(1)
		OAC rule 3745-17-07(A)
		OAC rule 3745-21-08(B)
		OAC rule 3745-23-06(B)

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Emissions Unit ID: P043

Issued: To be entered upon final issuance

Applicable Emissions Limitations/Control Measures	equipment:
Flare combustion emissions:	Carbon monoxide (CO) emissions shall not exceed 25.0 lbs/hr and 60.4 TPY
Sulfur dioxide (SO ₂) emissions shall not exceed 0.009 lb/hr and 0.04 TPY	Emissions from the natural decarburization of the steel (uncontrolled):
The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20).	Carbon monoxide (CO) emissions shall not exceed 23.31 lbs/hr and 82.8 TPY
no visible particulate emissions.	See section A.2.d below
Flare combustion emissions:	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
PM/PM ₁₀ emissions shall not exceed 0.12 lbs/hr and 0.52 TPY	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
Nitrogen oxide (NO _x) emissions shall not exceed 1.57 lbs/hr and 6.87 TPY	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
Carbon monoxide (CO) emissions shall not exceed 1.32 lbs/hr and 5.78 TPY	See Section A.2.b. below.
Volatile organic compounds (VOC) emissions shall not exceed 0.09 lbs/hr and 0.39 TPY	See Section A.2.b. below.
Emissions from the Oxygen Lansing Degassing for Low carbon and Stainless Steel production with flare control	

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

- 2.a** The flare shall meet the design requirements specified in 40 CFR Part 60.18.
- 2.b** The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.
- 2.c** A flare control system with 99+ % control efficiency is required during the oxygen lancing degassing process for Low carbon and Stainless Steel production.

The flare control system will not be operational during the natural decarburization process of steel due to the relatively low uncontrolled emission rate and the safety hazards associated with the process.

Chart

PTI A

Emissions Unit ID: P043

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- 2.d** The permittee is required to perform a Best Available Control Technology (BACT) review for NO_x, CO, PM/PM₁₀, and VOC. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) through(20) above. The following determinations have been made for this emissions unit:

CO- Use of a combustion flare system.

II. Operational Restrictions

1. The permittee shall operate the flare system for control of CO emissions when the emissions unit is in operation during the degassing of the steel.
2. The maximum annual process rate for the Low carbon and Stainless Steel production or degassing and decarburization of the steel in this emissions unit shall not exceed 710,600 tons of steel, based upon a rolling, 12-month summation of the tons of steel produced per month. In order to ensure federal enforceability during the first twelve months of operation after the permit issuance, the permittee shall comply with the following monthly production restrictions:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Production Totals (Tons)</u>
1	59,220
1-2	118,440
1-3	177,660
1-4	236,880
1-5	296,100
1-6	355,320
1-7	414,540
1-8	473,760
1-9	532,980
1-10	592,200
1-11	651,420
1-12	710,600

After the first 12 calendar months of operation after the issuance of this permit, compliance with the annual steel production limitation shall be based upon a rolling, 12-month summation of the steel production.

III. Monitoring and/or Recordkeeping Requirements

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Emissions Unit ID: P043

1. The permittee shall properly install, operate, and maintain a device to continuously monitor the flame presence when the emissions unit is in operation during the Oxygen Lansing Degassing process. The monitoring device and any recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.
2. The permittee shall record the following information each day:
 - a. All periods during which the flame presence sensor was inoperable.
 - b. The operating times for the flare, monitoring equipment, and the emissions unit during the Oxygen Lansing Degassing process.
3. The permittee shall maintain daily production records for this emissions unit. These records, at a minimum, shall contain the following information:
 - a. the number of hours this emissions unit was in operation; and
 - b. the tons of steel processed.
4. The permittee shall maintain monthly records of the tons of steel processed during each calendar month, as well as the rolling, 12-month summation of the amount of steel processed.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods during which the flame presence sensor was not functioning properly. The reports shall include the date, time, and duration of each such period.
2. The permittee shall submit deviation (excursion) reports to the Cleveland DAQ which identify all exceedances of the rolling, 12-month steel process rate limitation for the first 12 calendar months of operation following the issuance of this permit and exceedances of the rolling, 12-month limitation thereafter. Each report shall be submitted to the Cleveland DAQ within 30 days after the deviation occurs.

V. Testing Requirements

1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
no visible particulate emissions.

Applicable Compliance Method:
If required, compliance shall be determined through visible emission observations

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performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- b. Emission Limitation:
flare combustion
PM/PM10 emissions shall not exceed 0.12 lb/hr.

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Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the flare's maximum hourly natural gas firing rate (0.0157 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

- c. Emission Limitation:
flare combustion
0.52 TPY of PM/PM10 emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- d. Emission Limitation:
flare combustion
CO emissions shall not exceed 1.32 lbs/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0157 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10 while firing natural gas.

- e. Emission Limitation:
flare combustion
5.78 TPY of CO emissions

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Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

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- f. Emission Limitation:
flare combustion
NOx emissions shall not exceed 1.57 lbs/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NOx/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0157 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7 while firing natural gas.

- g. Emission Limitation:
flare combustion
6.87 TPY of NOx emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- h. Emission Limitation:
flare combustion
VOC emissions shall not exceed 0.09 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0157 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 25 or 25A while firing natural gas.

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- i. Emission Limitation:
flare combustion
0.39 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- j. Emission Limitation:
flare combustion
SO₂ emissions shall not exceed 0.01 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO₂/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0157 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6 while firing natural gas.

- k. Emission Limitation:
flare combustion
0.04 TPY of SO₂ emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly SO₂ emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- l. Emission Limitation:
Emissions from the Oxygen Lancing Degassing for Low carbon and Stainless Steel production with flare control equipment
Carbon monoxide (CO) emissions shall not exceed 25.0 lbs/hr

Applicable Compliance Method:

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The permittee shall demonstrate compliance with the lbs/hr emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10. See A.V.2.

- m. Emission Limitation:
Emissions from the Oxygen Lancing Degassing for Low carbon and Stainless Steel production with flare control equipment
60.4 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr CO emission rate established through the emissions testing requirement in A.V.1.1 by the maximum process rate of the emissions unit (100 tons/hr). This lb/ton emission factor is multiplied by the annual

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production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

- n. Emission Limitation:
Emissions from the natural decarburization of the steel (uncontrolled)
Carbon monoxide (CO) emissions shall not exceed 23.31 lbs/hr

Applicable Compliance Method:

The permittee shall demonstrate compliance with the lbs/hr emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10. See A.V.2

- o. Emission Limitation:
Emissions from the natural decarburization of the steel (uncontrolled)
82.8 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr CO emission rate established through the emissions testing requirement in A.V.1.n by the maximum process rate of the emissions unit (100 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

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

The emission testing shall be conducted within 6 months after issuance of this permit.

