



Environmental Protection Agency

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

4/2/2012

Certified Mail

Jay Lawniczak
Republic Steel, f/k/a Republic Engineered Products, Inc
1807 E. 28th Street
Lorain, OH 44055

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

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0247080229
Permit Number: P0109191
Permit Type: Initial Installation
County: Lorain

Dear Permit Holder:

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

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

and Ohio EPA DAPC, Northeast District Office
2110 East Aurora Road
Twinsburg, OH 44087

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Ohio EPA DAPC, Northeast District Office at (330)425-9171.

Sincerely,

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

Cc: U.S. EPA Region 5 -Via E-Mail Notification
Ohio EPA-NEDO; Canada



Permit Strategy Write-Up

1. Check all that apply:

Synthetic Minor Determination

Netting Determination

2. Source Description:

Republic Steel, located on 1807 East 28th Street in Lorain, Ohio, submitted a permit-to-install application proposing to install a new electric arc furnace (EAF), natural gas-fired boiler and EAF material handling and storage, and to modify existing plant roadways for increase in vehicle traffic.

The facility has requested an operational restriction to not operate its existing Blast Furnace/Basic Oxygen Furnace (BF/BOF) process and blast furnace gas-fired boilers when operating the new EAF. The BF/BOF process and blast furnace gas-fired boilers consist of two (2) blast furnaces P905 and P907, two (2) basic oxygen furnaces P908 and P909, one (1) hot metal desulfurization and skimming station P058, and four (4) blast furnace gas-fired boilers B007, B008, B009 and B013.

The facility requested to restrict the annual liquid steel production to 1,200,000 tons per year, based upon a rolling, 12-month summation of the production rates.

3. Facility Emissions and Attainment Status:

This is an existing facility. Republic Steel is a major stationary source for particulate emissions (PM₁₀) and (PM_{2.5}), oxides of nitrogen (NO_x), carbon monoxide (CO) and sulfur dioxide (SO₂) per year. Their SIC is 3312.

The facility is located in Lorain County, which is in attainment of the NAAQS for PM₁₀, NO_x, SO₂, CO, ozone and lead, and is classified as nonattainment for PM_{2.5}.

4. Source Emissions:

This project will trigger PSD review for CO and VOC. Other criteria pollutant emissions, however, will not trigger PSD review because of netting of emissions, restricting annual liquid steel production to 1,200,000 tons/yr, based upon a rolling 12-month summation of production rates, and not operating the BF/BOP process and BF boilers when operating the new EAF.

Netting determination:

The project is able to net out of exceeding the significant threshold levels for the remainder of criteria pollutants as specified in the netting analysis summary below:



PM10 PM2.5 SO2 NOx COVOC Pb CO2e

TOTAL NET EMISSIONS CHANGE -239.6 -147.2 20.5 -130.3 767.1 46.8 0.03 -1,210,916
(Sum of Project + Creditable – Excludable), in tons

MAJOR SOURCE NSR 15 10 40 40 100 40 0.6 75,000
“Significance” Levels, in tons

TRIGGERS NSR? No No No No Yes Yes No No

5. Conclusion:

The proposed new potential emissions from this project, based upon federally enforceable operating restrictions, are less than the PSD significant emission levels for PM10, PM2.5, NOx, SO2, and lead. However, emissions of CO, and VOC are over the PSD significant emission threshold levels requiring PSD review.

6. Please provide additional notes or comments as necessary:

None

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

Table with 2 columns: Pollutant, Tons Per Year. Rows include PM10 (162.8), PM2.5 (118.9), SO2 (379.1), NOx (319.9), CO (1,211.4), VOC (61.5), Pb (0.23), Hg (0.15).



**STAFF DETERMINATION FOR THE APPLICATION TO CONSTRUCT
UNDER THE PREVENTION OF SIGNIFICANT DETERIORATION REGULATIONS
FOR REPUBLIC STEEL LOCATED IN LORAIN COUNTY, OHIO
PTI P0109191
MARCH 26, 2012**

DRAFT

Ohio Environmental Protection Agency
Division of Air Pollution Control
Lazarus Government Center
50 West Town St., Suite 700
Columbus, Ohio 43215

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

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 stationary 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 stationary 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 stationary 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 stationary 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 stationary 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 stationary 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 stationary sources owned or operated in the state by the same entity are either in compliance with the existing SIP or are on an approved schedule resulting in full compliance with the SIP.

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

Site Description

The Republic Steel facility is located at 1807 East 28th Street in Lorain, Ohio, Lorain County.

This area is classified as nonattainment for particulate matter less than 2.5 microns in diameter and attainment for all other criteria pollutants, including particulate matter, sulfur dioxide, nitrogen oxides, carbon monoxide, volatile organic compounds and lead.

Facility Description

Republic Steel plans to install an electric arc furnace (EAF) with a nominal design capacity of 165 tons per hour and will be capable of producing 150 tons per hour of molten steel. The EAF will be located in the melt shop. Control of emissions will be accomplished with a Direct-Shell Evacuation Control (DEC) System located in a 4th hole through the EAF roof. The DEC system will maintain negative pressure inside the furnace. VOC and CO gases will be drawn from the furnace and combusted prior to the exhaust gases being water-cooled and vented to a new melt shop baghouse.



Any fugitives from the EAF operation will be controlled by the melt shop roof canopy and vented to the melt shop baghouse.

Operation of the electric arc furnace will require the installation of new flux, charge carbon and alloy unloading, handling and storage systems to provide materials to the EAF charge bucket and ladles. Flux and charge carbon materials will be delivered by truck and pneumatically conveyed to storage bins. Materials will then be gravity fed to a conveyor and truck for delivery to the melt shop. Conveyors will be added inside the melt shop to carry alloy materials to the EAF ladle car transfer. Any fugitives from the material handling operations will be controlled by the melt shop roof canopy and vented to the melt shop baghouse.

The EAF project will also require the installation of a package boiler to produce high-pressure steam to operate the existing vacuum tank degasser. This new boiler will be natural gas-fired and have a maximum heat input rating of 65 MMBtu/hr. Emissions will be controlled through proper burner design and good natural gas combustion practices.

Finally, operation of the EAF will require increased delivery, storage and handling of scrap metal. Unpaved roadways and parking areas will be treated with water and/or any other suitable dust suppression chemicals and the paved roadways and parking areas will be treated with water and by sweeping, at sufficient treatment frequencies to ensure compliance. Daily roadway and parking lot inspections will determine the necessary frequencies of implementation of the control measures. Any earth or other materials deposited on paved roadways will be promptly removed and disposed of properly. Open-bodied vehicles will utilize covers when transporting materials likely to become airborne.

Emissions Unit List:

EU#	Description
B019	65 MMBtu/hr natural gas-fired package boiler
F005	Plant Roadways and Parking Lots
P913	165 ton per hour electric arc furnace
P914	EAF Flux and Carbon Handling and Storage

New Source Review (NSR)/PSD Applicability

The Republic Steel facility meets the definition for a major stationary source because the facility will be located in an area designated as attainment for particulate matter, sulfur dioxide, nitrogen oxides, carbon monoxide, volatile organic compounds and lead and the facility, being an iron and steel mill, has the potential to emit greater than 100 tons per year of carbon monoxide and volatile organic compounds.

Fugitives emissions from the proposed project are included in the major stationary source determination because the facility is one of the stationary source categories specified in OAC rule 3745-31-01(LLI)(4) - iron and steel mills.



As a major stationary source, this facility must obtain a Prevention of Significant Deterioration permit to install (PSD PTI) and must comply with the BACT requirements as specified in OAC rules 3745-31-11 through 20 for each emissions unit that emits any regulated air pollutant(s) above the significant levels specified in OAC rule 3745-31-01(MMMMM). Because Republic Steel has accepted an operational restriction to not operate two blast furnaces, two basic oxygen furnaces and four blast furnace gas-fired boilers whenever the EAF is in operation, the facility will only emit CO and VOC at emission rates greater than the significant levels specified in OAC rule 3745-31-01(MMMMM).

