



State of Ohio Environmental Protection Agency

**RE: DRAFT PERMIT TO INSTALL CERTIFIED MAIL
FULTON COUNTY**

Street Address:

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

Mailing Address:
Lazarus Gov.
Center

Application No: 03-13977

DATE: 6/3/2003

North Star BHP Steel, LTD
Satara Taylor
6767 County Rd. 9
Delta, OH 43515

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 **\$1000** 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

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**PUBLIC NOTICE
OHIO ENVIRONMENTAL PROTECTION AGENCY
ISSUANCE OF DRAFT PERMIT TO INSTALL
SUBJECT TO PREVENTION OF SIGNIFICANT DETERIORATION REVIEW
TO NORTH STAR BHP STEEL, LIMITED**

Public Notice is hereby given that the Staff of the Ohio Environmental Protection Agency (EPA) has recommended to the Director that the Ohio EPA issue a draft action of a Permit to Install (PTI) to North Star BHP Steel, Limited (NSBHP), located in Delta, Fulton County, Ohio. The draft action (permit no. 03-13977) was issued on June 03, 2003. This draft permit proposes to modify electric arc shaft furnace (EASF) steelmaking and redesign the lid of each ladle to increase actual production up to the existing permit to install allowable. Therefore, potential hourly production rate of 315 tons/hr will not change. Also, the annual liquid steel production capacity will stay the same i.e. 2,250,000 tons per year. .

Due to the proposed modifications, increase in actual 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.

Pollutant	Net Change	PSD Significance Level
CO	3,974.5	100
NO _x	353.9	40
SO ₂	118.6	40
OC	258.8	40
PM ^a	68.1	25
PM ₁₀ ^a	66.6	15
Lead ^a	1.81	0.6

^a Includes fugitive and point emissions.

^b Proposed

This facility is subject to the applicable attainment provisions of the Ohio EPA permit to install requirements (OAC 3745-31).

The Ohio EPA allows sources to consume less than one half the available increment. This facility has demonstrated that the impact from the new sources is less than one half the available increment. Based on this analysis, the project complies with the increment requirements.

Within 30 days from the date of this notice, any interested party may submit comments or request a public hearing. Comments are to be sent to Elissa Hartfield of the Northwest District Office, Ohio Environmental Protection Agency, 347 North Dunbridge Road, Bowling Green, Ohio, 43402.

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 Northwest District Office at the above address during normal business hours. Telephone number: (419) 352-8461.

**STAFF DETERMINATION FOR THE PSD APPLICATION TO MODIFY ELECTRIC ARC SHAFT
FURNACE TO INCREASE ACTUAL PRODUCTION UP TO THE
EXISTING PERMIT TO INSTALL (PTI) ALLOWABLE TO 315 TONS OF STEEL
PER HOUR AND 2.25 MILLION TONS OF STEEL PER YEAR AT THE
NORTH STAR BHP STEEL, LIMITED'S FLAT ROLL STEEL
RECYCLING FACILITY (PTI NO. 03-13977)**

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.

Facility Description:

North Star BHP Steel, Limited (NSBHP) manufactures flat rolled steel products from recycled steel scrap. The primary steel production operations includes: electric arc shaft furnace (EASF) steelmaking, ladle refining (ladle metallurgy facility), a continuous castor, two tunnel furnaces and a rolling mill, and associated ancillary processes. Raw material scrap and other forms of iron will be shipped to the site by railcar and truck.

NSBHP proposes to replace two shell burners and one lance burner in each shell of the EASF with three new "Morè Modules". This type of technology is designed to optimize the injection of oxygen and carbon into the furnace melting process and to homogenize steel temperature and chemistry, thus resulting in decreased heat cycle time, improved metallic yield, and reduced electrical consumption. The use of this technology is expected to decrease the use of oxygen, carbon, and natural gas in the EASF melting process, and as a result, the manufacturer's literature suggests that potential emission rate of carbon monoxide (CO) and nitrogen oxides (NO_x) from the EASF should not increase. NSBHP also proposes to redesign the lid of each ladle such that there is a weight decrease of approximately three tons. As a result, this will allow NSBHP to produce an additional three tons of steel per process cycle (heat). While the actual hourly production rate will see an increase, the potential hourly rate of 315 tons/hr will not change. Also, the annual liquid steel production capacity will stay the same i.e. 2,250,000 tons per year.

The efficiency improvements will, however, result in hourly and annual production rate increases from current levels. This will in turn cause a significant net increase in actual mass emissions of NO_x, even though the lb/ton rate will not increase. Therefore, the proposed project will be a major modification subject to Prevention of Significant Deterioration (PSD) review.

Process Description:

NSBHP produces steel by melting steel scrap in an electric arc shaft furnace (EASF). Scrap is received into a scrap yard and then loaded into charge buckets for charging into the EASF where the metal is melted and then tapped through a bottom tap system into a ladle which is transported to a ladle metallurgy facility or LMF (LMF is not a part of this project).

Modifications:

The proposed modification will consist of removing two existing shell burners and the single water-cooled injection lance that are currently used to add oxygen and carbon to the furnace. Carbon and oxygen are injected into the furnace during the melting process to increase the combustion efficiency and increase the carbon content of the steel.

NSBHP also proposes to redesign the lid of each ladle such that there is a weight decrease of approximately three tons. As a result, this will allow NSBHP to produce an additional three tons of steel per process cycle (heat).

New Source Review (NSR)/PSD Applicability

The facility contains an EASF that is an innovative twin shell design with an integrated double shaft scrap preheating system which is rated at 290 tons per hour with 100% scrap charge and 260 tons per hour with 60% scrap and 40% hot briquette iron pellets. The maximum production and the assigned permit allowable for the EASF is 315 tons of steel per hour. As such, the EASF generates particulate emissions

for which an emission standard applies, and is therefore, considered an "affected facility" subject to 40 CFR 60 Subpart AAa, "Standards of Performance for Steel Plants Electric Arc Furn. & Argon-O₂."

The Steel Plants Electric Arc Furn. & Argon-O₂ NSPS applies to emissions for PM and opacity. The emission standard for Particulate Matter (PM) emissions applicable to the EASF is 0.0052 grains/dscf. This subpart also has an opacity requirement of 3% for the baghouse and 6% for the shop roof and 10% for dust handling operations associated with the EASF. Method 9 is the required reference method for opacity and Method 5 for PM emissions.

The NSBHP facility is classified as a "major" stationary source because it is one of the 28 source categories and the potential emissions including fugitive emissions exceed 100 tons per year in an attainment area. The city of Delta, Ohio is located in Fulton County where the installation was built and is an attainment area for all pollutants. Once a source emits a regulated pollutant that triggers a major modification at a major source level emissions a PSD analysis is required. In addition, all pollutants which will be emitted at a rate in excess of the significance levels would also require the facility to perform a PSD analysis for those pollutants. Table 1 shows the emissions from the proposed modification.

TABLE 1

Emissions From the Proposed Installation

Pollutant	2-Year Average Emissions (TPY)	Future Potential to Emit (TPY)	Net Change	PSD Significance Level
CO	4,463	8,437.5 ^b	3,974.5	100
NO _x	287.4	641.3	353.9	40
SO ₂	162.7	281.3	118.6	40
OC	135	393.8	258.8	40
PM ^a	31.6	99.7	68.1	25
PM ₁₀ ^a	25.5	92.1	66.6	15
Lead ^a	0.18	1.99	1.81	0.6

^a Includes fugitive and point emissions.

^b Proposed

Based upon the above information, PSD review is required for PM, PM₁₀, NO_x, SO₂, OC, Lead (Pb), and CO.

BACT 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 will be employed by the source. In this specific case, the BACT analysis was conducted for particulate matter, sulfur dioxide, nitrogen oxides, carbon monoxide, and volatile organic compound and lead. Each pollutant will be reviewed separately.

The application used a "top-down" approach to determine an appropriate level of control.

BACT Control for Particulate Matter and Lead

The particulate matter emitted from this source is comprised in part of lead, therefore, the proposed PM BACT is assumed to reflect BACT for lead as well.

NSBHP is proposing a direct evacuation control/canopy (DEC) hood system with a fabric filter as BACT. In determining whether a DEC would be considered BACT, NSBHP investigated the feasibility of the following capture and control technologies for the EASF PM emissions:

1. side draft hood;
2. full or partial furnace enclosures; and
3. open and closed configuration.