The emission testing shall be conducted to demonstrate compliance with the CO emission limitations.

The following test methods shall be employed to demonstrate compliance with the CO emission limitation: Methods 1-4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The test(s) shall be conducted while the VOD is operational during the Oxygen Lancing Degassing for Low carbon and Stainless Steel production with the flare control equipment operational. Additionally, testing shall be conducted while the VOD is operational during the natural decarburization of the steel. The emissions unit shall be operated at or near its maximum

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capacity for each of the production scenarios unless otherwise specified or approved by the Cleveland Division of Air Quality.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland Division of Air Quality. 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 Cleveland Division of Air Quality's refusal to accept the results of the emission test(s).

Personnel from the Cleveland DAQ 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 Cleveland DAQ 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 Cleveland DAQ.

VI. Miscellaneous Requirements

None.

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Facility ID: 1318171623

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B. State Only Enforceable Section**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P043 - Vacuum Oxygen Degasser (VOD) vessel	None.	None.

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

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Emissions Unit ID: P044

Issued: To be entered upon final issuance

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P044 - Carbon silo - storage of carbon additive for steel alloying equipped with a bin vent for control of particulate emissions	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20).
	OAC rule 3745-31-10 thru 20	0.01 grain/dry standard cubic feet of exhaust gases and 0.10 pound/hour and 0.45 TPY OF PM/PM10 emissions
	OAC rule 3745-17-11(B)	Visible particulate emissions shall not exceed 10% opacity, as a 6-minute average.
	OAC rule 3745-17-07(A)	See A.2.a The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
		The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

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- 2.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 bin vent filter with an emission limit of 0.01 gr/dscf of exhaust gases constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

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II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. 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. 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 eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Cleveland Division of Air Quality by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
Visible PE shall not exceed 10% opacity, as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03 (B)(1).

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- b. Emission Limitation:
PM/PM10 emissions shall not exceed 0.01 grain/dry standard cubic feet of exhaust gases
and 0.10 pound/hour

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Applicable Compliance Method:

Compliance with the emission limitation may be determined by the use of the calculation below using the control equipment manufacturer's outlet rate of 0.01 gr/dscf and gas flow rate of 1200 acfm at ambient temperature.

$$(0.01 \text{ grains/dscf}) * (1200 \text{ acfm}) * (70+460)/(70+460) * (1 \text{ lb}/7000 \text{ grains}) * (60 \text{ min}/1 \text{ hr}) = 0.10 \text{ lb/hr}$$

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

- c. Emission Limitation:
0.45 TPY OF PM/PM10 emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

VI. Miscellaneous Requirements

None.

Issued: To be entered upon final issuance

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P044 - Carbon silo - storage of carbon additive for steel alloying	None.	None.

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

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Emissions Unit ID: P045

Issued: To be entered upon final issuance

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P045 - Lime Silo - storage for lime additive for steel alloying equipped with a bin vent for control of particulate emissions	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20).
	OAC rule 3745-31-10 thru 20	0.01 grain/dry standard cubic feet of exhaust gases and 0.10 pound/hour and 0.45 TPY OF PM/PM10 emissions
	OAC rule 3745-17-11(B)	Visible particulate emissions shall not exceed 10% opacity, as a 6-minute average.
	OAC rule 3745-17-07(A)	See A.2.a The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
		The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

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- 2.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 bin vent filter with an emission limit of 0.01 gr/dscf of exhaust gases constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. 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. 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 eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Cleveland Division of Air Quality by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):
 - a. Emission Limitation:
Visible PE shall not exceed 10% opacity, as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03 (B)(1).

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- b. Emission Limitation:
PM/PM10 emissions shall not exceed 0.01 grain/dry standard cubic feet of exhaust gases and 0.10 pound/hour

Applicable Compliance Method:

Compliance with the emission limitation may be determined by the use of the calculation below using the control equipment manufacturer's outlet rate of 0.01 gr/dscf and gas flow rate of 1200 acfm at ambient temperature.

$$(0.01 \text{ grains/dscf}) * (1200 \text{ acfm}) * (70+460)/(70+460) * (1 \text{ lb}/7000 \text{ grains}) * (60 \text{ min}/1 \text{ hr}) = 0.10 \text{ lb/hr}$$

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

- c. Emission Limitation:
0.45 TPY OF PM/PM10 emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

VI. Miscellaneous Requirements

None.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P045 - Lime Silo - storage for lime additive for steel alloying	None.	None.

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

Chart
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Emissions Unit ID: P046

Issued: To be entered upon final issuance

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P046 - cooling tower 1.5 MMgallons/hr for cooling of process water	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20).
	OAC rule 3745-31-10 thru 20	PM/PM10 emissions shall not exceed 1.5 lbs/hr and 6.6 TPY
	OAC rule 3745-17-07(A)	OC emissions shall not exceed 0.15 lb/hr and 0.66 TPY
	OAC rule 3745-17-11(B)	Visible particulate emissions shall not exceed 10% opacity as a 6-minute average.
		The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
		The particulate emission limitation specified by this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

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2.a None.

II. Operational Restrictions

1. The water flow rate of the cooling tower shall not exceed 25,000 gpm.
2. The monthly average concentration of total dissolved solids (TDS) in the cooling tower water shall not exceed 5,682 mg/gallon.
3. The monthly average concentration of organics in the cooling tower water shall not exceed 568 mg/gallon.
4. The cooling tower will be equipped with drift eliminators to reduce drift water droplets by inertial separation.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate and maintain equipment to monitor the cooling tower water flow rate. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals. The permittee shall monitor and record the cooling tower water flow rate, in gallons per minute, at a minimum frequency of once/day.
2. The permittee shall sample the cooling tower water monthly to adequately demonstrate compliance with the monthly average concentration of total dissolved solids (TDS) limitation.
3. The permittee shall sample the cooling tower water monthly to adequately demonstrate compliance with the monthly average concentration of organics limitation.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland DAQ that identify all periods of time during which the
 - a. cooling tower water flow rate exceeds 25,000 gpm;
 - b. the monthly average concentration of total dissolved solids (TDS) in the cooling tower water exceeds 5,682 mg/gallon; and
 - c. the monthly average concentration of organics in the cooling tower water exceeds 568

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mg/gallon.

V. Testing Requirements

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

- a. Emission Limitation:
Visible particulate emissions from any stack shall not exceed 10% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03 (B)(1).

