

Synthetic Minor Determination and/or Netting Determination

Permit To Install 13-04503

A. Source Description

The Ford Cleveland Casting Plant (Ford CCP) has proposed the replacement of their existing cupolas nos. 1, 2, 3 and 7 and their supporting charging, tapping and runner systems by two new cupola systems. The two new cupolas are named the East and West Cupolas. Each cupola system consists of the following:

1. A cupola controlled by a combustion device to capture and control organic compounds and carbon monoxide followed by a dedicated baghouse to control PE/PM₁₀ and Pb emissions - Emissions Units (EUs) P420 and P423;
2. A charge preparation system controlled by (G-Unit) baghouse - EUs P421 and P424; and
3. A tapping and runner system also controlled by G-Unit baghouse - EUs P422 and P425.

The last emissions unit - P426 - is a common central runners system initially designed to be routed to the the G-Unit baghouse (about 80% of total flow) and to the existing D-Unit baghouse (the remaining 20% of total flow) based on current engineering plans. The portion of the D-unit baghouse used (0 – 50% of the total flow from P426) will be determined in the final design phase and result in similar emissions since the grain loading (0.005 gr/cf) from both D-Unit and G-Unit baghouses are the same. This EU will enable hot iron from any of the two new cupolas to be conveyed to any of the operating holding furnaces and mold lines.

Upon completion of installation of the two new cupolas, their charge preparation and iron runner systems and their ancillaries, the two cupolas systems will ramp up production while simultaneously ramping down the present cupola systems (cupolas Nos. 1, 2, 3 and 7) and shutting them down permanently.

B. Facility Emissions and Attainment Status

Facility Emissions:

Ford CCP is classified as a major stationary source under the federal Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NNSR) regulations. Therefore, we have reviewed the Cupola Replacement Project to determine whether or not the project emissions exceed the respective significant rates for the regulated NSR pollutants and if, the significant rates are exceeded, whether or not there has been a net emissions increase for those pollutants at the Ford CCP facility.

Table A: Regulated NSR Pollutant Emission Rate data for All the New EUs Associated with the Cupola Replacement Project Compared to the PSD Significant Emission Rates:

Pollutant-->	CO	NO _x	SO ₂	PE/TSP	PM ₁₀	VOC	Pb
Potential Emission Rates from New EUs, TPY	120.00	132.00	105.00	78.03	78.03	6.0	1.18
PSD NNSR Significant Emission Rate, TPY	100	40	40	25	15	40	0.6
PSD/NNSR Significant Net Emissions Review Required? (Yes/No)	YES	YES	YES	YES	YES	No	YES

Table A shows that the emissions of CO, NO_x, SO₂, PE/TSP, PM₁₀, and Pb from the new EUs exceed their respective PSD significant rates and that VOC emission rates were well below the NNSR significant rates.

A net emission increase review for CO, NO_x, SO₂, PE/PM₁₀, and Pb was conducted over the contemporaneous 5-year period. Emission increases and decreases preceding the planned July 2005 commencement of construction shows that the contemporaneous net emission increase is -2537.87 TPY CO, 27.12 TPY NO_x, -113.08 TPY SO₂, -170.87 TPY PM, -113.38 TPY PM₁₀, -13.02 TPY Pb - which is below the PSD/NNSR significant rates for each pollutant. Therefore, the Cupola Replacement Project does not trigger a PSD/NNSR review for CO, NO_x, SO₂, PE/PM₁₀, and Pb at the Ford CCP facility.

CONTEMPORANEOUS CO EMISSIONS INCREASES AND DECREASES (Only CO emitters cited below)					
Emission Unit	Change	Date of Change	CO Emission Decrease TPY	CO Emission Increase TPY	Contemporaneous Net CO Emission Increase TPY
New East Cupola	Startup	Sept. 2006		60.00	
New West Cupola	Startup	Jan. 2007		60.00	
2006/2007 - P907 Cupola 7	Shutdown	July '06 to April'07	-267.77		
2006/2007 - P903 Cupola 3	Shutdown	July '06 to April'07	-951.79		
2006/2007 - P902 Cupola 2	Shutdown	July '06 to April'07	-497.08		
2006/2007 - P901-Cupola 1	Shutdown	July '06 to April'07	-929.40		
2006/2007 - B011 (Hot Blast 3)	Shutdown	July '06 to April'07	-3.11		
2006/2007 - B010 (Hot Blast 2)	Shutdown	July '06 to April'07	-2.48		
2006/2007 - B008 (Hot Blast 1)	Shutdown	July '06 to April'07	-2.76		
2006/2007 - B007 (Hot Blast 7)	Shutdown	July '06 to April'07	-1.57		
2005 - No Change					
2004 - No Change					
2003 - CACP Process EUs -	Shutdown	December 2003	-7.36		
2002 - No Change					
2001 - P107 - Core Line 8	Shutdown	January 2001	-1.91		
2000 - CACP Process EUs	Startup	January 2000		7.36	
Contemporary Review period June '00- April -07 TOTAL			-2665.23	127.36	-2537.87
PSD NNSR Significant Emission Rate, TPY					100
The net CO emission increase is below the PSD/NNSR significant rate of 100 TPY. Therefore, no PSD/NNSR review is required.					

CONTEMPORANEOUS Pb EMISSIONS INCREASES AND DECREASES (Only Pb emitters cited below)					
Emission Unit	Change	Date of Change	Pb Emission Decrease TPY	Pb Emission Increase TPY	Contemporaneous Net Pb Emission Increase TPY
New East Cupola	Startup	Sept. 2006		0.23	
New East Cupola Charge Prep	Startup	Sept. 2006		0.05	
New East Cupola Tapping & Runner	Startup	Sept. 2006		0.13	
New West Cupola	Startup	Jan. 2007		0.23	

New West Cupola Charge Prep	Startup	Jan. 2007		0.05	
New West Cupola Tapping & Runner	Startup	Jan. 2007		0.13	
New Central Iron Runners	Startup	Sept. 2006		0.36	
2006/2007 - P907 Cupola 7	Shutdown	July '06 to April'07	-1.96		
2006/2007 - P903 Cupola 3	Shutdown	July '06 to April'07	-4.28		
2006/2007 - P902 Cupola 2	Shutdown	July '06 to April'07	-3.07		
2006/2007 - P901-Cupola 1	Shutdown	July '06 to April'07	-3.96		
2006/2007 - F005 Cupola 7 Holding Furnace	Shutdown	July '06 to April'07	-0.82		
2006/2007 - B011 Hot Blast 3	Shutdown	July '06 to April'07	-1.85E-05		
2006/2007 - B010 Hot Blast 2	Shutdown	July '06 to April'07	-1.48E-05		
2006/2007 - B008 Hot Blast 1	Shutdown	July '06 to April'07	-1.64E-05		
2006/2007 - B007 Hot Blast 7	Shutdown	July '06 to April'07	-9.36E-06		
2005 - No Change					
2004 - No Change					
2003 - CACP Process EUs -	Shutdown	December 2003	-4.52E-05		
2002 - No Change					
2001 - P107 - Core Line 8	Shutdown	January 2001	-1.13E-05		
2001 - P030 Cleaning Line 4	Shutdown	January 2001	-0.037		
2000 - CACP Process EUs	Startup	January 2000		4.52E-05	
2000 - P097 Cupola 5 Holding Furnace	Shutdown	October 2000	-0.084		
Contemporary Review period June '00- April -07 TOTAL			-14.21	1.19	-13.02
PSD NNSR Significant Emission Rate, TPY					0.6
The net Pb emission increase is below the PSD/NNSR significant rate of 0.6 TPY. Therefore, no PSD/NNSR review is required.					