TABLE 1
PRELIMINARY POLLUTANT EMISSION RATES

Pollutant (in tpy)	Calendar Year 2006	Calendar Year 2007	Baseline Actual Emissi ons (Hot End)	Projected Actual Emissions (EAF Project)	Net Emissi on Chang e	Significant Level
	Tons		Per	Year		
PM ₁₀	356.16	386.02	371.1	131.5	-239.6	15
PM _{2.5}	244.88	277.68	261.3	114.1	-147.2	10
SO ₂	335.03	382.08	358.6	379.1	20.5	40
NO _x	424.80	475.52	450.2	319.9	-130.3	40
CO	393.33	495.18	444.3	1211.4	767.1	100
VOC	12.71	16.78	14.7	61.5	46.8	40
Lead	0.20	0.19	0.20	0.23	0.03	0.6
CO ₂ e	1291703	1542209	1416956	206040	-1210916	75000

Applicability of 40 CFR Part 60 (NSPS)

40 CFR Part 60, Subpart AAa:

In accordance with 40 CFR 60.270a(a) and (b), each electric arc furnace constructed after August 17, 1983 must comply with the applicable requirements of Subpart AAa. Republic Steel must comply with all applicable emission limitations and monitoring, record keeping, reporting and testing requirements specified in Subpart AAa.



40 CFR Part 60, Subpart Dc:

Each steam generating unit with a maximum design heat input capacity greater than or equal to 10 MMBtu/hr but less than or equal to 100 MMBtu/hr that begins construction after June 9, 1989 must comply with the applicable requirements of Subpart Dc. The VTD boiler to be installed by Republic Steel has a maximum design heat input capacity of 65 MMBtu/hr and is being constructed after June 9, 1989. Because the only fuel to be employed by the VTD boiler will be natural gas, the facility is required to submit an initial notification of construction report in accordance with 40 CFR 60.48c(a)(1) and maintain records of the amount of natural gas combusted in accordance with 40 CFR 60.48c(g).

Applicability of 40 CFR Part 63 (MACT)

40 CFR Part 63, Subpart YYYYYY:

Subpart YYYYYY is the area source MACT for Electric Arc Furnace Steel Making Facilities. To qualify as an area source of hazardous air pollutants, a facility must have potential emissions of less than 10 tpy for any individual HAP and less than 25 tpy for total combined HAPs. Republic Steel qualifies as an area source of HAPs and is identified in 40 CFR 63.10680(b) as a new affected source because construction will not begin until after September 20, 2007. As a new affected source, the Republic Steel EAF must comply with all applicable emission limitations and all applicable monitoring, record keeping and reporting requirements. The facility must also comply with the General Provisions as specified in Table 1 of Subpart YYYYYY.

40 CFR Part 63, Subpart JJJJJJ:

Subpart JJJJJJ is the area source MACT for Industrial, Commercial and Institutional Boilers. As stated above, Republic Steel qualifies as an area source. Because the VTD boiler only employs natural gas as fuel, this emissions unit meets the definition of a gas-fired boiler in 40 CFR 63.11237. As such, the requirements of Subpart JJJJJJ do not apply to the VTD boiler per the exemption in 40 CFR 63.11195(e).

Control Technology Review (BACT)

The Republic Steel facility has been classified as a major stationary source that emits CO and VOC above the significant levels specified in OAC rule 3745-31-01(MMMMM). The facility must comply with the BACT requirements for the pollutants listed above.

The requirement to conduct a BACT analysis and determination is set forth in section 165(a)(4) of the Clean Air Act (Act), in federal regulations at 40 CFR Part 52.21.(j) and also in OAC rules 3745-31-15(C) and 3745-31-01(S). The BACT requirement is defined as:

“... an emissions limitation (including a visible emissions standard) based on the maximum degree of reduction for each regulated NSR pollutant which would be emitted from any proposed major stationary source or major modification which the director, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such major stationary source or major modification through application of production processes or



available methods, systems and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant. In no event shall application of best available control technology result in emissions of any pollutant that would exceed the emissions allowed by any applicable standard under 40 CFR Parts 60, 61, and 63. If the director determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible, a design, equipment, work practice, operational standard, or combination thereof, may be approved by the director instead to satisfy the requirement for the application of best available control technology. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice or operation and shall provide for compliance by means which achieve equivalent results.”

The BACT process was further formalized in a memorandum by USEPA on December 1, 1987 and in the draft New Source Review Workshop Manual (EPA 1990b) issued on March 15, 1990, by introducing a “top-down” concept for BACT analysis. The top-down process requires that all available control technologies be ranked in descending order of control effectiveness. The BACT process first examines the most stringent - or “top”- alternative. That alternative is established as BACT unless it is demonstrated that technical considerations, or energy, environmental, or economic impacts justify a conclusion that the most stringent technology is not applicable. If the most stringent technology is eliminated, then the next most stringent alternative is considered, and this process is continued until an acceptable BACT is selected.

The objective of the BACT analysis is to conduct pollutant-specific control technology evaluation per USEPA requirements. The BACT evaluation steps consist of:

Step 1: identify all control technologies;

Step 2: eliminate technically infeasible options;

Step 3: rank remaining control technologies by control effectiveness;

Step 4: evaluate most effective controls and document results; and

Step 5: select the most effective control based on energy, environmental and economic impacts (generally the feasible technology that is also considered to be cost effective)



BACT Analysis: Electric Arc Furnace

BACT Review:

Pollutant	Control Technology	Technically Feasible
CO	Flaring of CO emissions	No
	Post combustion reaction chamber/thermal incineration	No
	CO oxidation catalyts and catalytic incineration	No
	Oxygen injection	No
	DEC controls	Yes
VOC	Post combustion reaction chamber/thermal incineration	No
	CO oxidation catalyts and catalytic incineration	No
	DEC controls	Yes
	Scrap management plan	Yes

Pollutant	Control Technology	Control Efficiency
CO	DEC controls	70% to 90%
VOC	DEC controls	Variable
	Scrap management plan	

Evaluation and BACT Selection:

For CO: A direct-shell evacuation control system with an adjustable air gap and a water-cooled elbow and duct will allow for efficient post-furnace CO combustion and will be employed as BACT. The EAF will be restricted to a CO emission rate of 2.0 lbs/ton of steel produced.

For VOC: A direct-shell evacuation control system with an adjustable air gap and a water-cooled elbow and duct will allow for efficient post-furnace VOC combustion. The DEC system and the implementation of a scrap management plan will be employed as BACT. The EAF will be restricted to a VOC emission rate of 0.10 lb/ton of steel produced.



BACT Analysis: VTD Boiler

BACT Review:

Pollutant	Control Technology	Technically Feasible
CO	Proper burner design and good natural gas combustion practices	Yes
VOC	Proper burner design and good natural gas combustion practices	Yes

Evaluation and BACT Selection:

For CO: Proper burner design and good natural gas combustion practices and a restriction of the CO emission rate to 0.04 lb/MMBtu will be employed as BAT for the VTD boiler.

For VOC: Proper burner design and good natural gas combustion practices and a restriction of the VOC emission rate to 0.0055 lb/MMBtu will be employed as BAT for the VTD boiler.

Modeling Summary:

Evaluation of AERMOD modeling for Republic Steel PTI P0101919 – Application Number A0043129

Modeling

Summary:

TRC Environmental Corporation has submitted air dispersion modeling for Carbon Monoxide (CO) on behalf of Republic Steel. Republic Steel is proposing to install a new electric arc furnace (EAF) and boiler at its facility in Lorain, Ohio. The EAF will be controlled by a new baghouse. It has been identified that the application triggers a PSD air quality modeling requirement only for carbon monoxide. The purposes of the modeling and additional impact analyses were to assess the direct and indirect ambient air impacts of CO and related emissions from the project. The Lorain County is currently an attainment county for carbon monoxide. The report summarized findings and conclusions regarding the dispersion modeling and additional impacts analyses. TRC used the AERMOD (version 11103) air dispersion model to show compliance for CO in accordance to the Ohio Modeling Standards and Significant Impact Levels.

Modeling Information:

Republic Steel is located in Lorain County, Ohio. The approximate UTM coordinates for Republic are 404457.8 E, 4589133.4 N, in zone 17 of NAD83.

- Model options:** In AERMOD, regulatory default model option was used.
- Meteorological inputs:** A 5-year set of meteorological data was processed by AERMET program for the years 2001-2005. As instructed in the Ohio EPA Engineering Guideline 69,



the Cleveland National Weather Service station (NWS ID 14820) was used surface hourly observation data and Buffalo NWS Station (NWS ID 14733) for upper air data.

- 3. Receptor grids: Receptor network was set up with 25, 50, and 80 meters spacing out to a distance of 2-3 km.
4. Terrain: AERMAP terrain processor was processed with an appropriate terrain data file from the National Elevation Dataset.
5. Building information: USEPA's BPIP-Prime building algorithm was used to determine directionally-dependent building-dimensions.
6. Model Operation: TRC provided modeling files which they generated using BREEZE Graphical User Interface (GUI) platform.