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- b. Emission Limitation:
PM/PM10 emissions shall not exceed 1.5 lbs/hr.
- Applicable Compliance Method:
Compliance with the hourly emission limitation may be determined by use of the following formulas:
circulation rate (gal/min) x drift factor (%) = Drift Rate
- $$(25,000 \text{ gal/min}) \times (0.008/100) = 2 \text{ gal/min or } 454.2 \text{ liters/hr}$$
- concentration of make up water (mg/liter) x number of concentration cycles for the cooling tower
= TDS
- $$500 \text{ mg/liter} \times 3 = 1500 \text{ mg/liter}$$
- Drift rate x TDS x 1 lb/453,592 mg = emission rate in lb/hr
- c. Emission Limitation:
6.6 TPY of PM/PM10 emissions
- Applicable Compliance Method(s):
The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.
- d. Emission Limitation:
OC emissions shall not exceed 0.15 lb/hr.
- Applicable Compliance Method:
Compliance with the hourly emission limitation may be determined by use of the following formulas:
circulation rate (gal/min) x drift factor (%) = Drift Rate
- $$(25,000 \text{ gal/min}) \times (0.008/100) = 2 \text{ gal/min or } 454.2 \text{ liters/hr}$$
- organic concentration of make up water (mg/liter) x number of concentration cycles for the cooling tower
= TDS

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$$50 \text{ mg/liter} \times 3 = 150 \text{ mg/liter}$$

$$\text{Drift rate} \times \text{TDS} \times 1 \text{ lb}/453,592 \text{ mg} = \text{emission rate in lb/hr}$$

- e. Emission Limitation:
0.66 TPY of OC emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly OC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

VI. Miscellaneous Requirements

None.

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P046 - cooling tower 1.5 MMgallons/hr for cooling of process water	None.	None.

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

Chart
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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P900 - 110 TPH capacity Electric Arc Furnace (EAF) with direct evacuation control (DEC) for capture and a baghouse for control of emissions	OAC rule 3745-31-05(A)(3)	OAC rule 3745-31-05(C)
		OAC rule 3745-17-07 (A)(1)
		OAC rule 3745-17-11(B)
	OAC rule 3745-31-10 thru 20	
		OAC rule 3745-18-06(E)(1)
		NSPS 40 CFR Part 60 Subpart AAa

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<u>Applicable Emissions Limitations/Control Measures</u>	See section A.2.c.
Sulfur dioxide (SO ₂) emissions shall not exceed 22.0 lbs/hr.	71.06 tons of SO ₂ per rolling 12-month period.
Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and NSPS 40 CFR Part 60 Subpart AAa.	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
Emissions from the EAF shall not exceed the following: PM/PM ₁₀ emissions shall not exceed 12.43 lbs/hr and 40.15 TPY	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
Nitrogen oxide (NO _x) emissions shall not exceed 36.29 lbs/hr and 117.25 TPY	The particulate emission limitation specified by this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
Carbon monoxide (CO) emissions shall not exceed 356.4 lbs/hr and 1,151.2 TPY	The visible emission limitation specified by this rule is equivalent to the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
Volatile organic compounds (VOC) emissions shall not exceed 22.0 lbs/hr and 71.06 TPY	
Lead (Pb) emissions shall not exceed 0.000065 gr/dscf, 0.55 lb/hr and 1.78 TPY	
See section A.2.a.	

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

- 2.a** The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following:

PM/PM10 emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO₂) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NO_x) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

6 percent opacity from the EAF

- 2.b** Mercury emissions shall be controlled by using the baghouse and by scrap management. The permittee shall negotiate with suppliers to obtain auto frag scrap (or any other potential mercury containing scrap) with the mercury containing components already removed, whenever possible.

- 2.c** The permittee is required to perform a Best Available Control Technology (BACT) review for NO_x, CO, PM/PM₁₀, lead, and VOC. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) through(20) above. The following determinations have been made for this emissions unit:

PM/PM10- Use of a baghouse with an emission limit of 0.0024 gr/dscf of exhaust gases

Lead - Use of a baghouse with an emission limit of 0.000065 gr/dscf of exhaust gases

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NOx-	Use of DEC Direct Evacuation Control (DEC) system, low NOx oxy-fuel burners and monitoring of specific process variables.
VOC -	Use of DEC Direct Evacuation Control (DEC) system
CO -	Use of DEC Direct Evacuation Control (DEC) system

II. Operational Restrictions

1. The pressure drop across the meltshop baghouse shall be maintained within the range of 3.0 to 8.0 inches of water while the emissions unit is in operation.
2. The emissions from P900 shall be vented to the melt shop baghouse. In addition, the capture system shall be designed and operated such that all emissions are captured and ducted to the dropout chamber and then to the baghouse. The capture system for the emissions unit shall include a common canopy hood and a roof control system, both of which vent to the dropout chamber and then to the melt shop baghouse.
3. The maximum annual production rate for this emissions unit shall not exceed 710,600 tons of steel, based upon a rolling, 12-month summation of the tons of steel produced per month. In order to ensure federal enforceability during the first twelve months of operation after the permit issuance, the permittee shall comply with the following monthly production restrictions:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Production Totals (Tons)</u>
1	59,220
1-2	118,440
1-3	177,660
1-4	236,880
1-5	296,100
1-6	355,320
1-7	414,540
1-8	473,760
1-9	532,980
1-10	592,200
1-11	651,420
1-12	710,600

After the first 12 calendar months of operation after the issuance of this permit, compliance with

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the annual steel production limitation shall be based upon a rolling, 12-month summation of the steel production.

4. Prior to the installation of this emissions unit, the permittee shall submit a Scrap Management Plan (SMP) to the Cleveland DAQ for review and approval. The main focus of the SMP will be to ensure that the purchase of excessively oily scrap and other combustible material will be minimized to the greatest extent possible. All grades of scrap shall be free of excessive dirt, oil, and grease. Heavily oiled scrap shall not be used. As part of the SMP, the permittee shall install a radionuclide detector which will be used to inspect all incoming scrap material into the facility. Radioactive scrap material shall not be used at this facility. Any scrap material which is determined to be radioactive shall be disposed of in accordance with the Nuclear Regulatory Commission's (NRC) requirements.
5. The following standards are requirements of the NSPS Subpart AAa(The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.), BACT and BAT. Visible emissions shall not exceed the following limits as a six-minute average:
 - a. 3 percent opacity from the baghouse exit; and,
 - b. 6 percent opacity from the meltshop [Note: This limit is more restrictive than the NSPS limit which only limits emissions due solely to the operation of an EAF(s) or AOD vessel(s)].
6. No more than 15% by weight of the scrap fed to the EAF will be mercury containing scrap.