CONTEMPORANEOUS PM ₁₀ EMISSIONS INCREASES AND DECREASES (Only PM ₁₀ emitters cited below)					
Emission Unit	Change	Date of Change	PM ₁₀ Emission Decrease TPY	PM ₁₀ Emission Increase TPY	Contemporaneous Net PM ₁₀ Emission Increase TPY
New East Cupola	Startup	Sept. 2006		12.20	
New East Cupola Charge Prep Stack	Startup	Sept. 2006		2.82	
New East Cupola Charge Prep Fugitive	Startup	Sept. 2006		1.21	
New East Cupola Tapping & Runner Stack	Startup	Sept. 2006		6.57	
New East Cupola Tapping & Runner Fugitive	Startup	Sept. 2006		2.81	
New West Cupola	Startup	Jan. 2007		12.20	
New West Cupola Charge Prep Stack	Startup	Jan. 2007		2.82	

New West Cupola Charge Prep Fugitive	Startup	Jan. 2007		1.21	
New West Cupola Tapping & Runner Stack	Startup	Jan. 2007		6.57	
New West Cupola Tapping & Runner Fugitive	Startup	Jan. 2007		2.81	
New Central Iron Runners Stack	Startup	Sept. 2006		18.77	
New Central Iron Runners Fugitive	Startup	Sept. 2006		8.04	
2006/2007 - P907 Cupola 7 Stack	Shutdown	July '06 to April'07	-20.31		
2006/2007 - P907 Cupola 7 Tapping/Runner/Charge Prep Fugitive	Shutdown	July '06 to April'07	-2.51		
2006/2007 - P903 Cupola 3 Stack	Shutdown	July '06 to April'07	-46.64		
2006/2007 - P903 Cupola 3 Tapping/Runner/Charge Prep Fugitive	Shutdown	July '06 to April'07	-9.93		
2006/2007 - P902 Cupola 2 Stack	Shutdown	July '06 to April'07	-33.38		
2006/2007 - P902 Cupola 2 Tapping/Runner/Charge Prep Fugitive	Shutdown	July '06 to April'07	-7.11		
2006/2007 - P901-Cupola 1 Stack	Shutdown	July '06 to April'07	-42.75		
2006/2007 - P901-Cupola 1 Tapping/Runner/Charge Prep Fugitive	Shutdown	July '06 to April'07	-8.85		
2006/2007 - F005 Cupola 7 Holding Furnace	Shutdown	July '06 to April'07	-5.18		
2006/2007 - B011 Hot Blast 3	Shutdown	July '06 to April'07	-0.28		
2006/2007 - B010 Hot Blast 2	Shutdown	July '06 to April'07	-0.22		
2006/2007 - B008 Hot Blast 1	Shutdown	July '06 to April'07	-0.25		
2006/2007 - B007 Hot Blast 7	Shutdown	July '06 to April'07	-0.14		
2005 - No Change					
2004 - No Change					
2003 - CACP Process EUs - '00	Shutdown	December 2003	-22.55		
2003 - CACP Process EUs - '99	Shutdown	December 2003	-19.63		
2002 - No Change					
2001 - P107 - Core Line 8	Shutdown	January 2001	-10.01		
2001 - P030 Cleaning Line 4	Shutdown	January 2001	-3.0		
2000 - CACP Process EUs	Startup	January 2000		22.55	
2000 - P097 Cupola 5 Holding Furnace	Shutdown	October 2000	-0.83		
2000-CACP Process EUs 1999	Startup	1999-2000		19.63	
Contemporary Review period June '00- April -07 TOTAL			-233.59	120.21	-113.38
PSD NNSR Significant Emission Rate, TPY					15

The net PM₁₀ emission increase is below the PSD/NNSR significant rate of 15 TPY. Therefore, no PSD/NNSR review is required.

CONTEMPORANEOUS PM EMISSIONS INCREASES AND DECREASES (Only PM emitters cited below)					
Emission Unit	Change	Date of Change	PM Emission Decrease TPY	PM Emission Increase TPY	Contemporaneous Net PM Emission Increase TPY
New East Cupola	Startup	Sept. 2006		12.2	
New East Cupola Charge Prep Stack	Startup	Sept. 2006		2.82	
New East Cupola Charge Prep Fugitive	Startup	Sept. 2006		1.21	
New East Cupola Tapping & Runner Stack	Startup	Sept. 2006		6.57	
New East Cupola Tapping & Runner Fugitive	Startup	Sept. 2006		2.81	
New West Cupola	Startup	Jan. 2007		12.2	
New West Cupola Charge Prep Stack	Startup	Jan. 2007		2.82	
New West Cupola Charge Prep Fugitive	Startup	Jan. 2007		1.21	
New West Cupola Tapping & Runner Stack	Startup	Jan. 2007		6.57	
New West Cupola Tapping & Runner Fugitive	Startup	Jan. 2007		2.81	
New Central Iron Runners Stack	Startup	Sept. 2006		18.77	
New Central Iron Runners Fugitive	Startup	Sept. 2006		8.04	
2006/2007 - P907 Cupola 7 Stack	Shutdown	July '06 to April'07	-25.51		
2006/2007 - P907 Cupola 7 Tapping/Runner/Charge Prep Fugitive	Shutdown	July '06 to April'07	-2.51		
2006/2007 - P903 Cupola 3 Stack	Shutdown	July '06 to April'07	-58.56		
2006/2007 - P903 Cupola 3 Tapping/Runner/Charge Prep Fugitive	Shutdown	July '06 to April'07	-12.25		
2006/2007 - P902 Cupola 2 Stack	Shutdown	July '06 to April'07	-41.93		
2006/2007 - P902 Cupola 2 Tapping/Runner/Charge Prep Fugitive	Shutdown	July '06 to April'07	-8.77		
2006/2007 - P901-Cupola 1 Stack	Shutdown	July '06 to April'07	-53.99		
2006/2007 - P901-Cupola 1 Tapping/Runners/Charge Prep Fugitive	Shutdown	July '06 to April'07	-10.91		

2006/2007 - F005 Cupola 7 Holding Furnace	Shutdown	July '06 to April'07	-8.24		
2006/2007 - B011 Hot Blast 3	Shutdown	July '06 to April'07	-0.28		
2006/2007 - B010 Hot Blast 2	Shutdown	July '06 to April'07	-0.22		
2006/2007 - B008 Hot Blast 1	Shutdown	July '06 to April'07	-0.25		
2006/2007 - B007 Hot Blast 7	Shutdown	July '06 to April'07	-0.14		
2005 - No Change					
2004 - No Change					
2003 - CACP Process EUs - '00	Shutdown	December 2003	-22.55		
2003 - CACP Process EUs - '99	Shutdown	December 2003	-19.63		
2002 - No Change					
2001 - P107 - Core Line 8	Shutdown	January 2001	-14.76		
2001 - P030 Cleaning Line 4	Shutdown	January 2001	-9.71		
2000 - CACP Process EUs	Startup	January 2000		22.55	
2000 - P097 Cupola 5 Holding Furnace	Shutdown	October 2000	-0.84		
2000-CACP Process EUs 1999	Startup	1999-2000		19.63	
Contemporary Review period June '00- April -07 TOTAL			-291.07	120.21	-170.87
PSD NNSR Significant Emission Rate, TPY					25
The net PM emission increase is below the PSD/NNSR significant rate of 25 TPY. Therefore, no PSD/NNSR review is required.					