Results:

1. PSD modeling:

As shown in Table 1 and 2, the Ohio EPA is in agreement with the results that the proposed project does not have a predicted impact in excess of the Significant Impact Levels for carbon monoxide.

Table 1 AERMOD modeling results from TRC

Table with 3 columns: Year, Highest 1-hr Impact, Highest 8-hr Impact. Row 1: 2001-2005, 292.44539, 164.86651. Row 2: PSD Significant Impact Level, 2000, 500.

Table 2 AERMOD modeling results from Ohio EPA

Table with 3 columns: Year, Highest 1-hr Impact, Highest 8-hr Impact. Row 1: 2001-2005, 292.44672, 164.07141. Row 2: PSD Significant Impact Level, 2000, 500.



The discrepancy (0.8 mg/m³ of the highest 8-hr) between TRC and Ohio EPA was caused by different terrain inputs and commercial GUI platforms. TRC did not provide topography file (NED_07054371.tif) that they used for AERMAP process because the file size seemed too large to send by email. Ohio EPA used the National Elevation Data downloaded from USGS database to provide AERMAP topography input.

2. Additional Impact Analysis:

TRC described Additional Impact Analysis that is required for any PSD review according to Federal (40 CFR, Part 52) and Ohio air pollution regulations (OAC rule 3745-31-07). Ohio EPA is in agreement with TRC's results of the three analyses.

Their Additional Impact Analysis included:

- a. "Industry and Secondary Growth",
- b. "Soil and Vegetation Impacts", and
- c. "Impacts on Visibility"

Conclusions

Based upon the review of the permit to install application and the supporting documentation provided by the applicant, the Ohio EPA staff has determined the installation will comply with all applicable State and Federal environmental regulations and that the requirements for attainment area review are satisfied. Therefore, the Ohio EPA staff recommends that a permit to install be issued to Republic Steel for the installation of the new integrated steel mini-mill facility.

PUBLIC NOTICE PUBLIC HEARING
Issuance of Draft Air Pollution Permit-To-Install
Republic Steel

Issue Date: 4/02/2012

Permit Number: P0109191

Permit Type: Initial Installation

Permit Description: Installation of a 165 ton per hour electric arc furnace and 65 mmBtu/hr natural gas-fired package boiler with a baghouse for PM control and a direct-shell evacuation control system for CO and VOC control.

Facility ID: 0247080229

Facility Location: Republic Steel

1807 E. 28th Street

Lorain, OH 44055

Facility Description: Steel Production

The Director of the Ohio Environmental Protection Agency, 50 West Town Street, Columbus Ohio has issued a draft action of an air pollution control permit-to-install (PTI) for the facility at the location identified above on the date indicated. This draft permit proposes to allow the installation of an electric arc furnace and natural gas-fired package boiler.

The draft permit proposed allowable emissions rates of PSD pollutants from the new facility are listed below, in tons per year.

<u>Pollutant</u>	<u>Tons/year</u>
VOC	61.5
CO	1211.4

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

The U.S. EPA allows sources to consume no more than the maximum available ambient PSD increment(s) for each PSD pollutant. The Ohio EPA allows PSD sources to consume less than one half the available increment.

A public hearing on the draft air permit is scheduled for May 7, 2012, at South Lorain Branch Library, 2121 Homewood Drive, Lorain, Ohio 44055. The public information session and hearing will commence at 6:00 p.m. to accept comments on the draft permit. A presiding officer will be present and may limit oral testimony to ensure that all parties are heard.

All interested persons are entitled to attend or be represented and give written or oral comments on the draft permit at the hearing. Written comments on the draft permit must be received by the close of the business day on May 09, 2012. Comments received after this date will not be considered to be a part of the official record. Written comments may be submitted at the hearing or sent to: Tony Becker of the Northeast District Office, 2110 E. Aurora Rd., Twinsburg, Ohio, 44087.

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 Northeast District Office, located at the above address, telephone number (330) 963-1200. The permit can be downloaded from the Web page: www.epa.state.oh.us/dapc



DRAFT

**Division of Air Pollution Control
Permit-to-Install**

for

Republic Steel, f/k/a Republic Engineered Products, Inc

Facility ID:	0247080229
Permit Number:	P0109191
Permit Type:	Initial Installation
Issued:	4/2/2012
Effective:	To be entered upon final issuance



Division of Air Pollution Control
Permit-to-Install
for
Republic Steel, f/k/a Republic Engineered Products, Inc

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Authorization

Facility ID: 0247080229
Facility Description: Steel production facility
Application Number(s): A0043129, A0043452, A0044104
Permit Number: P0109191
Permit Description: The project includes the installation of a new electric arc furnace (EAF), natural gas boiler and EAF material handling and storage. The project also includes modifying an existing emissions unit: increase traffic on plant roadways.
Permit Type: Initial Installation
Permit Fee: \$3,100.00 *DO NOT send payment at this time, subject to change before final issuance*
Issue Date: 4/2/2012
Effective Date: To be entered upon final issuance

This document constitutes issuance to:

Republic Steel, f/k/a Republic Engineered Products, Inc
1807 E. 28th Street
Lorain, OH 44055

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

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

Ohio EPA DAPC, Northeast District Office
2110 East Aurora Road
Twinsburg, OH 44087
(330)425-9171

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally
Director



Authorization (continued)

Permit Number: P0109191

Permit Description: The project includes the installation of a new electric arc furnace (EAF), natural gas boiler and EAF material handling and storage. The project also includes modifying an existing emissions unit: increase traffic on plant roadways.

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

- Emissions Unit ID: B019
Company Equipment ID: VTD Boiler
Superseded Permit Number:
General Permit Category and Type: Not Applicable
Emissions Unit ID: F005
Company Equipment ID: Plant Roadways & Parking Lots
Superseded Permit Number:
General Permit Category and Type: Not Applicable
Emissions Unit ID: P913
Company Equipment ID: #1 EAF
Superseded Permit Number:
General Permit Category and Type: Not Applicable
Emissions Unit ID: P914
Company Equipment ID: EAF Flux and Carbon Storage and Handling
Superseded Permit Number:
General Permit Category and Type: Not Applicable



A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
 - (1) Standard Term and Condition A.2.a), Severability Clause
 - (2) Standard Term and Condition A.3.c) through A. 3.e) General Requirements
 - (3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements
 - (4) Standard Term and Condition A.9., Reporting Requirements
 - (5) Standard Term and Condition A.10., Applicability
 - (6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
 - (7) Standard Term and Condition A.14., Public Disclosure
 - (8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
 - (9) Standard Term and Condition A.16., Fees
 - (10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

- a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. General Requirements

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

- b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d) This permit does not convey any property rights of any sort, or any exclusive privilege.
- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

4. Monitoring and Related Record Keeping and Reporting Requirements

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - (1) The date, place (as defined in the permit), and time of sampling or measurements.
 - (2) The date(s) analyses were performed.
 - (3) The company or entity that performed the analyses.
 - (4) The analytical techniques or methods used.
 - (5) The results of such analyses.
 - (6) The operating conditions existing at the time of sampling or measurement.
- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Northeast District Office.

- (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Ohio EPA DAPC, Northeast District Office. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.
 - (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the Ohio EPA DAPC, Northeast District Office every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
 - (4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

5. Scheduled Maintenance/Malfunction Reporting

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

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

6. Compliance Requirements

- a) The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.
- b) Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.



- c) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- d) The permittee shall submit progress reports to the Ohio EPA DAPC, Northeast District Office concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

7. Best Available Technology

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

8. Air Pollution Nuisance

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

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Northeast District Office.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have

been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA DAPC, Northeast District Office. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

10. Applicability

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

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

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.
- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in Ohio EPA's "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).



- d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

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

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

12. Permit-To-Operate Application

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

13. Construction Compliance Certification

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

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.
- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. Public Disclosure

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



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

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

16. Fees

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

17. Permit Transfers

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

18. Risk Management Plans

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

19. Title IV Provisions

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



B. Facility-Wide Terms and Conditions



1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
 - a) None.
2. Facility-wide Operational Restriction:
 - a) The permittee shall not operate any of the following emissions units when the electric arc furnace, emissions unit P913 (#1 EAF) is in operation:
 - (1) B007 (#7 BF Boiler)
 - (2) B008 (#8 BF Boiler)
 - (3) B009 (#9 BF Boiler)
 - (4) B013 (#13 BF Boiler)
 - (5) P058 (Hot metal desulfurization and skimming)
 - (6) P905 (#3 Blast furnace)
 - (7) P907 (#4 Blast furnace)
 - (8) P908 ("L" Vessel BOF)
 - (9) P909 ("N" Vessel BOF)
3. Facility-wide Monitoring and/or Recordkeeping Requirements:
 - a) The permittee shall maintain daily records of the following information:
 - (1) The date and all times when any of these emissions units B007, B008, B009, B013, P058, P905, P907, P908, and P909 operated when the electric arc furnace, emissions unit P913 (#1 EAF) was in operation.
4. Facility-wide Reporting Requirements:
 - a) The permittee shall submit quarterly deviation (excursion) reports that identify all times when any of these emissions units B007, B008, B009, B013, P058, P905, P907, P908, and P909 operated when the electric arc furnace, emissions unit P913 (#1 EAF) was in operation.