III. Monitoring and/or Recordkeeping Requirements

1. The following are requirements of the NSPS Subpart AAa. Observations of the opacity of the visible emissions from the meltshop baghouse shall be performed by a certified visible emission observer as follows:
 - a. Visible emission observations shall be conducted at least once per day of operation. The observations shall occur when the furnace is operating in the charging, melting, tapping and refining period. These observations shall be taken in accordance with Method 9 of 40 CFR Part 60, Appendix A and, for at least three 6-minute periods, the opacity shall be recorded for point(s) where the greatest opacity visible emissions are observed, and that portion of the plume where the condensed water phase is not present in accordance with the procedures listed in Method 9 of 40 CFR Part 60, Appendix A. Where it is possible to determine that a number of visible emission sites relate to only one incident of the visible emission, only one set of three 6-minute observations will be required. In this case, Method 9 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. Records shall be maintained of any 6-minute average that is in excess of the limitation for visible particulate emissions.

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The appropriate records shall be maintained in the permittee's files to identify the persons responsible for conducting the opacity readings and to verify that the Method 9 certifications are up to date for the responsible individuals.

2. In accordance with NSPS Subpart AAa, observations of the opacity of the visible emissions from the shop shall be performed by a certified visible emission observer as follows:
 - a. Visible emission observations shall be conducted at least once per day when the furnace is operating in the meltdown and refining period. 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. Where it is possible to determine that a number of visible emission sites relate to only one incident of the 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. The owner or operator shall maintain records of all shop observations made in accordance with the above requirements. The appropriate records shall be maintained in the permittee's files to identify the persons responsible for conducting the opacity readings and to verify that the Method 9 certifications are up to date for the responsible individuals.
3. The permittee shall monitor the operation of the furnace control systems and maintain records in accordance with the following requirements:
 - a. The permittee shall install, calibrate, and maintain a monitoring device that allows the pressure in the free space inside the EAF to be monitored. The monitoring device may be installed in any appropriate location in the EAF ducts prior to the introduction of ambient air such that reproducible results will be obtained. The pressure monitoring device shall have an accuracy of plus or minus 5 mm of water gauge over its normal operating range and shall be calibrated according to the manufacturer's instructions. The pressure determined during the most recent compliance demonstration shall be maintained at all times when the EAF is operating in a meltdown and refining period. Operation at higher pressures may be considered by the Ohio EPA, Division of Air Pollution Control (DAPC) to be unacceptable operation and maintenance of the control system. The permittee may petition the Ohio EPA for reestablishment of the 15-minute integrated average of the pressure whenever the permittee can demonstrate to the Agency's satisfaction that EAF operating conditions upon which the pressures were previously established are no longer applicable;
 - b. The permittee shall check and record on a once-per-shift basis the furnace static pressure and either (1) check and record the control system fan motor amperes and damper positions on a once-per-shift basis; or (2) install, calibrate, and maintain a monitoring

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device that continuously records the volumetric flow rate through each separately ducted hood. The monitoring device may be installed in any appropriate location in the exhaust duct such that reproducible flow rate monitoring will result. The flow rate monitoring devices shall have an accuracy of plus or minus 10 percent over their normal operating range and shall be calibrated according to the manufacturer's instructions. The Ohio EPA, DAPC may require the permittee 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 demonstration of compliance shall be maintained at the appropriate levels for each applicable period. Operation at other than baseline values will be considered by the Ohio EPA, DAPC to be unacceptable operation and maintenance of the control system. The permittee may petition the Ohio EPA for reestablishment of these parameters whenever the permittee can demonstrate to the Agency's satisfaction that the operating conditions upon which the parameters were previously established are no longer applicable;

- c. The permittee shall perform and maintain records of the monthly operational status inspections of the equipment that is important to the performance of the total capture systems (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 ductwork, and fan erosion.) Any deficiencies shall be recorded and proper maintenance performed. The permittee may petition the Ohio EPA, DAPC to approve any alternative to monthly operational status inspections that will provide a continuous record of the operation of each emission capture system; and,
 - d. Upon approval by the U.S. EPA, an alternative method may be established to replace the monitoring and recordkeeping requirements found in 2.a, 2.b, and 2.c above.
4. The permittee shall maintain daily production records for this emissions unit. These records, at a minimum, shall contain the following information:
 - a. the number of hours this emissions unit was in operation; and
 - b. the tons of steel produced.
 5. The permittee shall maintain monthly records of the tons of steel produced during each calendar month and the rolling, 12-month summation of the steel produced.
 6. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the meltshop baghouse while the emissions unit is in operation. The monitoring equipment shall be installed calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once per day.
 7. The permittee shall obtain an analysis of the Melt Shop Baghouse dust on a monthly basis. At a minimum, the samples shall be analyzed for chromium, magnesium, manganese, lead, zinc, and

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mercury content. The results shall be reported in weight percent. This analysis shall be conducted in accordance with U.S. EPA test methods and procedures.

8. The permittee shall record the percent by weight of mercury containing scrap charged to the EAF, on a daily basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly written deviation (excursion) reports of all exceedances of the opacity restrictions for the meltshop baghouse from A.I.2.a. For the purposes of these reports, exceedances are defined as all 6-minute periods during which the average opacity exceeds these limits.
2. The permittee shall submit quarterly written deviation (excursion) reports that identify all exceedances of the static pressure values in the EAF established in A.III.3.b above and either operation of control system fan motor amperes at values exceeding plus 15 percent of the values established under A.III.3.b above or operation at flow rates lower than those established under A.III.3.b above.
3. The permittee shall submit quarterly written deviation (excursion) reports that identify all periods of time during which the pressure drop for the Melt Shop Baghouse did not comply with the allowable range specified in A.II.1.
4. The permittee shall submit deviation (excursion) reports to the Cleveland DAQ which identify all exceedances of the rolling, 12-month steel production rate limitation for the first 12 calendar months of operation following the issuance of this permit and for exceedances of the rolling, 12-month limitation thereafter. Each report shall be submitted to the Cleveland DAQ within 30 days after the deviation occurs.

V. Testing Requirements

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

- a. Emission Limitation:
12.43 lbs/hr of PM/PM10 emissions P900

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the controlled FIRE 6.22 emission factor for the EAF steel processing (0.113 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour).

- b. Emission Limitation:
40.15 TPY of PM/PM10 emissions P900

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Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the controlled FIRE 6.22 emission factor for the EAF steel processing (0.113 lb/ton) which is multiplied by the actual annual steel process rate of the emissions unit (in tons/year) and dividing by the factor of (2000 lbs/ton).