CONTEMPORANEOUS SO ₂ EMISSIONS INCREASES AND DECREASES (Only SO ₂ emitters cited below)					
Emission Unit	Change	Date of Change	SO ₂ Emission Decrease TPY	SO ₂ Emission Increase TPY	Contemporaneous Net SO ₂ Emission Increase TPY
New East Cupola	Startup	Sept. 2006		52.50	
New East Cupola Charge Prep	Startup	Sept. 2006			
New East Cupola Tapping & Runner	Startup	Sept. 2006			
New West Cupola	Startup	Jan. 2007		52.50	
New West Cupola Charge Prep	Startup	Jan. 2007			
New West Cupola Tapping & Runner	Startup	Jan. 2007			
New Central Iron Runners	Startup	Sept. 2006			
2006/2007 - P907 Cupola 7	Shutdown	July '06 to April'07	-22.08		
2006/2007 - P903 Cupola 3	Shutdown	July '06 to April'07	-78.45		
2006/2007 - P902 Cupola 2	Shutdown	July '06 to April'07	-40.88		
2006/2007 - P901-Cupola 1	Shutdown	July '06 to April'07	-76.59		
2006/2007 - F005 Cupola 7 Holding Furnace	Shutdown	July '06 to April'07			
2006/2007 - B011 Hot Blast 3	Shutdown	July '06 to April'07	-0.02		
2006/2007 - B010 Hot Blast 2	Shutdown	July '06 to April'07	-0.02		
2006/2007 - B008 Hot Blast 1	Shutdown	July '06 to April'07	-0.02		
2006/2007 - B007 Hot Blast 7	Shutdown	July '06 to April'07	-0.01		

2005 - No Change					
2004 - No Change					
2003 - CACP Process EUs - '00	Shutdown	December 2003	-0.13		
2003 - CACP Process EUs - '99	Shutdown	December 2003			
2002 - No Change					
2001 - P107 - Core Line 8	Shutdown	January 2001	-0.01		
2001 - P030 Cleaning Line 4	Shutdown	January 2001			
2000 - CACP Process EUs	Startup	January 2000		0.13	
2000 - P097 Cupola 5 Holding Furnace	Shutdown	October 2000			
2000-CACP Process EUs 1999	Startup	1999-2000			
Contemporary Review period June '00- April '07 TOTAL			-218.21	105.13	-113.08
PSD NNSR Significant Emission Rate, TPY					40
The net SO ₂ emission increase is below the PSD/NNSR significant rate of 40 TPY. Therefore, no PSD/NNSR review is required.					

CONTEMPORANEOUS NO _x EMISSIONS INCREASES AND DECREASES (Only NO _x emitters cited below)					
Emission Unit	Change	Date of Change	NO _x Emission Decrease TPY	NO _x Emission Increase TPY	Contemporaneous Net NO _x Emission Increase TPY
New East Cupola	Startup	Sept. 2006		66.00	
New East Cupola Charge Prep	Startup	Sept. 2006			
New East Cupola Tapping & Runner	Startup	Sept. 2006			
New West Cupola	Startup	Jan. 2007		66.00	
New West Cupola Charge Prep	Startup	Jan. 2007			
New West Cupola Tapping & Runner	Startup	Jan. 2007			
New Central Iron Runners	Startup	Sept. 2006			
2006/2007 - P907 Cupola 7	Shutdown	July '06 to April'07	-9.20		
2006/2007 - P903 Cupola 3	Shutdown	July '06 to April'07	-32.67		
2006/2007 - P902 Cupola 2	Shutdown	July '06 to April'07	-17.03		
2006/2007 - P901-Cupola 1	Shutdown	July '06 to April'07	-31.89		
2006/2007 - F005 Cupola 7 Holding Furnace	Shutdown	July '06 to April'07			
2006/2007 - B011 Hot Blast 3	Shutdown	July '06 to April'07	-3.71		
2006/2007 - B010 Hot Blast 2	Shutdown	July '06 to April'07	-2.96		
2006/2007 - B008 Hot Blast 1	Shutdown	July '06 to April'07	-3.29		
2006/2007 - B007 Hot Blast 7	Shutdown	July '06 to April'07	-1.87		
2005 - No Change					
2004 - No Change					
2003 - CACP Process EUs - '00	Shutdown	December 2003	-29.43		
2003 - CACP Process EUs - '99	Shutdown	December 2003			
2002 - No Change					
2001 - P107 - Core Line 8	Shutdown	January 2001	-2.27		

2001 - P030 Cleaning Line 4	Shutdown	January 2001			
2000 - CACP Process EUs	Startup	January 2000		29.43	
2000 - P097 Cupola 5 Holding Furnace	Shutdown	October 2000			
2000-CACP Process EUs 1999	Startup	1999-2000			
Contemporary Review period June '00- April -07			-134.31	161.43	27.12
TOTAL					
PSD NNSR Significant Emission Rate, TPY					40
The net NOx emission increase is below the PSD/NNSR significant rate of 40 TPY. Therefore, no PSD/NNSR review is required.					

Restriction of Iron Production in the Cupolas:

Each cupola has a maximum production capacity of 100 tons hot iron per hour. At this rate, each cupola is capable of producing 876,000 tons iron per year. However, Ford CCP is voluntarily restricting the iron production of both cupolas to a combined 600,000 tons iron per year based on a rolling, 12-month summation of the iron produced. As a result, the tons per year allowable SO₂, NO_x, CO and OC or VOC have been calculated at a combined 600,000 tons iron per year for both cupolas. However, the allowable PE/PM₁₀, Total Metal HAPs and Pb have been calculated at 8760 hours per year based on the grain loading of the baghouse exhaust.

Attainment Status:

Cuyahoga County is attainment or unclassifiable for the PM₁₀, SO₂, CO, lead, NO_x, 1-hour ozone and moderate non-attainment for the 8-hour Ozone National Ambient Air Quality Standards (NAAQS). Emissions from the new project EUs were reviewed for compliance with the Ohio EPA acceptable incremental impacts in Table 3 of Ohio EPA Engineering Guide #69. Necessary SCREEN3 dispersion modeling was performed. These results show that the ambient concentrations resulting from the new emissions units are less than their respective Ohio EPA ambient acceptable incremental impacts.

C. Source Emissions

Emissions from the cupolas and fugitive emissions from the building housing this project are subject to Subpart EEEEE of 40 CFR Part 63 - the Iron and Steel Foundry MACT. The foundry qualifies as an existing foundry. The MACT established work practice standards for metal scrap procurement. Based on 8760 hours of operation, the new units would have a potential to emit that would trigger PSD and Non-attainment NSR. However, the Netting and Synthetic Minor restrictions noted above keep emissions below thresholds.

D. Conclusion

Because these project emissions could be netted out without a significant net increase in CO, NO_x, SO₂, PE/PM₁₀, and Pb emissions, this project will not be subject to PSD or NNSR requirements even though there was a significant emission increase of these regulated NSR pollutants. The inclusion of the Synthetic Minor restriction for both cupolas of 600,000 tons iron produced per rolling 12-month period restricts emissions below the PSD and Non-attainment NSR applicability.

A review and close scrutiny of project emissions, control devices, and air quality impacts indicates that the Cupola Replacement Project will comply with all applicable state and federal regulations and will result in no adverse ambient air quality impacts. Moreover, through a carefully pre-planned methodical ramping up of the iron production of the new cupolas in concert with the simultaneous ramping down of the iron production of the existing cupolas, Ford CCP ensures that the project emissions will be maintained below the significant rate for net NO_x, PE/TSP, PM₁₀, SO₂, CO, and Pb.



State of Ohio Environmental Protection Agency

**RE: DRAFT PERMIT TO INSTALL
CUYAHOGA COUNTY**

CERTIFIED MAIL

Street Address:

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

Mailing Address:

Lazarus Gov.
Center

**Application No: 13-04503
Fac ID: 1318120180**

DATE: 4/21/2005

**Ford Motor Company - Cleveland Casting
Batuk Modi
5600 Henry Ford Boulevard
Brook Park, OH 44142**

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$8750** will be due. Please do not submit any payment now.

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

Sincerely,

Michael W. Ahern

Michael W. Ahern, Manager
Permit Issuance and Data Management Section
Division of Air Pollution Control

CC: USEPA

CLAA

PA

PUBLIC NOTICE PUBLIC HEARING
 OHIO ENVIRONMENTAL PROTECTION AGENCY
 ISSUANCE OF DRAFT PERMIT TO INSTALL TO
 FORD MOTOR COMPANY CLEVELAND CASTING PLANT

Public notice is hereby given that the Ohio Environmental Protection Agency (EPA) has issued, on April 21, 2005, a draft action of air Permit To Install (PTI) application number 13-04503 to Ford Motor Company - Cleveland Casting Plant, in Brook Park, Ohio. This draft action proposes to allow the installation of two new cupola furnaces and supporting charging, tapping and runner systems at the facility located at 5600 Henry Ford Boulevard, Brook Park, Ohio.