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



C. Emissions Unit Terms and Conditions



1. B019, VTD Boiler

Operations, Property and/or Equipment Description:

65 MMBtu/hr natural gas-fired package boiler to produce steam to an existing VTD

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
(1) None.
b) Applicable Emissions Limitations and/or Control Requirements
(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Table with 2 columns: Applicable Rules/Requirements and Applicable Emissions Limitations/Control Measures. Rows include ORC 3704.03(T), OAC rule 3745-31-05(A)(3), OAC rule 3745-31-05(A)(3)(a)(ii), and OAC rule 3745-31-10 through OAC rule 3745-31-20.



Table with 3 columns: Row ID, Applicable Rules/Requirements, and Applicable Emissions Limitations/Control Measures. Rows include BACT Determinations, OAC rule 3745-17-10(B)(1), OAC rule 3745-17-07(A), OAC rule 3745-18-06(A), OAC rule 3745-110-03(B), 40 CFR Part 60, Subpart Dc, and 40 CFR Part 63, Subpart JJJJJ.

(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutants less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limitations/control measures no longer apply.
b. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan. The

Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM₁₀/PM_{2.5} and SO₂ from this air contaminant source since the uncontrolled potentials to emit for PM₁₀/PM_{2.5} and SO₂ are less than 10 tons/yr.

- c. The permittee shall employ "Best Available Control Technology" (BACT) for controlling emissions of CO and VOC. BACT for this emissions unit has been determined to be the following:
 - i. CO – Proper burner design and good natural gas combustion practices. Acceptance of emission limitations of 0.04 lb/MMBtu and 11.4 tons/yr.
 - ii. VOC – Proper burner design and good natural gas combustion practices. Acceptance of emission limitations of 0.35 lb/hr and 1.52 tons/yr.

The emission limits based on the BACT requirements are listed under OAC rule 3745-31-10 through OAC rule 3745-31-20 above.

- d. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency (U.S. EPA), 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency (Ohio EPA).
- e. The Ohio EPA has determined that this facility is subject to the requirements of 40 CFR Part 63, Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Area Sources: Industrial, Commercial, and Institutional Boilers. Although Ohio EPA has determined that this Generally Available Control Technology NESHAP (GACT) applies, at this time Ohio EPA does not have the authority to enforce this standard. Instead, U.S. EPA has the authority to enforce this standard. Please be advised, that all requirements associated with this rule are in effect and shall be enforced by U.S. EPA. For more information on the area source rules, please refer to the following U.S. EPA website: <http://www.epa.gov/ttn/atw/area/arearules.html>.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas as fuel in this emission unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (2) The permittee shall record and maintain records of the amount of each fuel combusted during each calendar month.

e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. The reports shall include the daily quantity of each type of fuel burned other than natural gas.

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

f) Testing Requirements

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

a. Emission Limitation:

NO_x emissions shall not exceed 0.07 lb/MMBtu (as measured at the maximum firing condition).

Applicable Compliance Method:

Compliance shall be demonstrated based upon emission tests performed in accordance with the requirements specified in f)(2).

b. Emission Limitation:

PM₁₀/PM_{2.5} emissions (filterable and condensable) shall not exceed 0.48 lb/hr.

Applicable Compliance Method:

Compliance with the PM₁₀/PM_{2.5} limitation of 0.48 lb/hr shall be demonstrated based upon the following equation:

$$PM_{10}/PM_{2.5} = (EF)(NG)$$

where:

PM₁₀/PM_{2.5} = particulate emissions (filterable and condensable), in pounds per hour;

EF = total PM₁₀/PM_{2.5} emission factor, 7.6 lbs/10⁶ CF of natural gas burned, from AP-42 "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.4, Table 1.4-2 (7/98); and

NG = Maximum hourly natural gas usage, 63,107 CF/hr.

c. Emission Limitation:

PM₁₀/PM_{2.5} emissions (filterable and condensable) shall not exceed 2.1 tons/yr.

Applicable Compliance Method:

The tons per year emission limitation was developed by multiplying the short-term allowable PM₁₀/PM_{2.5} limitation (0.48 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

d. Emission Limitation:

SO₂ emissions shall not exceed 0.037 lb/hr.

Applicable Compliance Method:

Compliance with the SO₂ emission limitation shall be demonstrated based upon the following equation:

$$SO_2 = (EF)(NG)$$

where:

SO₂ = sulfur dioxide emissions, in pounds per hour;

EF = sulfur dioxide emission factor, 0.60 lb/10⁶ CF of natural gas burned, from AP-42 "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.4, Table 1.4-2 (7/98); and

NG = Maximum hourly natural gas usage, 63,107 CF/hr.

e. Emission Limitation:

SO₂ emissions shall not exceed 0.16 ton/yr.

Applicable Compliance Method:

The tons per year emission limitation was developed by multiplying the short-term allowable SO₂ emission limitation (0.037 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

f. Emission Limitation:

VOC emissions shall not exceed 0.35 lb/hr.

Applicable Compliance Method:

Compliance with the VOC emission limitation shall be demonstrated based upon the following equation:

$$VOC = (EF)(NG)$$

where:

VOC = volatile organic compounds emissions, in pounds per hour;

EF = volatile organic compounds emission factor, 5.5 lbs/10⁶ CF of natural gas burned, from AP-42 "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.4, Table 1.4-2 (7/98); and

NG = Maximum hourly natural gas usage, 63,107 CF/hr.

g. Emission Limitation:

VOC emissions shall not exceed 1.52 tons/yr.

Applicable Compliance Method:

The tons per year emission limitation was developed by multiplying the short-term allowable VOC emission limitation (0.35 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

h. Emission Limitation:

CO emissions shall not exceed 0.04 lb/MMBtu (as measured at the maximum firing condition).

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 10 or 10B. Alternative U.S. EPA-approved test methods may be used with prior written approval from Ohio EPA.

i. Emission Limitation:

CO emissions shall not exceed 11.4 tons/yr.

Applicable Compliance Method:

The tons per year emission limitations were developed by multiplying the short-term CO emission limitation (0.04 lb/MMBtu) by the maximum annual natural gas usage (552.8 x 10⁶ CF/yr), by natural gas heat content (1030 Btu/CF), by (1 MMBtu/10⁶ Btu), and then dividing by 2,000 lbs/ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

j. Emission Limitation:

Visible particulate emissions from the stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be demonstrated through visible particulate emissions observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

- (2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- a. The emission testing shall be conducted within six (6) months after the startup of the emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for NO_x.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

for NO_x: 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 7 or 7E.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
 - d. The test(s) shall be conducted while the boiler is operating at or near maximum capacity. The gas firing burners of the boiler shall be operated at the highest firing condition rate during compliance testing to determine the NO_x emission rate in lb/MMBtu.
 - e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).
 - f. Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
 - g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office.



2. F005, Plant Roadways & Parking Lots

Operations, Property and/or Equipment Description:

Plant Roadways & Parking Lots

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
(1) None.
b) Applicable Emissions Limitations and/or Control Requirements
(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below.

Table with 3 columns: Applicable Rules/Requirements, Applicable Emissions Limitations/Control Measures. Rows include: (unpaved and paved roadways and parking areas), a. OAC rule 3704.03(T) Best Available Technology (BAT) Determinations for NAAQS Pollutants > 10 tons/yr, (unpaved roadways and parking areas), b. OAC rule 3745-17-07(B)(8)(a), c. OAC rules 3745-17-08(B), 3745-17-08(B)(2) and 3745-17-08(B)(7)



Table with 2 columns: ID (d, e) and Description (OAC rules and emission control measures). Row d: OAC rule 3745-17-07(B)(8)(a), Visible particulate emissions... Row e: OAC rules 3745-17-08(B), 3745-17-08(B)(7), 3745-17-08(B)(8) and 3745-17-08(B)(9), reasonably available control measures... See b)(2)d through b)(2)i.