- c. Emission Limitation:
22.0 lbs/hr of SO₂ emissions P900

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the emission factor for the EAF steel processing (0.2 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour).

- d. Emission Limitation:
71.06 tons of SO₂ emissions per rolling 12-month period P900

Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the emission factor for the EAF steel processing (0.2 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year) and dividing by the factor of (2000 lbs/ton).

- e. Emission Limitation:
36.29 lbs/hr of NO_x emissions P900

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the emission factor for the EAF steel processing (0.33 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour).

- f. Emission Limitation:
117.25 TPY of NO_x emissions P900

Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the emission factor for the EAF steel processing (0.33 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year) and dividing by the factor of (2000 lbs/ton).

- g. Emission Limitation:

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356.4 lbs/hr of CO emissions P900

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the emission factor for the EAF steel processing (18.0 lbs/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour) and (1-0.82) which is the control efficiency for the DEC control system.

- h. Emission Limitation:
1,151.2 TPY of CO emissions P900

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Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the emission factor for the EAF steel processing (18.0 lbs/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year), (1-0.82) which is the control efficiency for the DEC control system and dividing by the factor of (2000 lbs/ton).

- i. Emission Limitation:
22.0 lbs/hr of VOC emissions P900

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the emission factor for EAF steel processing (0.2 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour).

- j. Emission Limitation:
71.06 TPY of VOC emissions P900

Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the emission factor for EAF steel processing (0.2 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year) and dividing by the factor of (2000 lbs/ton).

- k. Emission Limitation:
0.55 lb/hr of Lead (Pb) emissions P900

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the emission factor for the EAF steel processing (0.5 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour) and (1-0.99) which is the control efficiency for the baghouse system.

- l. Emission Limitation:
1.78 TPY of Lead (Pb) emissions P900

Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the emission factor for the EAF steel processing (0.5 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year), (1-0.99) which is the control

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efficiency for the baghouse control system and dividing by the factor of (2000 lbs/ton).

- m. Emission Limitation:
Visible PE shall not exceed 3% opacity from the baghouse stack.

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Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- n. Emission Limitation:
20.38 lbs/hr, 0.0024 grains/dscf of PM/PM10 emissions Meltshop baghouse

Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- o. Emission Limitation:
88.85 TPY of PM/PM10 emissions Meltshop baghouse

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr particulate emission rate established through the emissions testing requirement in A.V.1.n by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

- p. Emission Limitation:
264.1 lbs/hr of SO2 emissions Meltshop baghouse

Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- q. Emission Limitation:
99.43 TPY of SO2 emissions Meltshop baghouse

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr SO2 emission rate established through the emissions testing requirement in A.V.1.p by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions

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Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- s. Emission Limitation:
181.64 TPY of NOx emissions Meltshop baghouse

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr NOx emission rate established through the emissions testing requirement in A.V.1.r by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

- t. Emission Limitation:
401.74 lbs/hr of CO emissions Meltshop baghouse

Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- u. Emission Limitation:
1,297.41 TPY of CO emissions Meltshop baghouse

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr CO emission rate established through the emissions testing requirement in A.V.1.t by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

- v. Emission Limitation:
23.02 lbs/hr of VOC emissions Meltshop baghouse

Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- w. Emission Limitation:
74.59 TPY of VOC emissions Meltshop baghouse

Applicable Compliance Method:

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The ton per year limitation was developed by dividing the lb/hr VOC emission rate established through the emissions testing requirement in A.V.1.v by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

- x. Emission Limitation:
0.000065 gr/dscf, 0.57 lb/hr of Lead (Pb) emissions Meltshop baghouse

Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- y. Emission Limitation:
1.78 TPY of Lead (Pb) emissions Meltshop baghouse

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr Pb emission rate established through the emissions testing requirement in A.V.1.x by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

- z. Emission Limitation:
Visible PE shall not exceed 6% opacity from the EAF.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- aa. Emission Limitation:
0.052 lb/hr of Mercury (Hg) emissions Meltshop baghouse

Applicable Compliance Method:

Emission factor for mercury was developed based upon known testing and emissions allowables of other sources. An emission factor of 0.000476 lb Hg/ton of steel was used

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for determining the allowable hourly emission rate as follows: $110 \text{ tons/hr} \times 0.000476 \text{ lb Hg/ton} = 0.052 \text{ lb Hg/hr}$.

Compliance shall be based upon the results of the emission testing specified in section A.V.2

- bb. Emission Limitation:
0.17 TPY of Mercury (Hg) emissions Meltshop baghouse

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Applicable Compliance Method:

The emission factor of 0.000476 lb Hg/ton of steel was used to determine annual mercury emissions. This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton as follows: $710,600 \text{ tons/yr} \times 0.000476 \text{ lb Hg/ton} \times \text{ton}/2000 \text{ lbs} = 0.17 \text{ ton Hg/yr}$. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed and divide by 2000 lbs/ton.

2. Emission testing shall be conducted within 6 months after installation. The emission testing shall be conducted to demonstrate compliance with the SO₂, NO_x, CO, VOC, Lead (Pb), Mercury (Hg) and particulate emission limitations.

The test(s) shall be conducted while emissions units P032-P042 and P900-P902 are operating simultaneously at or near their maximum capacity, unless otherwise specified or approved by the Cleveland DAQ. The tests shall be conducted in accordance with the requirements of 40 CFR Part 60.275a.

During the particulate emission testing, the permittee shall obtain the following additional information:

- a. the pressure in the free space inside the furnace shall be determined during the melting and refining period(s) using the monitoring devices required under Condition III.3.a of this permit unless alternative monitoring is approved by U.S. EPA; and
- b. the control system fan motor amperes and all damper positions or the volumetric flow rate through each separately ducted hood shall be determined during all periods in which a hood is operated for the purpose of capturing emissions from the EAFs.

During performance tests, the permittee shall not add gaseous diluents to the effluent gas stream after the fabric in any pressurized fabric filter collector unless the amount of dilution is separately determined and considered in the determination of emissions.

The following test methods shall be employed to demonstrate compliance with the emission limitations: Methods 1 through 5 of 40 CFR Part 60, Appendix A for particulates, Methods 1 through 4 and 6 of 40 CFR Part 60, Appendix A for SO₂, Methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A for NO_x and Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A for CO, Methods 1 through 4 and 25 or 25A of 40 CFR Part 60, Appendix A for VOC and Methods 1 through 4 and 12 or 29 of 40 CFR Part 60, Appendix A for Lead (Pb) and Methods 1 through 4 and 29 of 40 CFR Part 60, Appendix A for Mercury (Hg). Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland DAQ. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s)

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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 Cleveland DAQ's refusal to accept the results of the emission test(s).