This project also includes the shutdown of the existing cupola furnace systems, therefore net reductions in many pollutants are expected. The permit contains the necessary federally enforceable restrictions for this project to remain below the major modification thresholds for both Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review regulations (Emission Offset Policy). The proposed permit allowable criteria pollutant air emission rates for the new sources and the net emissions increases or decreases are as follows, in tons/year:

<u>Pollutant</u>	<u>Allowable</u>	<u>Net Increase/Decrease</u>
Particulate	78.03	-170.87
PM ₁₀	78.03	-113.38
Sulfur Dioxide	105.0	-113.08
Nitrogen Oxides	132.0	27.12
Carbon Monoxide	120.0	-2537.87
Organic Compounds	6.0	NA
Lead	1.21	-13.02

A public hearing and information session on the draft air permit is scheduled for Thursday, May 26, 2005, at the Cuyahoga County Public Library - Brook Park Branch, 6155 Engle Road, Brook Park. The public information session will commence at 6:30 p.m. and the hearing will follow immediately 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 must be received by the close of the business day on May 31, 2005. Comments received after this date will not be considered to be a part of the official record. Written comments may be submitted at the hearing or sent to: David Hearne, Cleveland Department of Public Health, Division of Air Quality, 1925 St. Clair Avenue, Cleveland, OH 44114.

Copies of the draft permit application and technical support information may be reviewed and/or copies made by first calling to make an appointment at the Cleveland Division of Air Quality, located at the above address, telephone number 216-664-2178.



**Permit To Install
Terms and Conditions**

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

DRAFT PERMIT TO INSTALL 13-04503

Application Number: 13-04503
Facility ID: 1318120180
Permit Fee: **To be entered upon final issuance**
Name of Facility: Ford Motor Company - Cleveland Casting
Person to Contact: Batuk Modi
Address: 5600 Henry Ford Boulevard
Brook Park, OH 44142

Location of proposed air contaminant source(s) [emissions unit(s)]:
**5600 Henry Ford Boulevard
Brook Park, Ohio**

Description of proposed emissions unit(s):
Replacement of existing cupola systems by two (2) new East and West cupola systems to meet MACT standards.

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

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

1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.9 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
- iv. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

2. Scheduled Maintenance/Malfunction Reporting

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

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

3. Risk Management Plans

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

4. Title IV Provisions

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

5. Severability Clause

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

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6. General Requirements

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

7. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit To Install fees within 30 days after the issuance of this Permit To Install.

8. Federal and State Enforceability

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

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

9. Compliance Requirements

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

10. Permit To Operate Application

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete

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

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

11. Best Available Technology

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

12. Air Pollution Nuisance

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

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

1. Compliance Requirements

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

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Permit Transfers

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

4. Termination of Permit To Install

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

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be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

5. Construction of New Sources(s)

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

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

6. Public Disclosure

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

7. Applicability

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

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emissions unit(s).

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8. Construction Compliance Certification

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

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

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

C. Permit To Install Summary of Allowable Emissions

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
PE or PM ₁₀	61.95
SO ₂	105.0
NO _x	132.0
CO	120.0
OC or VOC*	6.0
Pb**	1.21
Fugitive Emissions	
PE or PM ₁₀	16.08

*VOHAPs are included in OC or VOC

**Pb is included in PE and/or PM₁₀

PTI Allowables for PE/PM₁₀, Total Metal HAPs and Pb have been calculated at 8760 hours per year.

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PTI Allowables for SO₂, NO_x, CO and OC or VOC have been limited to 600,000 tons iron per year combined for both cupolas.

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Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

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

1. The following emissions units contained in this permit are subject to MACT Subpart EEEEE: P420, P423 and all fugitive emissions from foundry operations. The complete MACT requirements have been established in the Title V permit for this facility which will encompass these emissions units upon reissuance. The applicable sections of the MACT Subpart EEEEE have been cited in the appropriate sections for the emissions units subject to this rule.
2. All of the emissions units located at this facility are subject to the facility-wide opacity limitation for fugitive emissions established in MACT Subpart EEEEE, Section 63.7690(a)(7). However, emissions units at this facility are either subject to a fugitive opacity BAT limitation or the fugitive opacity limitation from OAC rule 3745-17-07(B), both of which are more stringent than the limitation from MACT Subpart EEEEE.
3. The following emissions units will be permanently shutdown by no later than April 22, 2007 unless the new cupolas are not fully functional and Ford obtains U.S. EPA approval on an extension of the MACT compliance date. Ford would then be able to operate under the stipulated ramp-up/ramp-down scenario assuring that project emissions are maintained below the criteria pollutant significant rates, by limiting total iron production levels, as described above until the new cupolas are fully functional. These shutdowns are necessary to ensure federal enforceability of the emission reductions claimed for this Netting permit: existing cupolas P901, P902, P903, and P907; associated hot blasts B007, B008, B010, and B011; and one holding furnace F005. At no time during the start up/transition period shall the emissions of the units involved in the project netting exceed the net increase levels specified. The permittee shall maintain the records necessary to determine these emissions levels.
4. To ensure enforceability during the transition period of operation after issuance of this permit, the permittee shall not exceed the combined limit of 600,000 tons of iron per rolling, 12-month period. This combined limit shall be met for all cupolas (cupolas 1, 2, 3, 7, P420, and P423) based on the combined records for the existing cupolas plus the monthly records for emissions units P420 and P423. The facility has existing records to demonstrate that the existing cupolas currently are below the combined limit of 600,000 tons per year of iron.
5. The permittee shall collect and record the following information each month for emissions units P420, P423, and existing cupolas 1, 2, 3, and 7 during the transition from operating existing cupolas to the new cupolas:
 - a. the total weight of iron produced, in tons, for each month for emissions units P420, P423, and existing cupolas 1, 2, 3, and 7;
 - b. during the transition period of operation of emissions unit P420 and P423, while existing cupolas 1, 2, 3, and 7 are ramping down production, the rolling, 12-month summation of the total weight of iron produced for emissions units P420, P423, and existing cupolas 1, 2, 3, and 7;

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This condition shall expire after the existing cupolas 1, 2, 3, and 7 have been shut down permanently.

6. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) that identify all exceedances of the rolling, 12-month production rate limitation for P420, P423, and existing cupolas 1, 2, 3, and 7 combined.

This condition shall expire after the existing cupolas 1, 2, 3, and 7 have been shut down permanently.

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

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
<p>P420 - East Cupola (Kuttner) 100 Ton iron/hr for production of gray and nodular iron. A combustion chamber oxidizer will control emissions of carbon monoxide (CO), volatile organic compounds (VOC) and volatile organic hazardous air pollutants (VOHAPs) and a 65,000 dscfm fabric filter will control total suspended particulate matter (TSP/PM/PE), particulate matter less than 10 microns (PM₁₀) and metal hazardous air pollutants (metal HAPs).</p>	<p>OAC rule 3745-31-05(A)(3)</p>	<p>Particulate emissions (PE) and particulate matter emissions less than 10 microns in diameter (PM₁₀ emissions) from the baghouse stack serving this emissions unit shall not exceed the following:</p> <p>0.005 gr/dscf of TSP, PE or PM₁₀ or comply with total metal HAP gr/dscf limit below per MACT.</p> <p>PE and PM₁₀ emissions from the baghouse stack serving this emissions unit shall not exceed 2.79 lbs/hour and 12.2 tons per year (TPY).</p> <p>Lead emissions from the baghouse stack serving this emissions unit shall not exceed 0.054 lb/hr and 0.24 TPY.</p>

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Visible PE emissions from any stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average at any time.

Visible emissions of fugitive dust shall not exceed 10% opacity as a 3-minute average from any non-stack egress point at this emissions unit.