A side draft hood is considered to be an alternative fume extraction system to a DEC to remove process emissions from EASFs. The hood operates only when the furnace is upright with the roof in place. Side draft hoods are typically employed on smaller furnaces. EASF side draft hoods in lieu of the DEC are not considered BACT because side drafts hoods have lower capture efficiency. Also, high melt rate of modern large EASFs essentially require the use of direct evacuation gases from the furnace.

Full or partial furnace enclosures are not considered as a capture option because they hamper operations, such as charging and alloy addition, and can cause too many delays. A review of EPA documents and other publications indicates that furnace enclosures have been used on single furnace systems.

There are two basic roof configurations: open and closed. A closed roof configuration results in lower visible atmospheric emissions of particulate. One disadvantage of the closed roof system is that heavy in-shop heat and fume can accumulate in the work environment, and if there is an exhaust system malfunction or there is a furnace process upset, unacceptable worker exposure conditions can occur. Additionally, with a closed roof configuration, the canopy hood air flow must be higher than the canopy hood air flow in the open roof configuration to assure adequate ventilation and heat removal for the workers.

Fabric filters have advantages over other control devices in that they use less energy for equivalent outlet concentrations, are efficient collectors of very fine emissions, are tolerant of fluctuations in inlet particle size distribution, and collect dust in dry form, which is easier to handle.

Electrostatic precipitators, cyclones, and scrubbers are not often installed on electric arc shaft furnace operations because they generally do not meet BACT or the Subpart AAa New Source Performance Standard of 0.0052 grains per standard cubic foot.

NSBHP committed to the lowest permitted particulate emission performance level of 0.0018 grains/scf for their PSD permit.

The opacity of emissions from the baghouse exhaust will be limited to 3 percent. According to NSPS Subpart AAa, this baghouse opacity limit applies only for opacity of emissions from the "affected facility" which is the EASF. However, the baghouse will control emissions from other emission sources such as the LMFs. Since the combined emissions from the baghouse will be subject to the 3% opacity limit, and the NSPS opacity limit is far more stringent than the State opacity limit, the NSPS limit is deemed to represent BACT.

BACT Control for Sulfur Dioxide

Sulfur enters into the EASF process as a component of the coke charged with the scrap and injected into the furnace for the foaming slag process and as a component of the scrap. The preponderance of the sulfur emits under substoichiometric conditions in the melt to form sulfides in the slag, principally in the form of calcium sulfide, since there is a lot of free calcium residual in the slag from the added lime. Some of the sulfur may react with injected oxygen or oxidize at the slag surface or in the furnace headspace to form SO₂ and be exhausted from the furnace. A portion of the SO₂ carried over in the exhaust appears to react in the gas stream or at the baghouse with lime carried over from the furnaces. Baghouse dust contains a significant portion of calcium products, and dust processors report that sulfur is contained in the dust as a non-combustible product most probably tied up with the calcium, that remains with the iron rich residue after processing for recoverable metals. A precise material balance may not be possible, but it is projected that the capture of sulfur as reaction compounds in the slag and baghouse dust is well over 90 percent of the input sulfur. Thus, the nature of the EASF process results in good control of potential SO₂ emissions. The projected

average SO₂ emission attributable to the proposed EASF process is 0.10 lbs/ton of steel. Other EASF facilities are reported to have been tested or permitted at a range of levels equating to 0.09 to 0.28 lbs/ton of steel.

Traditional SO₂ control alternatives for combustion and process operations include: fuel or feed product modification or substitution and flue gas desulfurization (FGD) technologies.

Fuel substitution is not an option since natural gas used at the oxy-fuel burners is essentially a sulfur free fuel.

Alternative flue gas desulfurization technologies employed for combustion and other controlled process systems include:

1. Wet scrubbing,
2. Spray dryer absorption, and
3. Dry sorbent injection.

The lowest cost sulfur dioxide control alternative using dry injection technology would have a cost effectiveness around \$14,000 per ton of SO₂ controlled, making it economically prohibitive. Our determination is that there is no add-on EASF shop sulfur dioxide control meeting applicability, feasibility and impact criteria for BACT, and that the proposed well designed EASF and LMF systems and scrap management program meet BACT requirements.

Therefore, the SO₂ emission limit of 0.10 lbs/ton of steel from the proposed EASF process meets the BACT.

BACT Control for Nitrogen Oxides

There are three fundamental mechanisms of NO_x formation. These mechanisms yield (1) thermal NO_x, (2) fuel bound nitrogen NO_x, and (3) prompt NO_x.

Thermal NO_x formation takes place at temperatures above 2000° F, when both nitrogen and oxygen are present and sufficient residence time is allowed. In an EASF, where the furnace temperature reaches 3000 to 3400° F., conditions exist for the formation of NO_x to a relatively high degree. Recent PSD permits have BACT NO_x limits as high as 0.7 lbs/ton, and there is no information to suggest that EASFs have NO_x emission controls or that suitable controls are available. The proposed EASF system average NO_x emissions are projected at 0.54 lbs/ton. Note that this includes both the NO and NO₂ fractions in the emission stream.

Technologies considered for add-on control of NO_x from traditional combustion sources include selective catalytic reduction (SCR), selective non-catalytic reduction (SNCR) (including both urea injection and ammonia injection), and flue gas recirculation (FGR). None of these technologies have ever been applied to this steel source category, and the application of any of these would be considered experimental technology transfer.

Further, the EPA BACT/LAER Clearinghouse indicates no EASFs are employing add-on control technology for NO_x. Since NO_x emissions are understood to be largely generated in the EASF vessel and DEC during the melt phase, it is assumed for cost effectiveness evaluation purposes that 100% of the proposed potential emissions are captured by the DEC and only this smaller gas stream, as opposed to the full baghouse gas stream, should be considered for the most cost effective control.

In summary, there is no applicable NO_x control technology to reduce NO_x emissions from that proposed, and the well designed and operated EASF and DEC system constitutes BACT for NO_x control. It can also be pointed out that at the design baghouse flow rate the average outlet NO_x concentration over the complete cycle is expected to be less than 20 ppm, which is lower than most, controlled combustion sources.

BACT Control for Carbon Monoxide

CO is generated to some degree during the charging, melting, slagging and tapping phases of the EASF heat cycle. EPA Publication AP-42 gives an uncontrolled EASF emission factor for CO of 18 lbs/ton. This value is considered to be a baseline condition for evaluating control performance, for a shaft-type furnace utilizing a direct evacuation control (DEC) system. This assumption is based on the inherently higher CO emitting nature

of the shaft-type electric arc furnace due to the lower temperature of the gas entering the DEC. Most EASF systems now employ a combination of direct evacuation control (DEC) and capture hood exhaust. CO generated during charging and other times when the DEC is not engaged and CO discharged from the furnace during pressure upsets escapes to the plant air, is quenched and is captured by the hood system. Although captured by the hood, there is essentially no opportunity to control CO captured by the DEC, which is estimated to be about 90 to 95 percent of the total CO generated for a properly designed system.

By nature of the design, the base standard DEC system with an air gap to introduce cooling and combustion air provides for good oxidation of the CO to carbon dioxide. DEC systems with the air gap adjustment optimized have been tested in the range of 2 to 6 pounds of CO per ton of steel as a 24-hr average. The current BACT level established in NSBHP's PSD and Title V permits is 8.4 pounds per ton or 2,640 lbs/hr (8-hr average). This represents the typical maximum average emission rate for contemporary shaft preheater-style EASF/LMF steel making processes and is the basis for the control alternative reduction benefit.

CO control can be further improved with the installation of an appropriately integrated water-cooled dust changer to increase residence time and exhaust flow control system to maintain the proper combustion air volume over varying furnace conditions.

The DEC draft control provides optimal combustion control of the CO emissions without causing unnecessary drafting of the furnace, which could adversely effect NO_x emissions, and the water-cooled duct and dropout/combustion chamber systems provide for the time, temperature and mixing conditions necessary to maximize CO combustion.

These furnace, shaft, DEC, gap, chamber, duct and combustion control enhancements provide for excellent CO combustion conditions and are estimated to increase the control efficiency for the CO captured by the DEC to approximately 95 to 97 percent, for a resulting average controlled emission level of 7.5 lb/ton or less (including EASF and LMF emissions). The installed capital cost of these DEC improvements to optimize CO combustion is relatively expensive at approximately \$3,250,000. The resulting cost effectiveness is \$78 per ton. NSBHP proposes that the corresponding emission rate of 2,362.5 lbs CO/hour represents BACT for the shaft-style furnace.