(2) Additional Terms and Conditions

- a. The permittee shall employ reasonably available control measures on all unpaved roadways and parking areas and all paved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the unpaved roadways and parking areas with water and/or any other suitable dust suppression chemicals and the paved roadways and parking areas with water and by sweeping, at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
b. The needed frequencies of implementation of the control measures shall be determined by the permittee's inspections pursuant to the monitoring section of this permit. Implementation of the control measures shall not be necessary for an unpaved roadway or parking area or a paved roadway and parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.
c. Any unpaved roadway or parking area, which during the term of this permit is paved or takes the characteristics of a paved surface due to the application of certain types of dust suppressants, may be controlled using appropriate dust control measures for paved surfaces. Any unpaved roadway or parking area that takes the characteristics of a paved roadway or parking area due to the application of certain types of dust suppressants shall remain subject to the visible emission limitation for unpaved roadways and parking areas. Any unpaved roadway or parking area that is paved shall be subject to the visible emission limitation for paved roadways and parking areas
d. The permittee shall promptly remove, in such a manner as to minimize or prevent resuspension, earth and/or other material from paved streets onto which such

material has been deposited by trucking or earth moving equipment or erosion by water or other means.

- e. Open-bodied vehicles transporting materials likely to become airborne shall have such materials covered at all times if the control measure is necessary for the materials being transported.
- f. Implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit are appropriate and sufficient to satisfy the requirements of OAC rules 3745-17-08.

c) Operational Restrictions

(1) Operational Restrictions Concerning the Use of Dust Suppressants:

When a dust suppressant is used for controlling fugitive dust from the unpaved road segments and parking areas, the following restrictions apply:

- a. The permittee shall certify or possess certification that all dust suppressants used to control fugitive dust meet the PCB limitations set forth in 40 CFR 761, and that there are no listed hazardous wastes or characteristic hazardous wastes as set forth in 40 CFR 261.
- b. The permittee shall not apply used oil as defined by OAC rule 3745-279-01(A)(12) as a dust suppressant.
- c. The dust suppressant shall be applied in such a manner as to prevent pollution of waters of the State as required by the Ohio Revised Code, section 6111.

d) Monitoring and/or Recordkeeping Requirements

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

<u>unpaved roadways:</u>	<u>minimum inspection frequency:</u>
all	from May 1 to September 30: daily, when in use from October 1 to April 30: weekly, when in use
<u>unpaved parking areas:</u>	<u>minimum inspection frequency:</u>
all	from May 1 to September 30: daily, when in use from October 1 to April 30: weekly, when in use
<u>paved roadways:</u>	<u>minimum inspection frequency:</u>
all	from May 1 to September 30: daily, when in use from October 1 to April 30: weekly, when in use



paved parking areas:

minimum inspection frequency:

all

from May 1 to September 30: daily, when in use
from October 1 to April 30: weekly, when in use

- (2) The purpose of the inspections is to determine the need for implementing the above-mentioned control measures.
(3) The permittee may, upon receipt of written approval from the Ohio EPA, modify the above-mentioned inspection frequencies...
(4) The permittee shall maintain records of the following information:
a. the date and reason any required inspection was not performed...
b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;
c. the dates the control measures were implemented; and
d. on a calendar quarter basis, the total number of days the control measures were implemented and the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measures.

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

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify any of the following occurrences:
a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and
b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.

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

f) Testing Requirements

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

a. Emission Limitation (unpaved and paved roadways and parking areas):

Visible particulate emissions from any unpaved roadway or parking area shall not exceed 10 percent opacity, averaged over a data set consisting of twelve observations based on four uninterrupted vehicle passes, three observations per vehicle pass.

Visible particulate emissions from any paved roadway or parking area shall not exceed 10 percent opacity, averaged over a data set consisting of twelve observations based on four uninterrupted vehicle passes, three observations per vehicle pass.

Applicable Compliance Method:

If required, compliance with the limitation for visible emissions of fugitive dust shall be determined through visible emissions observations performed in accordance U.S. EPA Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3).

b. Emission Limitation (unpaved and paved roadway and parking areas):

For unpaved and paved roadways and parking areas, PM₁₀ emissions shall not exceed 47 tons/yr.

For unpaved and paved roadways and parking areas, PM_{2.5} emissions shall not exceed 7.5 tons/yr.

Applicable Compliance Method:

Compliance shall be determined by summing annual emissions from unpaved and paved roadways and parking areas using the following equations for each pollutant (PM₁₀ and PM_{2.5}):

(unpaved roadway and parking areas)

$$EF = k \left[\left(\frac{s}{12} \right)^a \right] x \left[\left(\frac{W}{3} \right)^b \right] x \left[\frac{(365 - P)}{365} \right] \quad \boxed{\text{AP-42 section 13.2.2., Eq. 2 (11/06)}}$$

where:

- EF = annual sized-specific emission factor, lb/VMT;
- k = (empirical constants, lb/VMT), PM₁₀ = 1.5, PM_{2.5} = 0.15;
- s = surface material silt content (6%);
- W = mean vehicle weight (tons);
- a = (empirical constants), PM₁₀ = 0.9, PM_{2.5} = 0.9;

b = (empirical constants), $PM_{10} = 0.45$, $PM_{2.5} = 0.45$; and
 P = number of days with > 0.01 in. of precipitation, 150 (AP-42, Figure 13.2.2-1).

$$EF(PM10) = 1.5 \times \left[\left(\frac{s}{12} \right)^{0.9} \times \left(\frac{W}{3} \right)^{0.45} \right] \times \left[1 - \frac{150}{365} \right] = \# \frac{lbs PM10}{VMT}$$

$$EF(PM2.5) = 0.15 \times \left[\left(\frac{s}{12} \right)^{0.9} \times \left(\frac{W}{3} \right)^{0.45} \right] \times \left[1 - \frac{150}{365} \right] = \# \frac{lbs PM2.5}{VMT}$$

The calculated emission factor (EF) shall be multiplied by the total miles traveled (in miles/yr), and by applying a control efficiency of 90% for the application of water and other suitable dust suppression chemicals (1 - 0.90) and divided by 2,000 lbs/ton, annual estimated emissions shall be calculated as follows:

$$Annual\ emissions\ (PM10, tpy) = \left(\# \frac{lbs PM10}{VMT} \right) \times \left(\frac{miles}{yr} \right) \times (1 - 0.90) \times \left(\frac{1}{2000} \right)$$

$$Annual\ emissions\ (PM2.5, tpy) = \left(\# \frac{lbs PM2.5}{VMT} \right) \times \left(\frac{miles}{yr} \right) \times (1 - 0.90) \times \left(\frac{1}{2000} \right)$$

(paved roadway and parking areas):

$$EF = [k \times (sL)^{0.91} \times (W)^{1.02}] \times \left[1 - \frac{P}{4N} \right]$$

(AP-42 section 13.2.1., Eq. 2(1/11))

where:

EF = annual sized-specific emission factor, lb/VMT;

k = (empirical constants, lb/VMT), $PM_{10} = 0.0022$, $PM_{2.5} = 0.00054$;

sL = road silt loading content ($9.7\ g/m^2$);

W = mean vehicle weight (tons);

P = number of days with > 0.01 in. of precipitation, 150 (AP-42, Figure 13.2.1-2); and

N = number of days in the averaging period, 365.

$$EF(PM10) = [0.0022 \times (sL)^{0.91} \times (W)^{1.02}] \times \left[1 - \frac{150}{4 \times 365} \right] = \# \frac{lbs PM10}{VMT}$$

$$EF(PM2.5) = [0.00054 \times (sL)^{0.91} \times (W)^{1.02}] \times \left[1 - \frac{150}{4 \times 365} \right] = \# \frac{lbs PM2.5}{VMT}$$

The calculated emission factor (EF) shall be multiplied by the total miles traveled (in miles/yr), and by applying a control efficiency of 80% for the application of water as well as sweeping paved roadways (1 - 0.80) and divided by 2,000 lbs/ton, annual estimated emissions shall be calculated as follows:

$$Annual\ emissions\ (PM10, tpy) = \left(\# \frac{lbs PM10}{VMT} \right) \times \left(\frac{miles}{yr} \right) \times (1 - 0.80) \times \left(\frac{1}{2000} \right)$$



$$\text{Annual emissions (PM2.5, tpy)} = \left(\# \frac{\text{lbs PM2.5}}{\text{VMT}} \right) \times \left(\frac{\text{miles}}{\text{yr}} \right) \times (1 - 0.80) \times \left(\frac{1}{2000} \right)$$

g) Miscellaneous Requirements

- (1) None.