The permittee shall employ best available control measures to minimize or eliminate visible emissions of fugitive dust. See A.I.2.a below.

Sulfur dioxide emissions from this emissions unit shall not exceed 35.0 lbs/hr.

Nitrogen oxides emissions from this emissions unit shall not exceed 44.0 lbs/hr.

Carbon monoxide emissions from this emissions unit shall not exceed 40.0 lbs/hr.

Organic and volatile organic compound emissions from this emissions unit shall not exceed 2.0 lbs/hr.

See section A.I.2.b below.

The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-08(B) and 3745-31-05(C) and 40 CFR Part 63, Subpart EEEEE.

OAC rule 3745-17-07(A)(1)

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

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	OAC rule 3745-17-07(B)(1)	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-08(B)	The control requirements specified or established by this rule are equivalent to or less stringent than the control requirements established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE limitation specified in this rule is less stringent than the particulate emission limitations established pursuant to 40 CFR Part 63, Subpart EEEEE and OAC rule 3745-31-05(A)(3).
	OAC rule 3745-18-06(E)(1)	The sulfur dioxide emission limitation specified by this rule is less stringent than the sulfur dioxide emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rules 3745-21-08(B)	See A.I.2.c below.
	OAC rule 3745-31-05(C) Synthetic Minor to avoid PSD and Nonattainment NSR	105.0 tons SO ₂ /rolling, 12-months; 132.0 tons NO _x /rolling, 12-months; 120.0 tons CO/rolling, 12-months; and 6.0 tons OC/rolling, 12-months; The above annual limits are based on a rolling, 12-month summation of the combined iron produced for P420 and P423. See A.II.1 below.
	40 CFR Part 63, Subpart EEEEE	See 40 CFR Part 63.7690 0.0005 gr/dscf of total metal HAP or comply with PE gr/dscf limit above per MACT. Volatile organic hazardous air pollutants (VOHAPs) from this emissions unit shall not exceed 20 parts per million by volume (ppmv) corrected to 10 percent oxygen. See A.I.2.b below.

2. Additional Terms and Conditions

- 2.a** Best available control measures consisting of sufficient air flow pulled into the top of the cupola to achieve 100% capture of fugitive emissions. The permittee shall operate and maintain a system for the capture and collection of particulate emissions from this emissions unit that meets the accepted engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in "Industrial Ventilation: A Manual Recommended Practice". The system shall be sufficient to minimize or eliminate visible emissions of fugitive dust from this emissions unit.
- 2.b** CO, VOC and VOHAP gases generated during the operation of this emissions unit shall be combusted such that the 15-minute average combustion zone temperature does not fall below 1,300 degrees Fahrenheit for 0.3 second or greater in a direct-flame afterburner, oxidizer or equivalent device equipped with an indicating pyrometer which is positioned in the working area at the operator's eye level. Periods when the cupola is off blast and for 15 minutes after going on blast from an off blast condition are not included in the 15-minute average.
- 2.c** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3). On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the 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 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.
- 2.d** This emissions unit and its associated air pollution control system(s) shall be maintained regularly in accordance with the Operation, Maintenance, and Monitoring Plan required under 40 CFR 63, Subpart EEEEE in order to minimize air contaminant emissions.

II. Operational Restrictions

1. The maximum annual production for emissions units P420 and P423 combined shall not exceed 600,000 tons iron per year, based on a rolling, 12-month summation of the production rates.
- a. To ensure enforceability during the first twelve months of operation following issuance of this permit, the permittee shall not exceed the iron production levels specified in the following table:

Month	Maximum Allowable Cumulative Combined Iron Production: (Tons Iron)
1	50,000

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1- 2	100,000
1- 3	150,000
1- 4	200,000
1- 5	262,500
1- 6	325,000
1- 7	387,500
1- 8	450,000
1- 9	475,000
1- 10	500,000
1- 11	550,000
1- 12	600,000

- b. After the first 12 calendar months of operation, compliance with the annual production rate limitation of 600,000 tons of iron for P420 and P423 combined shall be based on a rolling, 12-month summation of the production rates.
- 2. The permittee shall employ only natural gas as the primary fuel and LPG/Propane as back-up fuels to fire the burners associated with this emissions unit's oxidizer.
- 3. Operational restriction for the combustion chamber oxidizer serving this emissions unit:

The average combustion temperature within the oxidizer combustion chamber (or equivalent devices), for any 3-hour block of time when the emissions unit is in operation, shall not be less than 1,300 degrees Fahrenheit.
- 4. Low-NOx burner technology (or equivalent or better state-of-the-art technology as approved by Ohio EPA) shall be used in the combustion chamber oxidizer.
- 5. The sulfur content of the coke shall not exceed 1.2% by weight.
- 6. The permittee shall comply with the applicable restrictions required under 40 CFR Part 63, Subpart EEEEE, including the following sections:

63.7690(b)(1)	capture and collection system
63.7690(b)(3)	temperature for oxidizer for cupola
63.7700(a)	scrap material usage
63.7710(a), (b)(1) through (5)	operation and maintenance plan (including bag leak detection system)
63.7720(c)	startup, shutdown, and malfunction plan
63.7733(a), (e), and (f)	site specific operating limits for capture system

- 7. The certification or the scrap management plan requirements of 63.7700 shall be met. Use of scrap that may contain organic contaminants, plastics and HAP metals shall be minimized or eliminated. Accessible lead components and mercury switches shall be removed from any automotive bodies by

suppliers. The permittee shall not charge any radioactive scrap material into the cupola.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for emissions units P420 and P423:
 - a. the weight of iron produced, in tons, for each furnace and the combined total tons per month;
 - b. during the first 12 calendar months of operation, the combined cumulative iron production rate, for each calendar month, in tons;
 - c. beginning after the first 12 calendar months of operation, the rolling, 12-month summation of the combined iron production, in tons.
2. The permittee shall perform weekly checks, when the emissions unit is processing materials and when the weather conditions allow, for any visible emissions of fugitive dust (excluding uncombined water vapor) from the non-stack egress points (e.g., windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be recorded electronically or in an operations log. If visible emissions are observed, the permittee shall also record the following:
 - 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 emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.
3. For each day during which the permittee burns a fuel other than natural gas, LPG or propane the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
4. The permittee shall comply with the applicable monitoring and record keeping requirements required under 40 CFR Part 63, Subpart EEEEE, including the following sections:

63.7740(a)	capture system - maintain a CPMS
63.7740(b)	bag leak detection system for baghouse
63.7740(d)	monitor combustion zone temperature for oxidizer on cupola
63.7741(a)	capture system - install, operate, and maintain CPMS
63.7741(b)	install, operate, and maintain bag leak detection system
63.7741(d)	install and maintain a CPMS to measure and record the combustion zone temperature for the oxidizer
63.7741(f)	operate each CPMS per (f)(1) through (f)(3)

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63.7742	monitor continuously except for monitoring malfunctions, associated repairs and required quality control
63.7743(b)	monitor and record capture system data
63.7743(c)	bag leak detection system - maintain records
63.7743(e)	record data for combustion zone temperature
63.7744(a)	maintain records of continuous compliance with certification requirements for scrap collection
63.7745(a)	records for continuous compliance for capture system and each control device
63.7745(b)	maintain current copy of operation and maintenance plans
63.7752(a) and (c)	required overall records that should be maintained

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) that identify all exceedances of the rolling, 12-month production rate limitation for P420 and P423 combined and, for the first 12 calendar months of operation, all exceedances of the maximum allowable cumulative production levels for P420 and P423 combined.
2. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas, LPG or propane was burned in the oxidizer chamber of this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
3. The permittee shall submit semiannual written reports that:
 - a. identify all days during which any visible emissions of fugitive dust were observed from the non-stack egress points serving this emissions unit; and
 - b. describe any corrective actions taken to eliminate the visible emissions.

These reports shall be submitted to the Cleveland DAQ by February 15 and August 15 of each year and shall cover the previous 6-month calendar period.