Further, there are no other add-on control technologies being successfully utilized to further reduce CO emissions. Further manipulation of furnace process conditions to reduce CO is found to have a direct adverse affect on NO_x. NSBHP proposes that the DEC gap, dropout/combustion chamber, increased water cooled duct length and DEC exhaust fan flow control system having a maximum emission level of 7.5 lb/ton of steel as an 8-hour average is BACT for the EASF/LMF facility.

BACT Control for Volatile Organic Compounds

Volatile organic compounds (VOC) emissions largely result from the volatilization and partial combustion of oils, plastic and other organic matter in the scrap charge. The VOC emissions are intermittent and predominantly limited to brief periods during scrap charging of the EASF. Control incorporates a good scrap management program to prevent the purchase and charging into the furnace scrap that is heavily oiled or contains significant amounts of combustible materials. Every scrap shipment will be inspected for conformance with the NSBHP scrap specification. The emission factor proposed for permitting is equal to EPA's VOC emission factor of 0.35 lb/ton of steel produced. Because of the low average concentration and the large gas flow, flue gas incineration is essentially infeasible. NSBHP proposes that a well designed and operated furnace system and a good scrap management plan constitutes BACT for VOC emissions.

Ambient Air Quality Monitoring Requirements

The NSBHP facility is located in AQCR 177. The area is attainment for all criteria pollutants. U.S. EPA regulations require the establishment of baseline air quality in the vicinity of the proposed project. This is normally accomplished using representative air quality monitoring data. Air quality monitoring 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.

NSBHP has conducted initial ambient air quality modeling to determine the potential impact due to the proposed modification. The following are the projected impacts:

<u>Pollutant</u>	<u>Averaging Period</u>	<u>Predicted Concentration</u>	<u>Monitoring De minimus Concentration</u>
PM10	24-hour	11.9 ug/m ³	10 ug/m ³
SO ₂	24-hour	12.4 ug/m ³	13 ug/m ³
NO _x	Annual	3.6 ug/m ³	14 ug/m ³
CO	8-hour	648.2 ug/m ³	575 ug/m ³
Pb	Quarter	0.025 ug/m ³	0.1 ug/m ³

Predicted impacts exceed the monitoring threshold for PM10 and CO but not for SO₂, Pb and NO_x. In addition, more refined modeling indicated that SO₂ would also exceed the monitoring threshold as well. However, Ohio EPA has identified existing ambient data which it judged to be representative of the current air quality within the impact area of NSBHP. Therefore, NSBHP would not be required to conduct pre-construction monitoring.

Modeling

Air quality dispersion was conducted to assess the effect of this modification on the national ambient air quality standards (NAAQS) and PSD increments. ISCST3 (version 02035) was used in the regulatory default, urban mode. Five years of meteorological data (Toledo/Flint, 1985-1987, 1990-1991) were used. Building downwash was incorporated into the ISCST3 estimates.

Predicted impacts of SO₂, CO, PM10 and NO_x were above their corresponding PSD significant impact increments. Additional modeling for compliance with both the NAAQS and PSD increments was required for SO₂, CO, PM10 and NO_x. No further modeling was necessary for Pb.

PSD Increment

All areas surrounding the NSBHP facility are Class II PSD areas. It is the Ohio EPA policy that no individual project consumes more than 50% of the available PSD increment. For CO and Pb, projects are constrained to no more than 25% of the NAAQS. The following is the summary of the impact of increment consuming sources (peak annual quarterly and high-second-high short term impacts):

<u>Pollutant</u>	<u>Averaging Period</u>	<u>Modeled Concentration</u>	<u>PSD Increment Concentration</u>
PM10	24-hour	12.3 ug/m ³	30 ug/m ³
	Annual	3.8 ug/m ³	17 ug/m ³
SO ₂	3-hour	74.3 ug/m ³	512 ug/m ³
	24-hour	27.4 ug/m ³	91 ug/m ³
	Annual	2.01 ug/m ³	20 ug/m ³
NO _x	Annual	5.8 ug/m ³	25 ug/m ³
CO	1-hour	3008.1 ug/m ³	10000 ug/m ³ *
	8-hour 1	347.4 ug/m ³	2500 ug/m ³ *

* 25% of the NAAQS, Ohio Acceptable Incremental Impact.

NAAQS

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

<u>Pollutant</u>	<u>Averaging Period</u>	<u>Modeled Concentration</u>	<u>NAAQS Concentration</u>	<u>Concentration With Background</u>
PM10	24-hour	16.2 ug/m3	150 ug/m3	87.2 ug/m3
	Annual	4.32 ug/m3	50 ug/m3	27.3 ug/m3
SO2	3-hour	74.3 ug/m3	1300 ug/m3	234.3 ug/m3
	24-hour	27.4 ug/m3	365 ug/m3	72.0 ug/m3
	Annual	3.4 ug/m3	80 ug/m3	16.7ug/m3
NOx	Annual	6.60 ug/m3	100 ug/m3	51.8ug/m3
CO	1-hour	3008.1 ug/m3	40,000 ug/m3	6565.1 ug/m3
	8-hour	1347.4 ug/m3	10,000 ug/m3	3068.4 ug/m3

Secondary Impact Analysis

NSBHP 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.

Growth: No expansion of employees nor growth in the area population is expected.

Soil and Vegetation: The modeled impact of the project impacts for each of the pollutants are well below the national ambient air quality standards, therefore, no adverse impacts are expected.

Visibility: The NSBHP facility is located over 200 km from the nearest PSD Class I area (Dolly Sods and Otter Creek). Primary or secondary pollutants associated with this project are not anticipated to affect local or class I visibility.

Toxics Analysis

The Ohio Air Toxics Policy requires evaluation of increases in air toxics above the one ton/year threshold. Emissions rates are modeled to determine whether they exceed the Maximum Acceptable Ground Level Concentration (MAGLC) which is defined under the Air Toxics Policy.

There is no increase from current state allowables and no new toxics will be emitted, so no new toxic evaluation was performed.

Conclusions

Based upon the analysis of the permit to install application and it's supporting documentation provided by NSBHP, the Ohio EPA staff has determined the proposed modification 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 NSBHP to modify their Electric Arc Shaft Furnace (EASF) and to redesign the lid of each ladle to increase the

production up to the existing permit to install allowable.



STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

**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 03-13977

Application Number: 03-13977
APS Premise Number: 0326000073
Permit Fee: **To be entered upon final issuance**
Name of Facility: North Star BHP Steel, LTD
Person to Contact: Satara Taylor
Address: 6767 County Rd. 9
Delta, OH 43515

Location of proposed air contaminant source(s) [emissions unit(s)]:

**6767 County Road 9
Delta, Ohio**

Description of proposed emissions unit(s):

Modification to electric arc furnace.

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

North Star BHP Steel, LTD

Facility ID: 0326000073

PTI Application: 03-13977

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.

- 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 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

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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 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

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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>
S02	281.3
NOx	641.3
CO	8437.5
OC	393.8
PE	99.6
PM10	92.1
Pb	1.99
Hg	0.25

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North

PTI A

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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

North
PTI A

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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>
P901 - 315 tons/hr Twin Shaft Twin Shell Electric Arc Shaft Furnace (EASF)	40 CFR Part 52.21
	OAC Rule 3745-31-05 (A)(3)
	OAC rule 3745-18-06(F)
	40 CFR Part 60, Subpart AAa
	OAC rule 3745-17-11(B)(2)
	OAC rule 3745-17-07(A)
	OAC rule 3745-17-08
	OAC rule 3745-23-06 (B)

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PTI A**

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Applicable Emissions Limitations/Control Measures	(fugitive) See A.1.2.a. and A.1.2.g.
78.8 lbs Sulfur Dioxide (SO ₂)/hr, 281.3 tons SO ₂ /rolling 12-month period	0.038 lb Hg/hr, 0.17 ton Hg/yr (stack) See A.1.2.a. and A.1.2.i.
179.6 lbs nitrogen oxides (NO _x)/hr, 641.3 tons NO _x /rolling 12-month period	0.022 lb Hg/hr, 0.08 ton Hg/rolling 12-month period (fugitive) See A.1.2.a . and A.1.2.i. See A.1.2.c.
2362.5 lbs Carbon Monoxide (CO)/hr, 8437.5 tons CO/rolling 12-month period	See A.1.2.e.
110.3 lbs Organic Compounds (OC)/hr, 393.8 tons OC/rolling 12-month period	See A.1.2.b and A.1.2.d. (opacity restrictions) See A.1.2.e.
0.0018 grains particulate emissions (PE)/dscf (stack)	See A.1.2.e.
15.6 lbs PE/hr, 68.2 tons PE/yr (stack)	See A.1.2.h.
0.31 lb Pb/hr, 1.36 tons Pb/yr (stack)	See A.1.2.f.
8.8 lbs PE/hr, 31.5 tons PE/rolling 12-month period (fugitive)	
6.7 lbs PM ₁₀ /hr, 23.9 tons PM ₁₀ /rolling 12-month period (fugitive)	
0.18 lb Pb/hr & 0.63 ton Pb/rolling 12-month period	

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

- 2.a** The permittee shall employ Best Available Control Technology (BACT) for controlling O_x, SO₂, CO, PE/PM₁₀, Pb, and OC (VOC) on this emissions unit. BACT has been determined to be the following determinations have been made for each pollutant:

PE/PM₁₀ Operation of a baghouse with a capture efficiency of 98% and a maximum outlet grain loading of 0.0018 grains /dscf.