Personnel from the Cleveland DAQ 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 Cleveland DAQ 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 Cleveland DAQ.

3. The permittee shall conduct, or have conducted, a one-time emission test for this emissions unit for dioxins and furans in accordance with the following requirements:
 - a. Within 180 days after reaching maximum operating capabilities, the permittee shall conduct performance test and furnish Ohio EPA a written report of the results of such performance test.
 - b. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Southeast District Office.
 - c. The permittee shall employ Method 23 of 40 CFR Part 60, Appendix A to document the actual emission rate of dioxins and furans from EAF operations.
 - d. 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.

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Emissions Unit ID: P900

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).

VI. Miscellaneous Requirements

1. Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:
 - a. construction date (no later than 30 days after such date);
 - b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
 - c. actual start-up date (within 15 days after such date); and
 - d. date of performance testing (If required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Air Quality Modeling and Planning
Lazarus Government Center
P.O. Box 1049
Columbus, OH 43216-1049

and

The Cleveland Division of Air Quality
1925 St. Clair Ave.
Cleveland, Ohio 44114

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P900 - electric arc furnace 110 TPH capacity, for the melting of scrap steel.	None.	None.

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

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Emissions Unit ID: P901

	<u>Applicable Emissions Limitations/Control Measures</u>	
OAC rule 3745-18-06(E)(1)	Sulfur dioxide (SO ₂) emissions shall not exceed 220.0 lbs/hr during the production of resulfurized grade steel.	steel. 71.06 tons of SO ₂ per rolling 12-month period, during the production of all other grades of steel.
	Sulfur dioxide (SO ₂) emissions shall not exceed 22.0 lbs/hr during the production of all other grades of steel.	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	The requirements of this rule also include compliance with the requirements and OAC rule 3745-31-(10) thru (20) and OAC rule 3745-31-05(C).	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	Emissions from the LMF shall not exceed the following: PM/PM ₁₀ emissions shall not exceed 2.20 lbs/hr and 7.20 TPY	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	Nitrogen oxide (NO _x) emissions shall not exceed 1.65 lbs/hr and 5.32 TPY	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	Carbon monoxide (CO) emissions shall not exceed 33.0 lbs/hr and 107.0 TPY	
	Volatile organic compounds (VOC) emissions shall not exceed 0.22 lbs/hr and 0.71 TPY	
	Lead (Pb) emissions shall not exceed 0.000065 gr/dscf, 0.02 lb/hr and 0.07 TPY	
	See section A.2.a	
	See section A.2.b	
	28.0 tons of SO ₂ per rolling 12-month period, during the production of resulfurized grade	

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2. Additional Terms and Conditions

2.a The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following:

PM/PM10 emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO₂) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NO_x) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Chart

PTI A

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Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

- 2.b** The permittee is required to perform a Best Available Control Technology (BACT) review for NO_x, CO, PM/PM₁₀, and VOC. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) through(20) above. The following determinations have been made for this emissions unit:

PM/PM₁₀- Use of a baghouse with an emission limit of 0.0024 gr/dscf of exhaust gases

II. Operational Restrictions

1. The pressure drop across the meltshop baghouse shall be maintained within the range of 3.0 to 8.0 inches of water while the emissions unit is in operation.
2. The emissions from P901 shall be vented to the melt shop baghouse.
3. The maximum annual production rate for this emissions unit shall not exceed 710,600 tons of steel, based upon a rolling, 12-month summation of the tons of steel produced per month. In order to ensure federal enforceability during the first twelve months of operation after the permit issuance, the permittee shall comply with the following monthly production restrictions:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Production Totals (Tons)</u>
1	59,220
1-2	118,440
1-3	177,660
1-4	236,880
1-5	296,100
1-6	355,320
1-7	414,540
1-8	473,760
1-9	532,980
1-10	592,200
1-11	651,420

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1-12 710,600

After the first 12 calendar months of operation after the issuance of this permit, compliance with the annual steel production limitation shall be based upon a rolling, 12-month summation of the steel production.

4. The maximum annual production rate for this emissions unit during resulfurization grade steel production shall not exceed 28,000 tons of steel, based upon a rolling, 12-month summation of the tons of steel produced per month. In order to ensure federal enforceability during the first twelve months of operation after the permit issuance, the permittee shall comply with the following monthly production restrictions:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Production Totals (Tons)</u>
1	2,333
1-2	4,666
1-3	6,999
1-4	9,332
1-5	11,665
1-6	13,998
1-7	16,331
1-8	18,664
1-9	20,997
1-10	23,330
1-11	25,663
1-12	28,000

After the first 12 calendar months of operation after the issuance of this permit, compliance with the annual steel resulfurization production limitation shall be based upon a rolling, 12-month summation of the steel production.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall monitor the baghouse control system and maintain records in accordance with the following requirements.

The permittee shall perform monthly operational status inspections of the equipment that is 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 ductwork, and fan erosion). Any deficiencies shall be noted and proper maintenance performed.

2. The permittee shall properly operate and maintain equipment to monitor the pressure drop across

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the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once per day.

3. The permittee shall obtain an analysis of the Melt Shop Baghouse dust on a monthly basis. At a minimum, the samples shall be analyzed for chromium, magnesium, manganese, lead, zinc, and mercury content. The results shall be reported in weight percent. This analysis shall be conducted in accordance with U.S. EPA test methods and procedures.
4. The permittee shall maintain production records for the LMF. These records, at a minimum, shall contain the following information:
 - a. the number of hours this emissions unit was in operation; and
 - b. the tons of steel produced.
5. The permittee shall maintain monthly records of the tons of steel produced during each calendar month.
6. The permittee shall maintain production records for the LMF during the resulfurization process. These records, at a minimum, shall contain the following information:
 - a. the number of hours this emissions unit was in operation; and
 - b. the tons of steel produced during the resulfurization process.
7. The permittee shall maintain monthly records of the tons of steel produced during the resulfurization process each calendar month.

IV. Reporting Requirements

1. The permittee shall submit written deviation (excursion) reports to the Cleveland DAQ that identify all periods of time during which the pressure drop across the baghouse did not comply with the range established during the most recent emission test that demonstrated that the emissions unit was in compliance, as well as the corrective actions that were taken to achieve compliance.
2. The permittee shall submit deviation (excursion) reports to the Cleveland DAQ which identify all exceedances of the rolling, 12-month steel production rate limitation for the first 12 calendar months of operation following the issuance of this permit. Each report shall be submitted to the

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Cleveland DAQ within 30 days after the deviation occurs.