4. The permittee shall submit annual reports to the Cleveland DAQ that specify the total particulate and PM10 emissions (for the baghouse stack and combustion stack), nitrogen oxides, carbon monoxide, volatile organic compound, sulfur dioxide, and lead emissions, in tons, from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emissions Report.
5. The permittee shall submit semiannual reports and such other notifications and reports to the Cleveland DAQ as are required pursuant to 40 CFR Part 63, Subpart EEEEE, per the following

sections:

63.7751 (a)	semi-annual compliance report
63.7751 (b)	content of compliance reports
63.7751 (c)	startup, shutdown, malfunction report
63.7751 (d)	Title V monitoring report allowance
63.7746(a)	submission of deviation reports

V. Testing Requirements

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

- a. Emission Limitations:

0.005 gr/dscf of TSP, PE or PM₁₀; or comply with 0.0005 gr/dscf of total metal HAP.

Applicable Compliance Method:

If required, compliance shall be determined by performing a stack test using USEPA methods 1 through 5 of 40 CFR Part 60, Appendix A for particulates. If required, compliance shall be determined by performing a stack test using USEPA methods 1 through 4 and 29 of 40 CFR Part 60, Appendix A for total metal HAPS.

- b. Emission Limitations:

PE and PM₁₀ emissions from the baghouse stack serving this emissions unit shall not exceed 2.79 lbs/hour.

Applicable Compliance Method:

The pound per hour limit was established from the gr/dscf limit in accordance with the following calculations:

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$$0.005 \text{ gr/dscf} \times 65,000 \text{ dscf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr} = 2.79 \text{ lbs PE/PM}_{10} / \text{hr}$$

Provided compliance is demonstrated with the gr/dscf limitation, compliance will also be shown with the pound per hour limit since 65,000 dscf/min represents the maximum flow rate for the baghouse.

Alternatively, compliance may be determined using the actual gr/dscf and air flow rate determined from the most recent stack test which demonstrated compliance with the gr/dscf limitation.

c. Emission Limitations:

Lead emissions from the baghouse stack serving this emissions unit shall not exceed 0.054 lb/hr.

Applicable Compliance Method:

According to USEPA publication "National Emission Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries - Background Information for Proposed Standards" (EPA - 453/R-02-013, December 2002), per data on page 3-14 of the this publication, lead emission rates are based on a lead percentage of 1.92% of the TSP/PE from the cupola baghouse emissions. The lead emission rate is based on the following calculation:

$$0.0192 \times [0.005 \text{ gr/dscf} \times 65,000 \text{ dscf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr}] = 0.054 \text{ lb lead} / \text{hr}$$

Provided compliance is demonstrated with the gr/dscf limitation for particulates, compliance will also be shown with the pound per hour limit since 65,000 dscf/min represents the maximum flow rate for this emissions unit.

Alternatively, compliance may be determined using the actual gr/dscf and air flow rate determined from the most recent stack test which demonstrated compliance with the gr/dscf limitation for particulates.

If required, compliance shall be demonstrated by performing a stack test using USEPA methods 1 through 4 and 12 of 40 CFR Part 60, Appendix A.

d. Emission Limitations:

PE and PM₁₀ emissions from the baghouse stack serving this emissions unit shall not exceed 12.2 TPY.

Lead emissions from the baghouse stack serving this emissions unit shall not exceed 0.24 TPY.

Applicable Compliance Method:

The annual emission limitations were established by multiplying the hourly emission rate by

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8760 hours of operation per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitations shall be assumed provided compliance is maintained with the pounds per hour limitations.

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- e. Emission Limitations:
Visible PE emissions from any stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average at any time.

Visible emissions of fugitive dust shall not exceed 10% opacity as a 3-minute average from any non-stack egress point at this emissions unit.

Applicable Compliance Method:

If required, compliance with the visible emission limitations shall be determined using USEPA Method 9 of 40 CFR Part 60, Appendix A. Compliance with the fugitive dust limitation shall be determined by observing the non-stack egress points (e.g., windows, doors, roof monitors, etc.) serving this emissions unit.

- f. Emission Limitation:
Sulfur dioxide emissions from this emissions unit shall not exceed 35.0 lbs/hr.

Applicable Compliance Method:

The pound per hour emission limit was established using the maximum hourly production rate from the following equation:

$$0.35 \text{ lb SO}_2/\text{ ton iron} \times 100 \text{ tons iron/hr} = 35.0 \text{ lbs SO}_2/\text{hr}$$

The emission factor - 0.35 lb SO₂/ ton iron - was proposed by Ford CCP from a BAT study done by using US EPA's "top down" approach as a manufacturer's estimate.

If required, compliance shall be determined by performing a stack test using USEPA test methods 1 through 4 and 6 of 40 CFR Part 60, Appendix A.

- g. Emission Limitation:
Nitrogen oxides emissions from this emissions unit shall not exceed 44.0 lbs/hr.

Applicable Compliance Method:

The pound per hour emission limit was established using the maximum hourly production rate from the following equation:

$$0.44 \text{ lb NO}_x/\text{ ton iron} \times 100 \text{ tons iron/hr} = 44.0 \text{ lbs NO}_x/\text{hr}$$

The emission factor - 0.44 lb NO_x/ ton iron - was proposed by Ford CCP from a BAT study done by using US EPA's "top down" approach as a manufacturer's estimate.

If required, compliance shall be determined by performing a stack test using USEPA test

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methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A.

- h. Emission Limitation:
Carbon monoxide emissions from this emissions unit shall not exceed 40.0 lbs/hr

Applicable Compliance Method:

The pound per hour emission limit was established using the maximum hourly production rate from the following equation:

$$0.4 \text{ lb CO/ ton iron} \times 100 \text{ tons iron/hr} = 40.0 \text{ lbs CO/hr}$$

The emission factor - 0.4 lb CO/ ton iron - was proposed by Ford CCP from a BAT study done by using US EPA's "top down" approach. This is the most stringent limit found in RBLC and in Ohio EPA's permit database. The most recent cupola PTI issued in Ohio for the Honda Anna Engine Plant cupola limits CO emissions to 0.442 lb/ton of metal.

If required, compliance shall be determined by performing a stack test using USEPA test methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A.

- i. Emission Limitation:
Organic and volatile organic compound emissions from this emissions unit shall not exceed 2.0 lbs/hr.

Applicable Compliance Method:

The pound per hour emission limit was established using the maximum hourly production rate from the following equation:

$$0.02 \text{ lb OC/ ton iron} \times 100 \text{ tons iron/hr} = 2.0 \text{ lbs OC/hr}$$

The emission factor - 0.02 lb VOC/ ton iron - was proposed by Ford CCP from a BAT study done by using US EPA's "top down" approach. This is the most stringent limit found in RBLC and in Ohio EPA's permit database for controlling VOC with the use of a thermal or recuperative off-gas oxidizer.

If required, compliance shall be determined by performing a stack test using USEPA test methods 1 through 4 and 25 or 25A of 40 CFR Part 60, Appendix A.

- j. Emission Limitation:
Volatile organic hazardous air pollutants (VOHAPs) from this emissions unit shall not exceed 20 parts per million by volume (ppmv) corrected to 10 percent oxygen.

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Applicable Compliance Method:

If required, compliance shall be determined by performing a stack test using USEPA test methods 1 through 4 and 18 of 40 CFR Part 60, Appendix A. Alternatively, instead of using Method 18, Method 25 or 25A of 40 CFR Part 60, Appendix A can be used in accordance with MACT Subpart EEEEE.

- k. Emission Limitation for P420 and P423 combined at 600,000 tons iron/year total:

105.0 tons/year SO₂;

132.0 tons/year NO_x;

120.0 tons/year CO; and

6.0 tons/year OC;

The above annual limits are based on a rolling, 12-month summation of the iron produced.