NO_x, CO The operation of a Direct Evacuation Control (DEC) system with air gap, and operation of a cooled post combustion chamber with burners.

VOC, SO₂ The development maintenance, and process operations under a scrap management plan.

Pb Operation of a baghouse with a capture efficiency of 98% and a maximum outlet grain loading of 0.0018 grains /dscf, and the development, maintenance, and operation under a scrap management plan.

- 2.b** The permittee shall not cause to be discharged into the atmosphere any gasses which:
- i. exit from the stack of the baghouse controlling the EAF and exhibit 3% opacity or greater; and
 - ii. exit from the melt shop due solely to the operation of the EAF and exhibit 6% opacity or greater.

- 2.c** The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-10 through 20, 40 CFR Part 52.21, and 40 CFR Part 60, Subpart AAa. All mass emissions limits established under this rule are for emissions units P901, P902, and P903 combined.

- 2.d** The standard for particulate matter specified by 40CFR 60.272a(a)(1) is less stringent than the emission limit established pursuant to OAC rules 3745-31-10 through 20.

- 2.e** 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.f** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06 (B) by committing to comply with the

Emissions Unit ID: P901

best available technology requirements established pursuant to OAC rule 3745-31-05 (A)(3) in this permit to install.

- 2.g** The permittee has requested the federally enforceable emission limitations, based on a restriction on annual production of liquid steel (See A.II.1.). The purpose of the restriction is to establish the potential to emit of the facility.
- 2.h** This facility is not located within an "Appendix A" area as identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).
- 2.i** These emission limits are subject to the requirements of 40 CFR Part 52.21 and OAC rule 3745-31-05(A)(3), as established in PTI #03-9212 (most recent modification date 1-9-03).

II. Operational Restrictions

1. The permittee shall limit production in emissions units P901 to an average of 315 tons of liquid steel per hour. Annual production from emissions units P901 shall not exceed 2.25 million tons of liquid steel per year, based upon a rolling, 12-month summation of the monthly liquid steel production.

Note: These emissions unit has been in operation for over 12 months and, for the purposes of demonstrating compliance with the first 12 months of the rolling restriction, the permittee shall use existing records verified by the Ohio EPA, NWDO.
2. The permittee shall implement the following control practices:
 - a. the post combustion chamber ignition burner set point shall be at a minimum of 1.0 MW (megawatt) during any EAF steel making operation;
 - b. the active EAF DEC offgas ignition burner set point shall be at a minimum of 1.0 MW during any EAF steel making operation; and,
 - c. the combustion air fan for the active EAF shell shall be set to ensure excess combustion air.
 - d. The permittee may petition the Ohio EPA, NWDO 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. Operation at other than baseline values will be considered by the Ohio EPA, NWDO to be unacceptable operation and maintenance of the control system.
3. The control system's fan motor amperes set points and damper positions shall be maintained at a level established during the most recent emission testing that demonstrated the emissions unit was in compliance.

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4. The permittee shall follow the procedures outlined in its "Scrap Management Program" in order to minimize the use of scrap that contains mercury, lead, oils, plastics, and organic materials that are charged in the EAF. The "Scrap Management Program" was reviewed and approved by Ohio EPA, NWDO and shall be viewed as part of the operational requirements for the permit. Any change to the "Scrap Management Program" that would increase the amount of these compounds present in the scrap, or result in the emissions of an air contaminant not previously emitted, must be approved by Ohio EPA, NWDO.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall monitor the stack emissions from the baghouse controlling emissions unit P901. Observations of the opacity of the visible emissions from the control device shall be performed by a certified visible emission observer as follows:
 - a. The permittee shall conduct visible emission observations in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Method 9.
 - b. Visible emission observations shall be conducted at least once per day when the furnace is operating in the melting and refining period. These observations shall be taken in accordance with Method 9 for a least three 6-minute periods.
 - c. The opacities shall be recorded for any point(s) where visible emissions are observed. Where it is possible to determine that a number of visible emission sites relate to only one incident of the visible emissions, only one set of three 6-minute observations shall 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.
 - d. The permittee shall ensure that an adequate number of personnel on site are "certified" to conduct visible emission observations in accordance with Method 9 procedures. The permittee may choose to have visible emissions observations contracted out, i.e. "certified" personnel may be provided by another company.
 - e. The permittee shall maintain copies of all daily opacity observations required above. The records shall identify the persons responsible for conducting the readings and verification that their Method 9 certifications are up-to-date.

2. The permittee shall monitor the operation of the control system and maintain records in accordance with the following requirements:
 - a. The permittee shall check and record on a once-per-shift basis the control system fan motor amperes and damper positions. The monitoring devices may be installed in any appropriate location such that reproducible monitoring will result. The Ohio EPA, NWDO 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.
 - b. When the permittee is required to demonstrate compliance with the visible emission limitation in section A.I.2.b. and at any other time, the Ohio EPA, NWDO may require that all control system fan motor amperes and damper positions be determined during all periods in which a hood is operated for the purpose of capturing emissions.
 - c. The permittee may petition the Ohio EPA, NWDO 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. Operation at other than baseline values will be considered by the Ohio EPA to be unacceptable operation and maintenance of the control system.
 - d. The permittee shall perform 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, NWDO to approve any alternative to monthly operational status inspections that will provide a continuous record of the operation of each emission capture system.
3. Observations of the opacity of the visible emissions from the meltshop shall be performed by a certified visible emission observer as follows:
 - a. The permittee shall conduct visible emission observations in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Method 9.
 - b. Shop opacity observations shall be conducted at least once when the furnace is operating in the melting and refining period.
 - c. Shop opacity shall be determined as the arithmetic average of 24 consecutive 15-second opacity observations of emissions from the shop. Shop opacity shall be recorded for any points where visible emissions are observed. Where it is possible to determine that a number of visible emission sites relate to only one incident of visible emissions, only one observation of shop opacity will be required. In this case, the shop opacity observations must be made for the site of highest opacity that directly relates to the cause (or location)

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- of visible emissions observed during a single incident.
- d. The permittee shall ensure that an adequate number of personnel on site are "certified" to conduct visible emission observations in accordance with Method 9 procedures. The permittee may choose to have visible emissions observations contracted out, i.e. "certified" personnel may be provided by another company.
 - e. The permittee shall maintain copies of all daily opacity observations required above. The records shall identify the persons responsible for conducting the readings and verification that their Method 9 certifications are up-to-date.
4. The permittee shall maintain daily production records of the following for emissions unit P901:
- a. the number of hours of operation;
 - b. the tons of liquid steel produced; and,
 - c. the average hourly production rate (b divided by a).
5. The permittee shall maintain monthly records of the following for emissions unit P901, P902, and P903 combined:
- a. the tons of liquid steel produced;
 - b. the emissions of SO₂, CO, OC, and NO_x*;
 - c. of annual production of liquid steel, based on a rolling 12-month summation, and
 - d. the annual emissions of SO₂, CO, OC, and NO_x*, based on a rolling 12-month summation.
- * The permittee shall use the continuous monitoring requirements in condition A.III.7 to determine monthly CO emissions. For all other pollutants, the permittee shall use the emission factors as established in condition A.V.1.
6. The permittee shall maintain daily records of all instances where the computer program for monitoring the set points established in condition A.II.2. above for emissions unit P901 required cessation of, or delays in, furnace operations. The records shall include the reasons for any delay and/or cessation in furnace operations, the duration, a description of the corrective actions taken,

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and a determination whether or not a malfunction resulting in a violation of a condition of the permit has occurred.