V. Testing Requirements

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

- a. Emission Limitation:
2.20 lbs/hr of PM/PM10 emissions P901

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the emission factor for LMF steel processing (2.0 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour) and (1-0.99) which is the control efficiency for the baghouse.

- b. Emission Limitation:
7.20 TPY of PM/PM10 emissions P901

Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the emission factor LMF steel processing (2.0 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year), (1-0.99) which is the control efficiency for the baghouse and dividing by the factor of (2000 lbs/ton).

- c. Emission Limitation:
220.0 lbs/hr of SO2 emissions (resulturization) P901

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the emission factor for resulturized steel processing (2.0 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour).

- d. Emission Limitation:
28.0 tons of SO2 emissions per rolling 12-month period (resulturization) P901

Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the emission factor for resulturized steel processing (2.0 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year) and dividing by the factor of (2000 lbs/ton).

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- e. Emission Limitation:
1.65 lbs/hr of NOx emissions P901

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the emission factor for LMF steel processing (0.015 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour).

- f. Emission Limitation:
5.32 TPY of NOx emissions P901

Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the emission factor for LMF steel processing (0.015 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year) and dividing by the factor of (2000 lbs/ton).

- g. Emission Limitation:
33.0 lbs/hr of CO emissions P901

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Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the emission factor for LMF steel processing (0.3 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour).

- h. Emission Limitation:
107 TPY of CO emissions P901

Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the emission factor for LMF steel processing (0.3 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year) and dividing by the factor of (2000 lbs/ton).

- i. Emission Limitation:
0.22 lbs/hr of VOC emissions P901

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the emission factor for LMF steel processing (0.002 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour).

- j. Emission Limitation:
0.71 TPY of VOC emissions P901

Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the emission factor for LMF steel processing (0.002 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year) and dividing by the factor of (2000 lbs/ton).

- k. Emission Limitation:
0.02 lb/hr of Lead (Pb) emissions P901

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the emission factor for LMF steel processing (0.02 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour) and (1-0.99) which is the control efficiency for the baghouse.

- l. Emission Limitation:

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0.07 TPY of Lead (Pb) emissions P901

Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the emission factor LMF steel processing (0.02 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year), (1-0.99) which is the control efficiency for the baghouse and dividing by the factor of (2000 lbs/ton).

m. Emission Limitation:

Visible PE shall not exceed 3% opacity from the baghouse stack.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

n. Emission Limitation:

20.38 lbs/hr, 0.0024 gr/dscf of PM/PM10 emissions Meltshop baghouse

Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in section A.V.2.

o. Emission Limitation:

88.85 TPY of PM/PM10 emissions Meltshop baghouse

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr particulate emission rate established through the emissions testing requirement in A.V.1.n by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

p. Emission Limitation:

264.1 lbs/hr of SO2 emissions Meltshop baghouse

Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in section A.V.2.

q. Emission Limitation:

99.43 TPY of SO2 emissions Meltshop baghouse

Applicable Compliance Method:

Chart**PTI A**

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The ton per year limitation was developed by dividing the lb/hr SO₂ emission rate established through the emissions testing requirement in A.V.1.p by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

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- r. Emission Limitation:
56.2 lbs/hr of NO_x emissions Meltshop baghouse
- Applicable Compliance Method:
Compliance shall be based upon the results of the emission testing specified in section A.V.2.
- s. Emission Limitation:
181.64 TPY of NO_x emissions Meltshop baghouse
- Applicable Compliance Method:
The ton per year limitation was developed by dividing the lb/hr NO_x emission rate established through the emissions testing requirement in A.V.1.r by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.
- t. Emission Limitation:
401.74 lbs/hr of CO emissions Meltshop baghouse
- Applicable Compliance Method:
Compliance shall be based upon the results of the emission testing specified in section A.V.2.
- u. Emission Limitation:
1,297.41 TPY of CO emissions Meltshop baghouse
- Applicable Compliance Method:
The ton per year limitation was developed by dividing the lb/hr CO emission rate established through the emissions testing requirement in A.V.1.t by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.
- v. Emission Limitation:
23.02 lbs/hr of VOC emissions Meltshop baghouse

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Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- w. Emission Limitation:
74.59 TPY of VOC emissions Meltshop baghouse

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr VOC emission rate established through the emissions testing requirement in A.V.1.v by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

- x. Emission Limitation:
0.000065 gr/dscf, 0.57 lb/hr of Lead (Pb) emissions Meltshop baghouse

Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- y. Emission Limitation:
1.78 TPY of Lead (Pb) emissions Meltshop baghouse

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr Pb emission rate established through the emissions testing requirement in A.V.1.x by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

- z. Emission Limitation:
22.0 lbs/hr of SO₂ emissions (other steel grades) P901

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the emission factor for standard grade steel processing (0.2 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour).

- aa. Emission Limitation:
71.06 tons of SO₂ emissions per rolling 12-month period (other steel grades) P901

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Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the emission factor for standard steel processing (0.2 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year) and dividing by the factor of (2000 lbs/ton).

- bb. Emission Limitation:
0.052 lb/hr of Mercury (Hg) emissions Meltshop baghouse

Applicable Compliance Method:

Emission factor for mercury was developed based upon known testing and emissions allowables of other sources. An emission factor of 0.000476 lb Hg/ton of steel was used for determining the allowable hourly emission rate as follows: 110 tons/hr x 0.000476 lb Hg/ton = 0.052 lb Hg/hr.

Compliance shall be based upon the results of the emission testing specified in section A.V.2

- cc. Emission Limitation:
0.17 TPY of Mercury (Hg) emissions Meltshop baghouse

Applicable Compliance Method:

The emission factor of 0.000476 lb Hg/ton of steel was used to determine annual mercury emissions. This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton as follows: 710,600 tons/yr x 0.000476 lb Hg/ton x ton/2000 lbs = 0.17 ton Hg/yr. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed and divide by 2000 lbs/ton.

2. Emission testing shall be conducted within 6 months after installation. The emission testing shall be conducted to demonstrate compliance with the SO₂, NO_x, CO, VOC, Lead (Pb), Mercury (Hg) and particulate emission limitations.

The test(s) shall be conducted while emissions units P032-P042 and P900-P902 are operating simultaneously at or near their maximum capacity, unless otherwise specified or approved by the Cleveland DAQ.

The following test methods shall be employed to demonstrate compliance with the emission limitations: Methods 1 through 5 of 40 CFR Part 60, Appendix A for particulates, Methods 1

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through 4 and 6 of 40 CFR Part 60, Appendix A for SO₂, Methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A for NO_x and Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A for CO, Methods 1 through 4 and 25 or 25A of 40 CFR Part 60, Appendix A for VOC and Methods 1 through 4 and 12 or 29 of 40 CFR Part 60, Appendix A for Lead (Pb) and Methods 1 through 4 and 29 of 40 CFR Part 60, Appendix A for Mercury (Hg). Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland DAQ. 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 Cleveland DAQ's refusal to accept the results of the emission test(s).