Applicable Compliance Method:

Compliance shall be determined based on the record keeping and reporting in A.III.1 and A.IV.1 respectively for the total annual iron produced and using the following equations:

$$0.35 \text{ lb SO}_2/\text{ ton iron} \times \text{ tons iron/year} \times \text{ ton}/2000 \text{ lbs} = \text{ tons SO}_2/\text{year}$$

$$0.44 \text{ lb NO}_x/\text{ ton iron} \times \text{ tons iron/year} \times \text{ ton}/2000 \text{ lbs} = \text{ tons NO}_x/\text{year}$$

$$0.4 \text{ lb CO}/\text{ ton iron} \times \text{ tons iron/year} \times \text{ ton}/2000 \text{ lbs} = \text{ tons CO}/\text{year}$$

$$0.02 \text{ lb OC}/\text{ ton iron} \times \text{ tons iron/year} \times \text{ ton}/2000 \text{ lbs} = \text{ tons OC}/\text{year}$$

where, tons iron/year is the actual amount of iron produced during any rolling, 12-month period.

Alternatively, compliance may be determined using an emission factor (in lb/ton iron produced) for each pollutant above that was determined from the most recent stack test which demonstrated compliance with the hourly emission limits for each pollutant.

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

The emission testing shall be conducted within 6 months after beginning full-time operation of the emissions unit and no less frequently than every five years thereafter. Testing for facility-wide fugitive opacity shall occur once every six months.

The emission testing shall be conducted to demonstrate compliance with the allowable particulate or metal HAPs, lead, opacity (stack and fugitive), SO₂, NO_x, CO, VOC, and VOHAPs emission limitations .

The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate(s):for particulate, metal HAPs, lead, opacity (stack and fugitive), SO₂, NO_x, CO,VOC, and VOHAPs:

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particulate: methods 1 through 5, 5B, 5D, 5F, or 5I of 40 CFR Part 60, Appendix A;
metal HAPs: methods 1 through 4 and 29 of 40 CFR Part 60, Appendix A;
SO₂: methods 1 through 4 and 6 of 40 CFR Part 60, Appendix A;
NO_x: methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A;
opacity: method 9 of 40 CFR Part 60, Appendix A;
CO: methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A;
lead: methods 1 through 4 and 12 of 40 CFR Part 60, Appendix A;
VOC: methods 1 through 4 and 25 or 25A of 40 CFR Part 60, Appendix A;
VOHAPs: methods 1 through 4 and 18 (or 25 or 25A) of 40 CFR Part 60, Appendix A.

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

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Cleveland Division of Air Quality (Cleveland DAQ). Sampling shall occur only during times when the cupola is on blast. The minimum sample volume collected during each run shall be 60 dscf. The combustion temperature of the afterburner shall be monitored and recorded during each test run. The stack test shall be performed in accordance with the requirements established in 40 CFR Part 63.7732.

The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland DAQ. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Cleveland DAQ's refusal to accept the results of the emission test(s).

Personnel from the Cleveland DAQ shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

The results of the stack test shall be converted from carbon to VOC in accordance with OAC rule 3745-21-10(C)(7) which states the following:

To convert a mass emission value from VOC as carbon to VOC, divide the mass emission value of VOC as carbon by the weight fraction of carbon in the average molecular weight of the VOC

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emission. The determination of this weight fraction of carbon may be based on standard analytical techniques or material formulation data.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Cleveland DAQ within 60 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Cleveland DAQ.

VI. Miscellaneous Requirements

None

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
none	none	none

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
<p>P421 - East Cupola Charge Preparation Operations consisting of a charge bucket and charge material load hoppers for loading the scrap metal, coke, limestone, steel, iron, alloys and cupola flux into the charge bucket and dumping of the cupola charge (bucket) into the charge receiving hopper at the top of the cupola. Emissions from these operations will be controlled by the G-Unit baghouse (collector #140 with maximum capacity 180,000 scfm) which it shares with emissions units P422, P424, P425 and P426. The maximum flow rate from this emissions unit to G-Unit baghouse is 15,000 scfm.</p>	<p>OAC rule 3745-31-05(A)(3)</p>	<p>Particulate emissions (PE) and particulate matter emissions less than 10 microns in diameter (PM₁₀ emissions) from the baghouse stack serving this emissions unit shall not exceed 0.005 gr/dscf.</p> <p>PE and PM₁₀ emissions from the baghouse stack serving this emissions unit shall not exceed 0.64 lb/hour and 2.82 tons per year (TPY).</p> <p>Emissions of fugitive dust from this process shall not exceed 0.28 lb PM/hour and 1.21 tons PM per year (TPY PM).</p> <p>Lead emissions from the baghouse stack serving this emissions unit shall not exceed 0.012 lb/hour and 0.054 TPY.</p> <p>Visible PE emissions from any stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average at any time.</p>

Visible emissions of fugitive dust shall not exceed 10% opacity as a 3-minute average from any non-stack egress point at this emissions unit.

The permittee shall employ best available control measures to minimize or eliminate visible emissions of fugitive dust - see A.I.2.a.

The requirements of this rule include compliance with the requirements of 40 CFR Part 63, Subpart EEEEE.

OAC rule 3745-17-07(A)(1)

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

OAC rule 3745-17-07(B)(1)

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

OAC rule 3745-17-08(B)

The control measures specified by these rules are equivalent to the control measures established pursuant to OAC rule 3745-31-05(A)(3).

OAC rule 3745-17-11

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

40 CFR Part 63, Subpart EEEEE

40 CFR Part 63.7690(a)(7) - facility-wide fugitive opacity limitation - see Part II.A.2

2. Additional Terms and Conditions

2.a Best available control measures consisting of at a minimum the venting of emissions from the hopper loading and charge bucket loading operations to the new G-unit baghouse. The permittee shall operate and maintain a system for the capture and collection of particulate

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emissions from this emissions unit that meets the accepted engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in "Industrial Ventilation: A Manual Recommended Practice,". The system shall be sufficient to minimize or eliminate visible emissions of fugitive dust from this emissions unit. If needed, install and maintain hooding above the charge point atop the cupola to assist in collecting fugitive emissions by the draft in the cupola.

II. Operational Restrictions

1. The permittee shall operate a bag leak detection system on the baghouse serving this emissions unit in accordance with the requirements established in 40 CFR Part 63 Subpart EEEEE.
2. The permittee shall comply with the applicable restrictions required under 40 CFR Part 63, Subpart EEEEE, including the following sections:

63.7700(a)	scrap material usage
63.7700(b)	written certification of scrap material usage
63.7700(c)	written plan for selection and inspection of scrap
63.7710(a) and (b)	operation and maintenance requirements
63.7720(a), (b), and (c)	startup, shutdown, and malfunction plan

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform weekly checks, when the emissions unit is processing materials and when the weather conditions allow, for any visible emissions of fugitive dust from the non-stack egress points (e.g., windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be recorded electronically or in an operations log. If visible emissions are observed, the permittee shall also record the following:
 - 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 emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.
2. The permittee shall properly install, operate, and maintain equipment to monitor bag leaks within the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record all periods of time during which the

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bag leak detector alarm is triggered and identify the corrective actions that were taken to resolve the problem.

3. The permittee shall comply with the applicable monitoring and record keeping requirements required under 40 CFR Part 63, Subpart EEEEE, including the following sections:

63.7744(a)	maintain records that document continuous compliance with the scrap certification requirements or scrap plan
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IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that:
 - a. identify all days during which any visible emissions of fugitive dust were observed from the non-stack egress points serving this emissions unit; and
 - b. describe any corrective actions taken to eliminate the visible emissions.

These reports shall be submitted to the Cleveland DAQ by February 15 and August 15 of each year and shall cover the previous 6-month calendar period.