7. The permittee shall operate and maintain equipment to continuously monitor and record CO from this emissions unit in the units established in this permit. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to, parts per million CO on an instantaneous (one minute) basis, emission of CO in lbs per hour in the appropriate averaging period (8-hour block), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. any exceedance of the production restrictions contained in condition A.II.1.;
 - b. all periods of time during which the control system's set points established in condition A.II.2 were not met; and
 - c. all periods of time during which any of the control system fan motor ampere values or damper positions established in condition A.II.3 were not met.

The permittee shall submit these deviation reports in accordance with the general terms and conditions of this permit.

2. The permittee shall submit a semiannual written report of all exceedances of the opacity restrictions contained in condition A.I.2.b.. For the purposes of these reports, exceedances are defined as all 6-minute periods during which the average opacity exceeds these limits. If no deviations occurred during the reporting period, the permittee shall submit an report which states that no deviations occurred. These reports shall be submitted by January 31st and July 31st of each year and shall cover the previous six month period.
3. Pursuant to OAC rules 3745-15-04, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, NWDO documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any) of all instances of CO values in excess of any limitations specified in the terms and conditions of this permit. These reports shall also contain the total CO emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA NWDO documenting any continuous CO monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s)

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taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

Pursuant to OAC rules 3745-15-04, and ORC sections 3704.03(I) and 3704.031, the permittee shall submit a summary of the excess emission report pursuant to 40 CFR Part 60 section 60.7. The summary shall be submitted to the Ohio EPA NWDO within 30 days following the end of each calendar quarter in a manner prescribed by the Director.

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for emissions units P901, P902, and P903 in accordance with the following requirements:
 - a. The emission testing shall be conducted within 180 days after the modifications to emissions unit P901 have been completed.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for PE, NO_x, CO, SO₂, OC, Pb and Hg, the allowable outlet grain loading for PE, and the opacity requirements specified in A.I.2.b.i. and A.I.2.b.ii.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for NO_x, Methods 1 through 4 and 7 of 40 CFR, Part 60, Appendix A; for CO, Methods 1 through 4 and 10 of 40 CFR, Part 60, Appendix A; for SO₂, Methods 1 through 4 and 6 of 40 CFR, Part 60, Appendix A; for PE (mass emissions and allowable grain loading), Methods 1 through 4 and 5d of 40 CFR, Part 60, Appendix A for VOC, Methods 1 through 4 and Method 18, 25 or 25A of 40 CFR, Part 60, Appendix A; for Pb*, Methods 1 through 4 and 12 or 29 of 40 CFR, Part 60, Appendix A; for Hg*, Methods 1 through 5 and 29 of 40 CFR, Part 60, Appendix A, Appendix A; and for opacity, Method 9 of 40 CFR, Part 60, Appendix A. Alternative

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U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

- d. During the performance testing to demonstrate compliance with the allowable mass emission rate and outlet grain loading for PE, and the opacity requirements, the following additional testing requirements shall be employed:
 - i. The sampling time and sample volume for each Method 5D run shall be at least 4 hours and 4.50 dscm (160 dscf) and the sampling time shall include an integral number of heats.
 - ii. Opacity measurements shall be taken concurrently with each Method 5D run.
 - iii. The test runs shall be conducted concurrently, unless inclement weather interferes.
 - iv. The permittee shall obtain and record the following information:
 - (a). all control system fan motor amperes and damper positions during all periods in which a hood is operated for the purpose of capturing emissions from the EAF's;
 - (b). charge weights and materials and tap weights and materials;
 - (c). heat times, including start and stop times, and a log of process operation, including periods of no operation during testing; and
 - (d). control device operation log.
- e. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA, NWDO.
- f. Except as specified in condition A.V.1.d., the sampling time for each run shall be 8 hours in duration.
- g. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, NWDO. 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 tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA's refusal to accept the results of the emission tests.
- h. Personnel from the Ohio EPA 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.
- i. A comprehensive written report on the results of the emissions tests shall be signed by the

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person or persons responsible for the tests and submitted to the Ohio EPA, NWDO within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA NWDO.

- j. As part of the stack test report, the permittee shall develop emission factors for NO_x, SO₂, and OC. The emission factors shall be in the units of lbs of emissions per liquid ton of steel produced.
 - * Testing for Pb and Hg may be done concurrently with the emissions testing for PE. As part of the testing for Pb and Hg the permittee shall determine the weight percentages of Pb and Hg as compared to PE. Testing for Pb and Hg shall be performed under "worst case" conditions.

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2. Compliance with the emission limitations established in this permit shall be determined in accordance with the following methods:

- a. Emission Limitation:
78.8 lbs SO₂/hr, 281.3 tons SO₂/rolling 12-month period

Applicable Compliance Method:

Compliance with the hourly mass emission limitation shall be determined in accordance with the test methods and procedures specified in condition A.V.1. Compliance with the annual emission limitation shall be determined in accordance with record keeping procedures specified in condition A.III.5.

- b. Emission Limitation:
179.6 lbs NO_x/hr, 641.3 tons NO_x/rolling 12-month period

Applicable Compliance Method:

Compliance with the hourly mass emission limitation shall be determined in accordance with the test methods and procedures specified in condition A.V.1. Compliance with the annual emission limitation shall be determined in accordance with record keeping procedures specified in condition A.III.5.

- c. Emission Limitation:
2362.5 lbs CO/hr, 8437.5 tons CO/rolling 12-month period

Applicable Compliance Method:

Compliance with the hourly mass emission limitation shall be determined in accordance with the test methods and procedures specified in condition A.V.1. Compliance with the annual emission limitation shall be determined in accordance with record keeping procedures specified in condition A.III.5.

- d. Emission Limitation:
110.3 lbs OC/hr, 393.8 tons OC/rolling 12-month period

Applicable Compliance Method:

Compliance with the hourly mass emission limitation shall be determined in accordance with the test methods and procedures specified in condition A.V.1. Compliance with the annual emission limitation shall be determined in accordance with record keeping procedures specified in condition A.III.5.

- e. Emission Limitation:

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0.0018 grains PE/dscf, 15.6 lbs PE/hr, 68.3 tons PE/yr
0.31 lb Pb/hr, 1.36 tons Pb/yr
0.038 lb Hg/hr, 0.17 ton Hg/yr

Applicable Compliance Method:

Compliance with the allowable outlet grain loading and the hourly mass emission limitations shall be determined in accordance with the test methods and procedures specified in condition A.V.1. Compliance with the annual emission limitations shall be determined by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 lbs/ton. Therefore provided compliance is demonstrated with the hourly emission limitation, compliance with the annual emission limitation will be assumed.

f. Emission Limitation:

Fugitive Emissions

8.8 lbs PE/hr, 31.5 tons PE/rolling 12-month period

Applicable Compliance Method:

The hourly and annual fugitive PE emissions were calculated from emission factors [1.4 pounds of PE per ton of steel produced for the EAF (emissions unit P901, with 98% capture) and 0.6 pound of PE per ton of steel produced for each of the Ladle Metalurgy Furnaces (LMFs, emissions units P902 and P903, with 99% capture)] applied to each unit's maximum production rate. The EAF and LMFs combined have a maximum hourly production rate of 315 tons and a permitted annual production is 2.25 million tons per rolling 12 month period.

If compliance is shown with the opacity restrictions specified in condition A.I.2.b, and with the with the hourly and annual production restrictions specified in condition A.II.1 compliance with the hourly and annual emission limitations will be assumed.

g. Emission Limitation:

Fugitive Emissions

6.7 lbs PM₁₀/hr, 23.9 tons PM₁₀/rolling 12-month period
0.18 lb Pb/hr & 0.63 ton Pb/rolling 12-month period
0.022 lb Hg/hr, 0.08 ton Hg/rolling 12-month period

Applicable Compliance Method:

The hourly and annual fugitive PM₁₀, Pb, and Hg emissions were calculated based on the following weight percentages of the fugitive PE limit: for PM₁₀, 76%; for Pb, 2% for Hg, 0.25%. The weight percentages for Pb and Hg will be verified in accordance with the

Emissions Unit ID: P901

with the test methods and procedures specified in condition A.V.1.

If compliance is shown with the opacity restrictions specified in condition A.I.2.b, and with the hourly and annual production restrictions specified in condition A.II.1 compliance with the hourly and annual emission limitations will be assumed.