3. P913, #1 EAF

Operations, Property and/or Equipment Description:

150 ton per hour hot metal production capacity electric arc furnace

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T) Best Available Technology (BAT) Determinations for NAAQS Pollutants > 10 tons/yr	PM ₁₀ (filterable and condensable) emissions shall not exceed 0.0034 gr/dscf. PM _{2.5} (filterable and condensable) emissions shall not exceed 0.0033 gr/dscf. SO ₂ emissions (non-resulfurized steel) shall not exceed 0.39 lb/ton. SO ₂ emissions (resulfurized steel) shall not exceed 2.0 lbs/ton. NO _x emissions shall not exceed 0.50 lb/ton. The requirements of this rule also include compliance with the requirements of the scrap contaminant control requirements specified in 40 CFR Part § 63.10685. The BAT requirements under ORC 3704.03(T) have been determined to be in compliance with the emissions



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		limitations for CO and VOC established pursuant to OAC rule 3745-31-10 through 3745-31-20.
b.	OAC rule 3745-31-05(A)(3) (as effective 11/30/01)	Pb emissions shall not exceed 0.000007 gr/dscf and 0.23 ton/yr. See b)(2)a.
c.	OAC rule 3745-31-05(A)(3)(b) (as effective 12/01/06)	See b)(2)b.
d.	OAC rules 3745-31-10 through OAC rule 3745-31-20 Best Available Control Technology (BACT) Determinations	CO emissions shall not exceed 2.0 lbs/ton and 1,200 tons/yr as a rolling, 12-month summation. VOC emissions shall not exceed 0.10 lb/ton, and 60 tons/yr as a rolling, 12-month summation. See b)(2)c.
e.	OAC rule 3745-31-05(D)(1)(a) Synthetic Minor Restrictions to Avoid Major Source New Source Review	SO ₂ emissions shall not exceed 378.9 tons/yr as a rolling, 12-month summation. NO _x emissions shall not exceed 300 tons/yr as a rolling, 12-month summation. See c)(1).
f.	OAC rule 3745-114-01	Hg emissions shall not exceed 0.0000045 gr/dscf and 0.15 ton/yr.
g.	OAC rule 3745-17-11	The particulate emission limitation specified by this rule is less stringent than the emission limitations established pursuant to ORC 3704.03(T).
h.	OAC rule 3745-17-07(A)(1) OAC rule 3745-17-07(B)(3)	The visible particulate emission limitations specified by these rules are less stringent than the visible particulate emission limitation established pursuant to 40 CFR Part 60, Subpart AAa.
i.	OAC rule 3745-17-08	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to 40 CFR Part 60, Subpart AAa.
j.	OAC rule 3745-18-06	The SO ₂ emission limitation specified by this rule is less stringent than the SO ₂ emission limitation established pursuant to OAC rule 3745-31-05(D)(1)(a).

k.	<p>40 CFR Part 60, Subpart AAa (40 CFR Part 60.270a -276a)</p> <p>[In accordance with 40 CFR 60.270a, the provisions of this Subpart are applicable to this steel plant: electric arc furnace (EAF), and dust handling system.</p> <p>This facility will commence construction of an electric arc furnace (EAF) and dust handling system after August 17, 1983.]</p>	<p>PE/PM (filterable) emissions shall not exceed 0.0052 gr/dscf from the exhaust of the EAF melt shop baghouse (No. EAFBH01).</p> <p>Visible particulate emissions from the EAF melt shop baghouse (No. EAFBH01) due to operation of the EAF shall not exceed three (3) percent opacity as a six-minute average.</p> <p>Visible particulate emissions of fugitive dust from the melt shop due to operation of the EAF shall not exceed six (6) percent opacity as a six-minute average.</p> <p>Visible particulate emissions from the EAF melt shop baghouse due to operations of the EAF dust handling equipment shall not exceed ten (10) percent opacity as a six-minute average.</p> <p>See b(2)d.</p>
l.	<p>40 CFR Part 63, Subpart YYYYY (40 CFR Part 63.10680 -10692)</p> <p>[In accordance with 40 CFR 63.10680(a) and (b)(2), this is a new affected source and is an area source of hazardous air pollutants (HAPs).</p> <p>This facility will commence construction of an electric arc furnace (EAF) steelmaking facility, after September 20, 2007, and must achieve compliance with the applicable provisions of this Subpart upon startup.]</p>	<p>Control of contaminants from scrap, including chlorinated plastics, lead, mercury, and free organic liquids.</p> <p>The PE/PM (filterable) emission limitation and the opacity limitation for fugitive dust from the melt shop specified by 40 CFR 63.10686(b)(1) and (b)(2) of this rule are equivalent to the emission limitations established pursuant to 40 CFR 60.272a(a)(1) and (3).</p>
m.	<p>40 CFR Part 63, Subpart YYYYY (40 CFR Part 63.10691) 40 CFR Part 63.1-16</p>	<p>Table 1 to Subpart YYYYY of 40 CFR Part 63 – Applicability of General Provisions to Subpart YYYYY.</p>

(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutants less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limitations/control measures no longer apply.
- b. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the Pb from this air contaminant source since the uncontrolled potential to emit for Pb is less than 10 tons/yr.
- c. The permittee shall employ "Best Available Control Technology" (BACT) for controlling emissions of CO and VOC. BACT for this emissions unit has been determined to be the following:
 - i. CO – DEC system with adjustable air gap and water-cooled elbow and duct. Acceptance of emission limitations of 2.0 lbs/ton, and 1,200 tons/yr as a rolling, 12-month summation.
 - ii. VOC – Scrap management and DEC system with adjustable air gap and water-cooled elbow and duct. Acceptance of emission limitations of 0.10 lb/ton, and 60 tons/yr as a rolling, 12-month summation.

The emission limits based on the BACT requirements are listed under OAC rule 3745-31-10 through OAC rule 3745-31-20 above.

In the event, the permittee does not demonstrate compliance by meeting the limit(s) above of 2.0 lbs/ton for CO and/or 0.10 lb/ton for VOC through initial performance testing as specified in sections f)(1)h and f)(2), then the permittee shall re-evaluate BACT and re-submit a permit modification along with supportive documentation to the Ohio EPA for this emissions unit within 60 days at the completion of the tests.

- d. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency (U.S. EPA), 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency (Ohio EPA).



- e. Particulate emissions captured by the direct evacuation control (DEC) system and the melt shop canopy hood shall be exhausted to the EAF melt shop baghouse (No. EAFBH01).
f. See 40 CFR Part 60, Subpart AAa (40 CFR Part 60.270a -276a).
g. See 40 CFR Part 63, Subpart YYYYYY (40 CFR Part 63.10680 -10692).

c) Operational Restrictions

- (1) The permittee shall restrict the annual liquid steel production to 1,200,000 tons per year, based upon a rolling, 12-month summation of the production rates.

To ensure federally enforceability during the first 12 calendar months of operation, the permittee shall not exceed the liquid steel production levels specified in the following table:

Table with 2 columns: Month(s) and Maximum Allowable Cumulative liquid steel production, in tons. Rows range from 1 to 1-12, showing cumulative production increasing from 110,000 to 1,200,000 tons.

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual liquid steel production limitation shall be based upon a rolling, 12-month summation of the production rates.

- (2) See 40 CFR Part 60, Subpart AAa (40 CFR Part 60.270a -276a).
(3) See 40 CFR Part 63, Subpart YYYYYY (40 CFR Part 63.10680 -10692).

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the following information:
a. the hours of operation for each calendar month;
b. the liquid steel production rate for each calendar month, in tons/month;
c. the rolling, 12-month summation of the hours of operation;
d. the rolling, 12-month summation of the liquid steel production rates, in tons; and

- e. the rolling, 12-month summation of the SO₂, NO_x, CO and VOC emissions, in tons.
 - (2) See 40 CFR Part 60, Subpart AAa (40 CFR Part 60.270a -276a).
 - (3) See 40 CFR Part 63, Subpart YYYYY (40 CFR Part 63.10680 -10692).
- e) Reporting Requirements
 - (1) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month liquid steel production rate limitation and, for the first 12 calendar months of operation following start-up, all exceedances of the allowable cumulative liquid steel production levels for this emissions unit.
 - (2) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month summation of the SO₂, NO_x, CO and VOC emissions.
 - (3) See 40 CFR Part 60, Subpart AAa (40 CFR Part 60.270a -276a).
 - (4) See 40 CFR Part 63, Subpart YYYYY (40 CFR Part 63.10680 -10692).
- f) Testing Requirements
 - (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
PE/PM (filterable) emissions shall not exceed 0.0052 gr/dscf.
Applicable Compliance Method:
Compliance shall be demonstrated based upon emission tests performed in accordance with the requirements specified in f)(2).
 - b. Emission Limitation:
PM₁₀ (filterable and condensable) emissions shall not exceed 0.0034 gr/dscf.
Applicable Compliance Method:
Compliance shall be demonstrated based upon emission tests performed in accordance with the requirements specified in f)(2).
 - c. Emission Limitation:
PM_{2.5} (filterable and condensable) emissions shall not exceed 0.0033 gr/dscf.