Personnel from the Cleveland DAQ 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 Cleveland DAQ 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 Cleveland DAQ.

VI. Miscellaneous Requirements

None.

**Chart
PTI A**

Emissions Unit ID: P901

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P901 - LMF - Ladle Metallurgy Furnace, 110 TPH capacity, for alloy mixing and re-sulfurization of molten steel	None.	None.

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

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PTI A

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None.

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Chart
PTI A

Emissions Unit ID: P902

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P902 - Continuous caster of steel	OAC rule 3745-31-05(A)(3)	OAC rule 3745-17-11
	OAC rule 3745-31-10 thru 20	OAC rule 3745-18-06(E)(1)
	OAC rule 3745-17-07(A)(1)	
	OAC rule 3745-17-07(B)(3)	
	OAC rule 3745-17-08	

Chart

PTI A

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Applicable Emissions
Limitations/Control
Measures

The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-17-08.

Emissions from the continuous caster shall not exceed the following:
PM/PM10 emissions shall not exceed
1.10 lbs/hr and 3.55 TPY

See section A.2.a

See section A.2.b

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

reasonable available control measures for control of emissions of fugitive dust

The emission limitation

specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

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Emissions Unit ID: P902

2. Additional Terms and Conditions

- 2.a** The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following:

PM/PM10 emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO₂) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NO_x) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

- 2.b** The permittee is required to perform a Best Available Control Technology (BACT) review for NO_x, CO, PM/PM₁₀, and VOC. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) through(20) above. The following determinations have been made for this emissions unit:

PM/PM10- Use of a baghouse with an emission limit of 0.0024 gr/dscf of exhaust gases

II. Operational Restrictions

1. The pressure drop across the meltshop baghouse shall be maintained within the range of 3.0 to 8.0 inches of water while the emissions unit is in operation.
2. The emissions from P902 shall be vented to the melt shop baghouse.
3. The maximum annual production rate for this emissions unit shall not exceed 710,600 tons of steel, based upon a rolling, 12-month summation of the tons of steel produced per month. In order to ensure federal enforceability during the first twelve months of operation after the permit issuance, the permittee shall comply with the following monthly production restrictions:

Chart**PTI A**

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<u>Month(s)</u>	<u>Maximum Allowable Cumulative Production Totals (Tons)</u>
1	59,220
1-2	118,440
1-3	177,660
1-4	236,880
1-5	296,100
1-6	355,320
1-7	414,540
1-8	473,760
1-9	532,980
1-10	592,200
1-11	651,420
1-12	710,600

After the first 12 calendar months of operation after the issuance of this permit, compliance with the annual steel production limitation shall be based upon a rolling, 12-month summation of the steel production.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall monitor the baghouse control system and maintain records in accordance with the following requirements.

The permittee shall perform monthly operational status inspections of the equipment that is 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 ductwork, and fan erosion). Any deficiencies shall be noted and proper maintenance performed.

2. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once per day.
3. The permittee shall obtain an analysis of the Melt Shop Baghouse dust on a monthly basis. At a

**Chart
PTI A**

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emission factor for continuous casting steel processing (1.0 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year), (1-0.99) which is the control efficiency for the baghouse and dividing by the factor of (2000 lbs/ton).

- c. Emission Limitation:
20.38 lbs/hr, 0.0024 grains/dscf of PM/PM10 emissions Meltshop baghouse

Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- d. Emission Limitation:
88.85 TPY of PM/PM10 emissions Meltshop baghouse

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr particulate emission rate established through the emissions testing requirement in A.V.1.c by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

- e. Emission Limitation:
264.1 lbs/hr of SO2 emissions Meltshop baghouse

Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- f. Emission Limitation:
99.43 TPY of SO2 emissions Meltshop baghouse

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr SO2 emission rate established through the emissions testing requirement in A.V.1.e by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

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- g. Emission Limitation:
56.2 lbs/hr of NOx emissions Meltshop baghouse
- Applicable Compliance Method:
Compliance shall be based upon the results of the emission testing specified in section A.V.2.
- h. Emission Limitation:
181.64 TPY of NOx emissions Meltshop baghouse
- Applicable Compliance Method:
The ton per year limitation was developed by dividing the lb/hr NOx emission rate established through the emissions testing requirement in A.V.1.g by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.
- i. Emission Limitation:
401.74 lbs/hr of CO emissions Meltshop baghouse
- Applicable Compliance Method:
Compliance shall be based upon the results of the emission testing specified in section A.V.2.
- j. Emission Limitation:
1,297.41 TPY of CO emissions Meltshop baghouse
- Applicable Compliance Method:
The ton per year limitation was developed by dividing the lb/hr CO emission rate established through the emissions testing requirement in A.V.1.i by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.
- k. Emission Limitation:
23.02 lbs/hr of VOC emissions Meltshop baghouse
- Applicable Compliance Method:
Compliance shall be based upon the results of the emission testing specified in section A.V.2.

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- l. Emission Limitation:
74.59 TPY of VOC emissions Meltshop baghouse
- Applicable Compliance Method:
The ton per year limitation was developed by dividing the lb/hr VOC emission rate established through the emissions testing requirement in A.V.1.k by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.
- m. Emission Limitation:
0.000065 gr/dscf, 0.57 lb/hr of Lead (Pb) emissions Meltshop baghouse
- Applicable Compliance Method:
Compliance shall be based upon the results of the emission testing specified in section A.V.2.
- n. Emission Limitation:
1.78 TPY of Lead (Pb) emissions Meltshop baghouse
- Applicable Compliance Method:
The ton per year limitation was developed by dividing the lb/hr Pb emission rate established through the emissions testing requirement in A.V.1.m by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.
- o. Emission Limitation:
Visible PE shall not exceed 3% opacity from the baghouse stack.
- Applicable Compliance Method:
If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).
- p. Emission Limitation:
0.052 lb/hr of Mercury (Hg) emissions Meltshop baghouse
- Applicable Compliance Method:
Emission factor for mercury was developed based upon known testing and emissions allowables of other sources. An emission factor of 0.000476 lb Hg/ton of steel was used for determining the allowable hourly emission rate as follows: 110 tons/hr x 0.000476 lb

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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 Cleveland DAQ 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 Cleveland DAQ.

VI. Miscellaneous Requirements

None.

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P902 - Continuous caster of steel	OAC rule 3745-31-05	None.

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.