- h. Emission Limitation:
exit from the stack of the baghouse controlling the EAF and exhibit 3% opacity or greater;
and

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Applicable Compliance Method:

Compliance with the annual emission limitation shall be determined in accordance with record keeping procedures specified in condition A.III.1.

- i. Emission Limitation:
exit from the melt shop due solely to the operation of the EAF and exhibit 6% opacity or greater.

Applicable Compliance Method:

Compliance with the annual emission limitation shall be determined in accordance with record keeping procedures specified in condition A.III.3.

VI. Miscellaneous Requirements

1. An alternative exhaust gas discharge configuration for the baghouse controlling the EAF may be used if found to be acceptable by Ohio EPA, pursuant to the requirements of federal and state rules. No less than 60 days prior to changing the exhaust gas discharge configuration, a complete description of the changed must be submitted to Ohio EPA. The final plan must be approved by Ohio EPA prior to any alteration of the exhaust gas discharge configuration. The above exhaust gas discharge requirement is based on the proposed emission limits for the entire plant.
2. A statement of certification of the existing continuous CO monitoring system shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 4 and 6. Proof of certification shall be made available to the Ohio EPA NWDO upon request.
3. Within 180 days of the effective date of this permit, the permittee shall update the existing written quality assurance/quality control plan for the continuous CO monitoring system designed to ensure continuous valid and representative readings of CO. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.

North
PTI A

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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 - 315 tons/hr Twin Shaft Twin Shell Electric Arc Furnace (EAF)	OAC rule 3745-31-05	See Below

2. **Additional Terms and Conditions**
None

II. Operational Restrictions
None

III. Monitoring and/or Recordkeeping Requirements
None

IV. Reporting Requirements
None

V. Testing Requirements
None

VI. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the increase in the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to

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above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

North
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 - Ladle Melt Furnace - Administrative modification to PTI 03-9212 (most recent modification dated 1-9-03) to change group emission limits	40 CFR Part 52.21 OAC Rule 3745-31-05 (A)(3) OAC rule 3745-18-06(F) OAC rule 3745-17-11(B)(2) OAC rule 3745-17-07(A) OAC rule 3745-17-08 OAC rule 3745-23-06 (B)

**North
PTI A**

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Applicable Emissions Limitations/Control Measures	
78.8 lbs Sulfur Dioxide (SO ₂)/hr, 281.3 tons SO ₂ /rolling 12-month period	0.18 lb Pb/hr & 0.63 ton Pb/rolling 12-month period (Fugitive)
179.6 lbs nitrogen oxides (NO _x)/hr, 641.3 tons NO _x /rolling 12-month period	0.022 lb Hg/hr, 0.08 ton Hg/rolling 12-month period (Fugitive)
2362.5 lbs Carbon Monoxide (CO)/hr, 8437.5 tons CO/rolling 12-month period	See A.1.2.a.
110.3 lbs Organic Compounds (OC)/hr, 393.8 tons OC/rolling 12-month period	See A.1.2.b.
0.0018 grains particulate emissions (PE)/dscf (Stack)	See A.1.2.c.
15.6 lbs PE/hr, 68.2 tons PE/yr (Stack)	See A.1.2.c. 20% opacity as a six-minute average, except as provided by rule
0.31 lb Pb/hr, 1.36 tons Pb/yr (Stack)	See A.1.2.e.
0.038 lb Hg/hr, 0.17 ton Hg/yr (Stack)	See A.1.2.d.
8.8 lbs PE/hr, 31.5 tons PE/rolling 12-month period (Fugitive)	
6.7 lbs PM ₁₀ /hr, 23.9 tons PM ₁₀ /rolling 12-month period (Fugitive)	

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

- 2.a** The permittee shall employ Best Available Control Technology (BACT) for controlling NO_x, SO₂, CO, PE/PM₁₀, Pb, and OC on this emissions unit. BACT was previously established in PTI 03-9212 (most recent modification dated 1-9-03) and determined to be the mass emission limitations established in this PTI.
- 2.b** The requirements of this rule also include compliance with the requirements of 40 CFR Part 52.21, and OAC rule 3745-17-07(A). All mass emissions limits established under this rule are for emissions units P901, P902, and P903 combined.
- 2.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).
- 2.d** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06 (B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05 (A)(3) in this permit to install.
- 2.e** This facility is not located within an "Appendix A" area as identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).

II. Operational Restrictions

None

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III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following for emissions unit P901, P902, and P903 combined:
 - a. the tons of liquid steel produced;
 - b. the emissions of SO₂, CO, OC, and NO_x*;
 - c. of annual production of liquid steel, based on a rolling 12-month summation, and
 - d. the annual emissions of SO₂, CO, OC, and NO_x*, based on a rolling 12-month summation.

* The permittee shall use the continuous monitoring requirements in condition A.III.7 to determine monthly CO emissions. For all other pollutants, the permittee shall use the emission factors as established in condition A.V.1.

2. The permittee shall operate and maintain existing equipment to continuously monitor and record CO from this emissions unit in the units established in this permit. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to, parts per million CO on an instantaneous (one minute) basis, emission of CO in lbs per hour in the appropriate averaging period (8-hour block), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

IV. Reporting Requirements

1. Pursuant to OAC rules 3745-15-04, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, NWDO documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any) of all instances of CO values in excess of any limitations specified in the terms and conditions of this permit. These reports shall also contain the total CO emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA NWDO documenting any continuous CO monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period

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and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

Pursuant to OAC rules 3745-15-04, and ORC sections 3704.03(I) and 3704.031, the permittee shall submit a summary of the excess emission report pursuant to 40 CFR Part 60 section 60.7. The summary shall be submitted to the Ohio EPA NWDO within 30 days following the end of each calendar quarter in a manner prescribed by the Director.

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for emissions units P901, P902, and P903 in accordance with the following requirements:
 - a. The emission testing shall be conducted within 180 days after the modifications to emissions unit P901 have been completed.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for PE, NO_x, CO, SO₂, OC, Pb and Hg, the allowable outlet grain loading for PE, and the opacity requirements (as specified in A.I.2.b.i. and A.I.2.b.ii. for emissions unit P901)
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for NO_x, Methods 1 through 4 and 7 of 40 CFR, Part 60, Appendix A; for CO, Methods 1 through 4 and 10 of 40 CFR, Part 60, Appendix A; for SO₂, Methods 1 through 4 and 6 of 40 CFR, Part 60, Appendix A; for PE (mass emissions and allowable grain loading), Methods 1 through 4 and 5d of 40 CFR, Part 60, Appendix A for VOC, Methods 1 through 4 and Method 18, 25 or 25A of 40 CFR, Part 60, Appendix A; for Pb*, Methods 1 through 4 and 12 or 29 of 40 CFR, Part 60, Appendix A; for Hg*, Methods 1 through 5 and 29 of 40 CFR, Part 60, Appendix A, Appendix A; and for opacity, Method 9 of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
 - d. During the performance testing to demonstrate compliance with the allowable mass emission rate and outlet grain loading for PE, and the opacity requirements, the following additional testing requirements shall be employed:

- i. The sampling time and sample volume for each Method 5D run shall be at least 4 hours and 4.50 dscm (160 dscf) and the sampling time shall include an integral number of heats.
- ii. Opacity measurements shall be taken concurrently with each Method 5D run.
- iii. The test runs shall be conducted concurrently, unless inclement weather interferes.
- iv. The permittee shall obtain and record the following information:
 - (a). all control system fan motor amperes and damper positions during all periods in which a hood is operated for the purpose of capturing emissions from the EAF's;
 - (b). charge weights and materials and tap weights and materials;
 - (c). heat times, including start and stop times, and a log of process operation, including periods of no operation during testing; and
 - (d). control device operation log.
- e. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA, NWDO.
- f. Except as specified in condition A.V.1.d., the sampling time for each run shall be 8 hours in duration.
- g. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, NWDO. 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 tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA's refusal to accept the results of the emission tests.
- h. Personnel from the Ohio EPA 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.
- i. A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, NWDO within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA NWDO.