Applicable Compliance Method:

Compliance shall be demonstrated based upon emission tests performed in accordance with the requirements specified in f)(2).

d. Emission Limitation:

Pb emissions shall not exceed 0.000007 gr/dscf.

Applicable Compliance Method:

Compliance shall be demonstrated based upon emission tests performed in accordance with the requirements specified in f)(2).

e. Emission Limitation:

Pb emissions shall not exceed 0.23 ton/yr.

Applicable Compliance Method:

Compliance with the Pb limitation shall be demonstrated based upon record keeping in d)(1), testing in f)(2) and the following equation:

$$Pb = (dscfm \text{ Test})(EF \text{ Test})(Hour)(1 \text{ lb}/7,000 \text{ gr})(60 \text{ min}/hr)(1 \text{ ton}/2,000 \text{ lbs})$$

where:

Pb = Pb (lead), in tons/yr;

dscfm Test = tested dry standard cubic feet/minute, in dscfm;

EF Test = tested emissions rate of Pb, in gr/dscf; and

Hour = actual hours of operation/yr.

f. Emission Limitation:

Hg emissions shall not exceed 0.0000045 gr/dscf.

Applicable Compliance Method:

Compliance shall be demonstrated based upon emission tests performed in accordance with the requirements specified in f)(2).

g. Emission Limitation:

Hg emissions shall not exceed 0.15 ton/yr.

Applicable Compliance Method:

Compliance with the Hg limitation shall be demonstrated based upon record keeping in d)(1), testing in f)(2) and the following equation:



Hg = (dscfm Test)(EF Test)(Hour)(1 lb/7,000 gr)(60 min/hr)(1 ton/2,000 lbs)

where:

Hg = Hg (mercury), in tons/yr;

dscfm Test = tested dry standard cubic feet/minute, in dscfm;

EF Test = tested emissions rate of Hg, in gr/dscf; and

Hour = actual hours of operation/yr.

h. Emission Limitations:

SO2 emissions (non-resulfurized steel) shall not exceed 0.39 lb/ton;

SO2 emissions (resulfurized steel) shall not exceed 2.0 lbs/ton;

NOx emissions shall not exceed 0.50 lb/ton;

CO emissions shall not exceed 2.0 lbs/ton; and

VOC emissions shall not exceed 0.10 lb/ton.

Applicable Compliance Method:

Compliance shall be demonstrated based upon emission tests performed in accordance with the requirements specified in f)(2).

i. Emission Limitations:

SO2 emissions shall not exceed 378.9 tons/yr as a rolling, 12-month summation;

NOx emissions shall not exceed 300 tons/yr as a rolling, 12-month summation;

CO emissions shall not exceed 1,200 tons/yr as a rolling, 12-month summation; and

VOC emissions shall not exceed 60 tons/yr as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the emission limitations shall be demonstrated based upon record keeping in d)(1), testing in f)(2) and the following equation:

E = (EF Test)(Tons)(1 ton/2,000 lbs)

where:

E = emissions for each pollutant, in tons/yr as a rolling, 12-month summation;

EF Test = tested emissions rate of each pollutant, in lb/ton; and

Tons = actual, tons of liquid steel, in tons/yr as a rolling, 12-month summation.

(For total SO₂ emissions, combined emissions from non-resulfurized steel and resulfurized steel together, using appropriate EF Test factors)

j. Emission Limitation:

Visible particulate emissions from the EAF melt shop baghouse (No. EAFBH01) due to operation of the EAF shall not exceed three (3) percent opacity as a six-minute average.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emission limitation shall be determined through visible emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

k. Emission Limitation:

Visible particulate emissions of fugitive dust from the melt shop due to operation of the EAF shall not exceed six (6) percent opacity as a six-minute average.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emission limitation shall be determined through visible emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

l. Emission Limitation:

Visible particulate emissions from the EAF melt shop baghouse due to operations of the EAF dust handling equipment shall not exceed ten (10) percent opacity as a six-minute average.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emission limitation shall be determined through visible emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

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

a. The emission testing shall be conducted within 6 months after startup of this emissions unit.

- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for PE/PM, PM₁₀, PM_{2.5}, SO₂, NO_x, Pb, Hg, CO and VOC.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):
- PE/PM - Methods 5 or 5D of 40 CFR Part 60, Appendix A
- PM₁₀- Methods 201/201A, 202 of 40 CFR Part 51, Appendix M
- PM_{2.5} - Methods 201/201A, 202 of 40 CFR Part 51, Appendix M
- SO₂ - Method 6 of 40 CFR Part 60, Appendix A.
- NO_x- Method 7 of 40 CFR Part 60, Appendix A
- Pb - Method 12 or 29 of 40 CFR Part 60, Appendix A
- Hg - Method 29 of 40 CFR Part 60, Appendix A
- CO - Method 10 of 40 CFR Part 60, Appendix A
- VOC - Method 18, 25, or 25A of 40 CFR Part 60, Appendix A
- VE - Method 9 of 40 CFR Part 60, Appendix A
(For EAF melt shop baghouse (No. EAFBH01) and melt shop)
- Methods 1 through 4 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. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.
- e. In addition, the test(s) shall be conducted using the test methods, procedures, record keeping and reporting requirements in 40 CFR 60.275a, 40 CFR 60.276a and 40 CFR 63.10686.
- f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

- g. Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- h. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office.



4. P914, EAF Flux and Carbon Storage and Handling

Operations, Property and/or Equipment Description:

EAF flux agent and charge carbon storage and material handling operations, including loading/unloading of storage bins, conveying to truck loading station, loading trucks at loading station, and loading (truck unloading) of fluxes and charge carbon into EAF charge bucket.

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) None.
- b) Applicable Emissions Limitations and/or Control Requirements
 - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) as effective 11/30/01	PM ₁₀ shall not exceed 2.4 lbs/hr and 1.0 ton/yr. PM _{2.5} shall not exceed 0.37 lb/hr and 0.2 ton/yr. See b)(2)a.
b.	OAC rule 3745-31-05(A)(3) as effective 12/01/06	See b)(2)b.
c.	OAC rule 3745-31-05(E)	See b)(2)c.
d.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the stack(s) serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
e.	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust from the material handling operations shall not exceed 20% opacity as a 3-minute average.
f.	OAC rule 3745-17-08(B)	The reasonable available control measures required by this applicable rule are less stringent than the control measures established pursuant to OAC rule 3745-31-05(E). See b)(2)e.



Table with 2 columns: Reference (g. OAC rule 3745-17-11) and Description (The particulate emission limitation required by this applicable rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(E)).

(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutants less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limitations/control measures no longer apply.
b. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the SIP.
The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to this emissions unit since the PM10 and PM2.5 emission limitations of 1.0 and 0.2 ton/yr, respectively, are less than 10 tons/yr.
c. Permit to Install P0109191 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment), as proposed by the permittee, for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3):
i. use enclosures and baghouse(s) that are sufficient in capturing and controlling fugitive particulate emissions to the extent of meeting the control efficiencies in the Ohio EPA RACM Guideline for Fugitive Dust Sources - Tables 2.3-2 and 2.4-2 and in permit application.
d. The material handling operation(s) that are covered by this permit and subject to the requirements of OAC rules 3745-17-07 and 3745-17-08 are listed below:
i. loading/unloading of fluxes and charge carbon in storage bins;
ii. conveyor;
iii. loading of fluxes and charge carbon in trucks at loading station; and
iv. loading (truck unloading) of fluxes and charge carbon into EAF charge bucket.

- e. The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM). These measures shall include, but not be limited to, the following:
 - i. for loading/unloading of fluxes and charge carbon at storage bins: the use of storage vent filters;
 - ii. for the conveyor: pick-up points, as needed, vented to either the EAF melt shop baghouse (No. EAFBH01) or to the new baghouse;
 - iii. for loading of fluxes and charge carbon in trucks at loading station: the use of an enclosure with dust capture hood vented to the EAF melt shop baghouse (No. EAFBH01) or to the new baghouse; and
 - iv. for loading (truck unloading) of fluxes and charge carbon to EAF charge bucket: use of melt shop canopy vented to EAF melt shop baghouse (No. EAFBH01).