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- j. As part of the stack test report, the permittee shall develop emission factors for NO_x, SO₂, and OC. The emission factors shall be in the units of lbs of emissions per liquid ton of steel produced.
 - * Testing for Pb and Hg may be done concurrently with the emissions testing for PE. As part of the testing for Pb and Hg the permittee shall determine the weight percentages of Pb and Hg as compared to PE. Testing for Pb and Hg shall be performed under "worst case" conditions.
- 2. Compliance with the emission limitations established in this permit shall be determined in accordance with the following methods:
 - a. Emission Limitation:
78.8 lbs SO₂ /hr, 281.3 tons SO₂/rolling 12-month period

Applicable Compliance Method:
Compliance with the hourly mass emission limitation shall be determined in accordance with the test methods and procedures specified in condition A.V.1. Compliance with the annual emission limitation shall be determined in accordance with record keeping procedures specified in condition A.III.5.
 - b. Emission Limitation:
179.6 lbs NO_x/hr, 641.3 tons NO_x/rolling 12-month period

Applicable Compliance Method:
Compliance with the hourly mass emission limitation shall be determined in accordance with the test methods and procedures specified in condition A.V.1. Compliance with the annual emission limitation shall be determined in accordance with record keeping procedures specified in condition A.III.5.
 - c. Emission Limitation:
2362.5 lbs CO/hr, 8437.5 tons CO/rolling 12-month period

Applicable Compliance Method:
Compliance with the hourly mass emission limitation shall be determined in accordance with the test methods and procedures specified in condition A.V.1. Compliance with the annual emission limitation shall be determined in accordance with record keeping procedures specified in condition A.III.5.
 - d. Emission Limitation:
110.3 lbs OC/hr, 393.8 tons OC/rolling 12-month period

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Applicable Compliance Method:

Compliance with the hourly mass emission limitation shall be determined in accordance with the test methods and procedures specified in condition A.V.1. Compliance with the annual emission limitation shall be determined in accordance with record keeping procedures specified in condition A.III.5.

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- e. Emission Limitation:
Stack Emissions
0.0018 grains PE/dscf, 15.6 lbs PE/hr, 68.3 tons PE/yr
0.31 lb Pb/hr, 1.36 tons Pb/yr
0.038 lb Hg/hr, 0.17 ton Hg/yr

Applicable Compliance Method:

Compliance with the allowable outlet grain loading and the hourly mass emission limitations shall be determined in accordance with the test methods and procedures specified in condition A.V.1. Compliance with the annual emission limitations shall be determined by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 lbs/ton. Therefore provided compliance is demonstrated with the hourly emission limitation, compliance with the annual emission limitation will be assumed.

- f. Emission Limitation:
Fugitive Emissions
8.8 lbs PE/hr, 31.5 tons PE/rolling 12-month period

Applicable Compliance Method:

The hourly and annual fugitive PE emissions were calculated from emission factors [1.4 pounds of PE per ton of steel produced for the EAF (emissions unit P901, with 98% capture) and 0.6 pound of PE per ton of steel produced for each of the Ladle Metalurgy Furnaces (LMFs, emissions units P902 and P903, with 99% capture)] applied to each unit's maximum production rate. The EAF and LMFs combined have a maximum hourly production rate of 315 tons and a permitted annual production is 2.25 million tons per rolling 12 month period.

If compliance is shown with the opacity restrictions specified in condition A.I.2.b, and with the with the hourly and annual production restrictions specified in condition A.II.1 compliance with the hourly and annual emission limitations will be assumed.

- g. Emission Limitation:
Fugitive Emissions
6.7 lbs PM₁₀/hr, 23.9 tons PM₁₀/rolling 12-month period
0.18 lb Pb/hr & 0.63 ton Pb/rolling 12-month period
0.022 lb Hg/hr, 0.08 ton Hg/rolling 12-month period

Applicable Compliance Method:

The hourly and annual fugitive PM₁₀, Pb, and Hg emissions were calculated based on the

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following weight percentages of the fugitive PE limit: for PM₁₀, 76%; for Pb, 2% for Hg, 0.25%. The weight percentages for Pb and Hg will be verified in accordance with the with the test methods and procedures specified in condition A.V.1.

If compliance is shown with the opacity restrictions specified in condition A.I.2.b, and with the with the hourly and annual production restrictions specified in condition A.II.1 compliance with the hourly and annual emission limitations will be assumed.

- h. Emission Limitation:
20% opacity as a six-minute average, except as provided by rule

Applicable Compliance Method:

If required, compliance with opacity restriction shall be demonstrated in accordance with procedures specified in OAC rule 3745-17-03(B)(1).

VI. Miscellaneous Requirements

1. A statement of certification of the existing continuous CO monitoring system shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 4 and 6. Proof of certification shall be made available to the Ohio EPA NWDO upon request.
2. Within 180 days of the effective date of this permit, the permittee shall update the existing written quality assurance/quality control plan for the continuous CO monitoring system designed to ensure continuous valid and representative readings of CO. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.

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 - Ladle Melt Furnace - Administrative modification to PTI 03-9212 (most recent modification dated 1-9-03) to change group emission limits	OAC rule 3745-31-05	See Below

2. **Additional Terms and Conditions**
None

II. Operational Restrictions
None

III. Monitoring and/or Recordkeeping Requirements
None

IV. Reporting Requirements
None

V. Testing Requirements
None

VI. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the increase in the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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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>
P903 - Ladle Melt Furnace - Administrative modification to PTI 03-9212 (most recent modification dated 1-9-03) to change group emission limits	40 CFR Part 52.21 OAC Rule 3745-31-05 (A)(3) OAC rule 3745-18-06(F) OAC rule 3745-17-11(B)(2) OAC rule 3745-17-07(A) OAC rule 3745-17-08 OAC rule 3745-23-06 (B)

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Applicable Emissions Limitations/Control Measures	
78.8 lbs Sulfur Dioxide (SO ₂)/hr, 281.3 tons SO ₂ /rolling 12-month period	0.18 lb Pb/hr & 0.63 ton Pb/rolling 12-month period (Fugitive)
179.6 lbs nitrogen oxides (NO _x)/hr, 641.3 tons NO _x /rolling 12-month period	0.022 lb Hg/hr, 0.08 ton Hg/rolling 12-month period (Fugitive)
2362.5 lbs Carbon Monoxide (CO)/hr, 8437.5 tons CO/rolling 12-month period	See A.1.2.a.
110.3 lbs Organic Compounds (OC)/hr, 393.8 tons OC/rolling 12-month period	See A.1.2.b.
0.0018 grains particulate emissions (PE)/dscf (Stack)	See A.1.2.c.
15.6 lbs PE/hr, 68.2 tons PE/yr (Stack)	See A.1.2.c. 20% opacity as a six-minute average, except as provided by rule
0.31 lb Pb/hr, 1.36 tons Pb/yr (Stack)	See A.1.2.e.
0.038 lb Hg/hr, 0.17 ton Hg/yr (Stack)	See A.1.2.d.
8.8 lbs PE/hr, 31.5 tons PE/rolling 12-month period (Fugitive)	
6.7 lbs PM ₁₀ /hr, 23.9 tons PM ₁₀ /rolling 12-month period (Fugitive)	

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2. Additional Terms and Conditions

- 2.a** The permittee shall employ Best Available Control Technology (BACT) for controlling NO_x, SO₂, CO, PE/PM₁₀, Pb, and OC on this emissions unit. BACT was previously established in PTI 03-9212 (most recent modification dated 1-9-03) and determined to be the mass emission limitations established in this PTI.
- 2.b** The requirements of this rule also include compliance with the requirements of 40 CFR Part 52.21, and OAC rule 3745-17-07(A). All mass emissions limits established under this rule are for emissions units P901, P902, and P903 combined.
- 2.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).
- 2.d** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06 (B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05 (A)(3) in this permit to install.
- 2.e** This facility is not located within an "Appendix A" area as identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).

II. Operational Restrictions

None

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III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following for emissions unit P901, P902, and P903 combined:
 - a. the tons of liquid steel produced;
 - b. the emissions of SO₂, CO, OC, and NO_x*;
 - c. of annual production of liquid steel, based on a rolling 12-month summation, and
 - d. the annual emissions of SO₂, CO, OC, and NO_x*, based on a rolling 12-month summation.

* The permittee shall use the continuous monitoring requirements in condition A.III.7 to determine monthly CO emissions. For all other pollutants, the permittee shall use the emission factors as established in condition A.V.1.