The collection efficiencies shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the points of capture to the extent possible with good engineering design.

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

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the egress points (i.e., storage bin vents, truck loading station, building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible fugitive emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the location and color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emissions incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions

incident under item (d) above or continue the weekly check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

- (2) In the event, the permittee installs and operates a new baghouse, other than using the EAF melt shop baghouse (No. EAFBH01), for the purpose of controlling particulate emissions at the truck loading station, then the permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emissions incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

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

- (3) In the event, the permittee installs and operates a new baghouse, other than using the EAF melt shop baghouse (No. EAFBH01), for the purpose of controlling particulate emissions at the truck loading station, then the permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a weekly basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

The acceptable range for the pressure drop across the baghouse shall be based upon the manufacturer's specifications, until such time as any required performance testing is conducted and an alternative pressure drop range and/or limit is established.

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

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

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

- a. a description of the corrective action;
- b. the date corrective action was completed;
- c. the date and time the deviation ended;
- d. the total period of time (in minutes) during which there was a deviation;
- e. the pressure drop readings immediately after the corrective action was implemented; and
- f. the name(s) of the personnel who performed the work.

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

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future emission tests that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring

requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

- a. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., storage bins, truck loading station, building windows, doors, roof monitors, etc.) serving this emissions unit; and
- b. any corrective actions taken to minimize or eliminate the visible emissions.

These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

(2) In the event, the permittee installs and operates a new baghouse, other than using the EAF melt shop baghouse (No. EAFBH01), for the purpose of controlling particulate emissions at the truck loading station, then permittee shall submit semiannual written reports that identify:

- a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and
- b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

(3) In the event, the permittee installs and operates a new baghouse, other than using the EAF melt shop baghouse (No. EAFBH01), for the purpose of controlling particulate emissions at the truck loading station, the permittee shall submit quarterly deviation (excursion) reports that identify any of the following occurrences:

- a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the range specified by the manufacturer and outside of the acceptable range following any required compliance demonstration;
- b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;
- c. each incident of deviation described in [a] (above) where a prompt investigation was not conducted;
- d. each incident of deviation described in [a] where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

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

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

f) Testing Requirements

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

- a. Emission Limitation:

Visible emissions of fugitive dust from the material handling operations shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance with the fugitive dust emission limitation shall be demonstrated through visible emissions observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and the modifications listed in OAC rule 3745-17-03 (B)(3).

- b. Emission Limitation:

Visible particulate emissions from the stack(s) serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emission limitation shall be demonstrated through visible emissions observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

- c. Emission Limitation:

PM₁₀ shall not exceed 2.4 lbs/hr and 1.0 ton/yr.

PM_{2.5} shall not exceed 0.37 lb/hr and 0.2 ton/yr.

Applicable Compliance Method:

Compliance shall be demonstrated by applying the emission factors and control efficiencies from Ohio EPA RACM Guideline for Fugitive Dust Sources - Tables 2.3-1, 2.3-2, 2.4-1 and 2.4-2, particle-size data from US EPA, AP-42, Section 13.2-4, control efficiencies in permit application, and the following equations:

For lb/hr:

$$E(\text{lbs/hr}) = k \sum_i^n EF(i) \times \text{Ton}(i) \times (1 - CE(i))$$

where:

E(lb/hr) = for each particle size (PM₁₀ and PM_{2.5}) of particulate matter, the summation of particulate emissions from all materials processed at all storage and material handling emission points, in lbs/hr;

k = particle size multiplier;
 (PM₁₀, k = 0.35/0.74; PM_{2.5}, k = 0.053/0.74)

n = total number of materials; and

Load-in at storage bins:

EF(i) = emission factor for each material i, load-in to bins, in lb/ton;
 (EF = 0.8 lb/ton lime; EF = 1.0 lb/ton charge carbon)

Ton(i) = hourly throughput of material i, load-in to bins, in tons/hr;
 (Ton = 30 tph lime and 30 tph charge carbon)

CE(i) = overall control efficiency for each material i, bin vent filters;
 (CE = 0.99 for lime; CE = 0.99 for charge carbon)

Transfer on weight belt:

EF(i) = emission factor for each material i, conveyor and transfer, in lb/ton;
 (EF = 0.8 lb/ton lime; EF = 1.0 lb/ton charge carbon)

Ton(i) = hourly throughput of material i, conveyor and transfer, in tons/hr;
 (Ton = 30 tph lime and 30 tph charge carbon)

CE(i) = overall control efficiency for each material i, baghouse and localized hooding;
 (CE = 0.94 for lime; CE = 0.94 for charge carbon)

Load-in to hopper/trucks:

EF(i) = emission factor for each material i, load-in to hopper/truck, in lb/ton;
 (EF = 0.22 lb/ton lime; EF = 0.40 lb/ton charge carbon)

Ton(i) = hourly throughput of material i, load-in to hopper/truck, in tons/hr;
 (Ton = 30 tph lime and 30 tph charge carbon)

CE(i) = overall control efficiency for each material i, baghouse and localized hooding;
 (CE = 0.94 for lime; CE = 0.94 for charge carbon)

Load-in to charge bucket:

EF(i) = emission factor for each material i, load-in to charge bucket, in lb/ton;
(EF = 0.22 lb/ton lime; EF = 0.40 lb/ton charge carbon)

Ton(i) = hourly throughput of material i, load-in to charge bucket, in tons/hr;
(Ton = 30 tph lime and 30 tph charge carbon)

CE(i) = overall control efficiency for each material i, baghouse and canopy enclosure;
(CE = 0.99 for lime; CE = 0.99 for charge carbon)

For ton/yr (tpy):

$$E(\text{tpy}) = \frac{k}{2000} \sum_i^n EF(i) \times \text{Ton}(i) \times (1 - CE(i))$$

where:

E(tpy) = for each particle size (PM₁₀ and PM_{2.5}) of particulate matter, the summation of particulate emissions from all materials processed at all storage and material handling emission points, in tpy;

k = particle size multiplier;
(PM₁₀, k = 0.35/0.74; PM_{2.5}, k = 0.053/0.74)

n = total number of materials;

Load-in at bins:

EF(i) = emission factor for each material i, load-in to bins, in lb/ton;
(EF = 0.8 lb/ton lime; EF = 1.0 lb/ton charge carbon)

Ton(i) = annual throughput of material i, load-in to bins, in tons/yr;
(Ton = 36,500 tpy lime and 14,600 tpy charge carbon)

CE(i) = overall control efficiency for each material i, bin vent filters;
(CE = 0.99 for lime; CE = 0.99 for charge carbon)

Transfer on weight belt:

EF(i) = emission factor for each material i, conveyor and transfer, in lb/ton;
(EF = 0.8 lb/ton lime; EF = 1.0 lb/ton charge carbon)

Ton(i) = annual throughput of material i, conveyor and transfer, in tons/yr;
(Ton = 36,500 tpy lime and 14,600 tpy charge carbon)

CE(i) = overall control efficiency for each material i, baghouse and localized hooding;
(CE = 0.94 for lime; CE = 0.94 for charge carbon)

Load-in at hopper/truck:

EF(i) = emission factor for each material i, load-in to hopper/truck, in lb/ton;
(EF = 0.22 lb/ton lime; EF = 0.40 lb/ton charge carbon)

Ton(i) = annual throughput of material i, load-in to hopper/truck, in tons/yr;
(Ton = 36,500 tpy lime and 14,600 tpy charge carbon)

CE(i) = overall control efficiency for each material i, baghouse and localized hooding;
(CE = 0.94 for lime; CE = 0.94 for charge carbon)

Load-in to charge bucket:

EF(i) = emission factor for each material i, load-in to charge bucket, in lb/ton;
(EF = 0.22 lb/ton lime; EF = 0.40 lb/ton charge carbon)

Ton(i) = annual throughput of material i, load-in to charge bucket, in tons/yr;
(Ton = 36,500 tpy lime and 14,600 tpy charge carbon)

CE(i) = overall control efficiency for each material i, baghouse and canopy enclosure.
(CE = 0.99 for lime; CE = 0.99 for charge carbon)

g) Miscellaneous Requirements

- (1) No additional monitoring, record keeping and/or reporting requirements are necessary for the use of the EAF melt shop baghouse (No. EAFBH01) by the permittee for this emissions unit. The EAF melt shop baghouse (No. EAFBH01) will be used by this emissions unit as well as emissions unit P913, #1 EAF, which has monitoring, record keeping and reporting requirements for the baghouse.