2. The permittee shall operate and maintain existing equipment to continuously monitor and record CO from this emissions unit in the units established in this permit. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to, parts per million CO on an instantaneous (one minute) basis, emission of CO in lbs per hour in the appropriate averaging period (8-hour block), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

IV. Reporting Requirements

1. Pursuant to OAC rules 3745-15-04, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, NWDO documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any) of all instances of CO values in excess of any limitations specified in the terms and conditions of this permit. These reports shall also contain the total CO emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA NWDO documenting any continuous CO monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period

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and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

Pursuant to OAC rules 3745-15-04, and ORC sections 3704.03(I) and 3704.031, the permittee shall submit a summary of the excess emission report pursuant to 40 CFR Part 60 section 60.7. The summary shall be submitted to the Ohio EPA NWDO within 30 days following the end of each calendar quarter in a manner prescribed by the Director.

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for emissions units P901, P902, and P903 in accordance with the following requirements:
 - a. The emission testing shall be conducted within 180 days after the modifications to emissions unit P901 have been completed.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for PE, NO_x, CO, SO₂, OC, Pb and Hg, the allowable outlet grain loading for PE, and the opacity requirements (as specified in A.I.2.b.i. and A.I.2.b.ii. for emissions unit P901)
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for NO_x, Methods 1 through 4 and 7 of 40 CFR, Part 60, Appendix A; for CO, Methods 1 through 4 and 10 of 40 CFR, Part 60, Appendix A; for SO₂, Methods 1 through 4 and 6 of 40 CFR, Part 60, Appendix A; for PE (mass emissions and allowable grain loading), Methods 1 through 4 and 5d of 40 CFR, Part 60, Appendix A for VOC, Methods 1 through 4 and Method 18, 25 or 25A of 40 CFR, Part 60, Appendix A; for Pb*, Methods 1 through 4 and 12 or 29 of 40 CFR, Part 60, Appendix A; for Hg*, Methods 1 through 5 and 29 of 40 CFR, Part 60, Appendix A, Appendix A; and for opacity, Method 9 of 40 CFR, Part 60, Appendix A. Alternative

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U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

- d. During the performance testing to demonstrate compliance with the allowable mass emission rate and outlet grain loading for PE, and the opacity requirements, the following additional testing requirements shall be employed:
 - i. The sampling time and sample volume for each Method 5D run shall be at least 4 hours and 4.50 dscm (160 dscf) and the sampling time shall include an integral number of heats.
 - ii. Opacity measurements shall be taken concurrently with each Method 5D run.
 - iii. The test runs shall be conducted concurrently, unless inclement weather interferes.
 - iv. The permittee shall obtain and record the following information:
 - (a). all control system fan motor amperes and damper positions during all periods in which a hood is operated for the purpose of capturing emissions from the EAF's;
 - (b). charge weights and materials and tap weights and materials;
 - (c). heat times, including start and stop times, and a log of process operation, including periods of no operation during testing; and
 - (d). control device operation log.
- e. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA, NWDO.
- f. Except as specified in condition A.V.1.d., the sampling time for each run shall be 8 hours in duration.
- g. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, NWDO. 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 tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA's refusal to accept the results of the emission tests.
- h. Personnel from the Ohio EPA 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.
- i. A comprehensive written report on the results of the emissions tests shall be signed by the

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person or persons responsible for the tests and submitted to the Ohio EPA, NWDO within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA NWDO.

- j. As part of the stack test report, the permittee shall develop emission factors for NO_x, SO₂, and OC. The emission factors shall be in the units of lbs of emissions per liquid ton of steel produced.
- * Testing for Pb and Hg may be done concurrently with the emissions testing for PE. As part of the testing for Pb and Hg the permittee shall determine the weight percentages of Pb and Hg as compared to PE. Testing for Pb and Hg shall be performed under "worst case" conditions.
2. Compliance with the emission limitations established in this permit shall be determined in accordance with the following methods:
- a. Emission Limitation:
78.8 lbs SO₂ /hr, 281.3 tons SO₂/rolling 12-month period
- Applicable Compliance Method:
Compliance with the hourly mass emission limitation shall be determined in accordance with the test methods and procedures specified in condition A.V.1. Compliance with the annual emission limitation shall be determined in accordance with record keeping procedures specified in condition A.III.5.
- b. Emission Limitation:
179.6 lbs NO_x/hr, 641.3 tons NO_x/rolling 12-month period
- Applicable Compliance Method:
Compliance with the hourly mass emission limitation shall be determined in accordance with the test methods and procedures specified in condition A.V.1. Compliance with the annual emission limitation shall be determined in accordance with record keeping procedures specified in condition A.III.5.
- c. Emission Limitation:
2362.5 lbs CO/hr, 8437.5 tons CO/rolling 12-month period
- Applicable Compliance Method:
Compliance with the hourly mass emission limitation shall be determined in accordance with the test methods and procedures specified in condition A.V.1. Compliance with the annual emission limitation shall be determined in accordance with record keeping procedures specified in condition A.III.5.
- d. Emission Limitation:
110.3 lbs OC/hr, 393.8 tons OC/rolling 12-month period

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Applicable Compliance Method:

Compliance with the hourly mass emission limitation shall be determined in accordance with the test methods and procedures specified in condition A.V.1. Compliance with the annual emission limitation shall be determined in accordance with record keeping procedures specified in condition A.III.5.

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- e. Emission Limitation:
Stack Emissions
0.0018 grains PE/dscf, 15.6 lbs PE/hr, 68.3 tons PE/yr
0.31 lb Pb/hr, 1.36 tons Pb/yr
0.038 lb Hg/hr, 0.17 ton Hg/yr

Applicable Compliance Method:

Compliance with the allowable outlet grain loading and the hourly mass emission limitations shall be determined in accordance with the test methods and procedures specified in condition A.V.1. Compliance with the annual emission limitations shall be determined by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 lbs/ton. Therefore provided compliance is demonstrated with the hourly emission limitation, compliance with the annual emission limitation will be assumed.

- f. Emission Limitation:
Fugitive Emissions
8.8 lbs PE/hr, 31.5 tons PE/rolling 12-month period

Applicable Compliance Method:

The hourly and annual fugitive PE emissions were calculated from emission factors [1.4 pounds of PE per ton of steel produced for the EAF (emissions unit P901, with 98% capture) and 0.6 pound of PE per ton of steel produced for each of the Ladle Metalurgy Furnaces (LMFs, emissions units P902 and P903, with 99% capture)] applied to each unit's maximum production rate. The EAF and LMFs combined have a maximum hourly production rate of 315 tons and a permitted annual production is 2.25 million tons per rolling 12 month period.

If compliance is shown with the opacity restrictions specified in condition A.I.2.b, and with the with the hourly and annual production restrictions specified in condition A.II.1 compliance with the hourly and annual emission limitations will be assumed.

- g. Emission Limitation:
Fugitive Emissions
6.7 lbs PM₁₀/hr, 23.9 tons PM₁₀/rolling 12-month period
0.18 lb Pb/hr & 0.63 ton Pb/rolling 12-month period
0.022 lb Hg/hr, 0.08 ton Hg/rolling 12-month period

Applicable Compliance Method:

The hourly and annual fugitive PM₁₀, Pb, and Hg emissions were calculated based on the following weight percentages of the fugitive PE limit: for PM₁₀, 76%; for Pb, 2% for Hg,

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0.25%. The weight percentages for Pb and Hg will be verified in accordance with the with the test methods and procedures specified in condition A.V.1.

If compliance is shown with the opacity restrictions specified in condition A.I.2.b, and with the with the hourly and annual production restrictions specified in condition A.II.1 compliance with the hourly and annual emission limitations will be assumed.

- h. Emission Limitation:
20% opacity as a six-minute average, except as provided by rule

Applicable Compliance Method:

If required, compliance with opacity restriction shall be demonstrated in accordance with procedures specified in OAC rule 3745-17-03(B)(1).

VI. Miscellaneous Requirements

1. A statement of certification of the existing continuous CO monitoring system shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 4 and 6. Proof of certification shall be made available to the Ohio EPA NWDO upon request.
2. Within 180 days of the effective date of this permit, the permittee shall update the existing written quality assurance/quality control plan for the continuous CO monitoring system designed to ensure continuous valid and representative readings of CO. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.

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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>
P903 - Ladle Melt Furnace -Administrative modification to PTI 03-9212 (most recent modification dated 1-9-03) to change group emission limits		See Below

2. **Additional Terms and Conditions**
None

II. Operational Restrictions
None

III. Monitoring and/or Recordkeeping Requirements
None

IV. Reporting Requirements
None

V. Testing Requirements
None

VI. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the increase in the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires permittees to apply for and obtain a new

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or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.