2. The permittee shall submit quarterly bag leak detection reports to the Cleveland DAQ that identify all periods of time during which the bag leak detector alarm was triggered and identify the corrective actions that were taken to resolve the problem. The above quarterly reports shall be submitted by February 15, May 15, August 15, and November 15 of each year and shall address the data obtained during the previous calendar quarter.
3. The permittee shall submit annual reports to the Cleveland DAQ that specify the total particulate and PM10 emissions (for the baghouse stack), and lead emissions, in tons, from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emissions Report.
4. The permittee shall submit semiannual reports and such other notifications and reports to the Cleveland DAQ as are required pursuant to 40 CFR Part 63, Subpart EEEEE, in accordance with the following sections:

63.7751 (a)	semi-annual compliance report
63.7751 (b)	content of compliance reports
63.7751 (c)	startup, shutdown, malfunction report
63.7751 (d)	Title V monitoring report allowance

63.7746(a)

submission of deviation reports

V. Testing Requirements

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

- a. Emission Limitations:

Particulate emissions (PE) and particulate matter emissions less than 10 microns in diameter (PM₁₀ emissions) from the baghouse stack serving this emissions unit shall not exceed 0.005 gr/dscf.

Applicable Compliance Method:

If required, compliance shall be determined by performing a stack test using USEPA methods 1 through 5 of 40 CFR Part 60, Appendix A.

- b. Emission Limitations:

PE and PM₁₀ emissions from the baghouse stack serving this emissions unit shall not exceed 0.64 lb/hour.

Applicable Compliance Method:

The pound per hour limit was established from the gr/dscf limit in accordance with the following calculation:

$$0.005 \text{ gr/dscf} \times 15,000 \text{ dscf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr} = 0.64 \text{ lb PE/PM}_{10} / \text{hr}$$

Provided compliance is demonstrated with the gr/dscf limitation, compliance will also be shown with the pound per hour limit since 15,000 dscf/min represents the maximum flow rate from this emissions unit to G-Unit baghouse.

Alternatively, compliance may be determined using the actual gr/dscf and air flow rate determined from the most recent stack test which demonstrated compliance with the gr/dscf limitation.

- c. Emission Limitation:

Emissions of fugitive dust from this emissions unit shall not exceed 0.28 lb PM/hr.

Applicable Compliance Method:

Compliance with the above fugitive dust limitation shall be determined by using the following formula:

Under the maximum emission conditions:

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$$0.02141 \text{ gr/cf} \times 15,000 \text{ cf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr} \times 0.10 = 0.28 \text{ lb PM/hr}$$

where 0.10 represents the uncaptured emissions assuming 90% capture efficiency per Table 2.7-3 for the hooding of cupola furnace charging and tapping emissions with venting to a fabric filter of the OEPA referene document "Reasonably Available Control Measures for Fugitive Dust Sources."

The above emission factor of 0.02141 gr/dscf fugitive PM is the uncontrolled fugitive emission factor and was derived from the stack test of the Cupola 7 Holding Furnace (F005) on 2/9/99. This factor was determined as follows:

$$3.12 \text{ lb/hr} \times \text{min}/17000 \text{ dscf} \times 1 \text{ hr}/60 \text{ min} \times 7000 \text{ gr/lb} = 0.02141 \text{ gr/dscf}$$

- d. Emission Limitation:
Emissions of fugitive dust from this emissions unit shall not exceed 1.21 TPY PM.

Applicable Compliance Method:

Compliance with the above fugitive dust limitation shall be determined by using the following formula:

$$0.02141 \text{ gr/cf} \times 15,000 \text{ cf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr} \times 0.10 \times 8760 \text{ hr/yr} \times \text{ton}/2000 \text{ lbs} \\ = 1.21 \text{ TPY PM}$$

- e. Emission Limitations:
Lead emissions from the baghouse stack serving this emissions unit shall not exceed 0.012 lb/hr.

Applicable Compliance Method:

According to USEPA publication "National Emission Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries - Background Information for Proposed Standards" (EPA - 453/R-02-013, December 2002), per data on page 3-14 of the this publication, lead emission rates are based on a lead percentage of 1.92% of the TSP/PE from the cupola baghouse emissions. The lead emission rate is based on the following calculation:

$$0.0192 \times [0.005 \text{ gr/dscf} \times 15,000 \text{ dscf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr}] = 0.012 \text{ lb lead / hr}$$

Provided compliance is demonstrated with the gr/dscf limitation for particulates, compliance will also be shown with the pound per hour limit since 15,000 dscf/min represents the maximum flow rate from this emissions unit to G-Unit baghouse.

Alternatively, compliance may be determined using the actual gr/dscf and air flow rate determined from the most recent stack test which demonstrated compliance with the gr/dscf

limitation.

If required, compliance shall be demonstrated by performing a stack test using USEPA methods 1 through 4 and 12 of 40 CFR Part 60, Appendix A.

f. Emission Limitations:

PE and PM₁₀ emissions from the baghouse stack serving this emissions unit shall not exceed 2.82 tons per year (TPY).

Lead emissions from the baghouse stack serving this emissions unit shall not exceed 0.054 TPY.

Applicable Compliance Method:

The annual emission limitations were established by multiplying the hourly emission rate by 8760 hours of operation per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitations shall be assumed provided compliance is maintained with the pounds per hour limitation.

g. Emission Limitations:

Visible PE emissions from any stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average at any time.

Visible emissions of fugitive dust shall not exceed 10% opacity as a 3-minute average from any non-stack egress point at this emissions unit.

Applicable Compliance Method:

Compliance with the visible emission limitations shall be determined using USEPA Method 9 of 40 CFR Part 60, Appendix A. Compliance with the fugitive dust limitation shall be determined by observing the non-stack egress points (e.g., windows, doors, roof monitors, etc.) serving this emissions unit.

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

The emission testing shall be conducted within 6 months after beginning full-time operation of the emissions unit

Subsequent performance tests to demonstrate compliance with the fugitive opacity limits shall be conducted no less frequently than once every 6 months.

The emission testing shall be conducted to demonstrate compliance with the allowable particulate, lead, and opacity (stack and fugitive) emission limitations .

The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulate, lead, and opacity (stack and fugitive):

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particulate: methods 1 through 5 of 40 CFR Part 60, Appendix A;
lead: methods 1 through 4 and 12 of 40 CFR Part 60, Appendix A;
opacity: method 9 of 40 CFR Part 60, Appendix A;

This emission testing shall include measurement of air flow from this emissions unit to G-Unit baghouse.

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

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Cleveland Division of Air Quality (Cleveland DAQ).

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland DAQ. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Cleveland DAQ's refusal to accept the results of the emission test(s).

Personnel from the Cleveland DAQ shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Cleveland DAQ within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Cleveland DAQ.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
none	none	none

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
<p>P422 - East Cupola Tapping and Runner Operations. The runners receive the hot metal from the cupola taphole and gravitate it either into the holding furnace either directly or via the porous plug desulfurization process. Emissions from these tapping and runner operations will be controlled by the G-Unit baghouse (collector #140 with maximum capacity 180,000 scfm) which it shares with emissions units P421, P424, P425 and P426. The maximum flow rate from this emissions unit to G-Unit baghouse is 35,000 scfm.</p>	<p>OAC rule 3745-31-05(A)(3)</p>	<p>Particulate emissions (PE) and particulate matter emissions less than 10 microns in diameter (PM₁₀ emissions) from the baghouse stack serving this emissions unit shall not exceed the following:</p> <p style="padding-left: 40px;">0.005 gr/dscf of TSP, PE or PM₁₀;</p> <p>PE and PM₁₀ emissions from the baghouse stack serving this emissions unit shall not exceed 1.50 lbs/hour and 6.57 tons per year (TPY).</p> <p>Fugitive dust emissions from this process shall not exceed 0.64 lb PM/hour and 2.81 tons per year PM (TPY).</p> <p>Lead emissions from the baghouse stack serving this emissions unit shall not exceed 0.03 lb/hr and 0.13 TPY.</p> <p>Visible PE emissions from any stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average at any time.</p> <p>Visible emissions of fugitive dust shall not exceed 10% opacity as a 3-minute average</p>

from any non-stack egress point at this emissions unit.

The permittee shall employ best available control measures to minimize or eliminate visible emissions of fugitive dust - see A.I.2a below.

The requirements of this rule include compliance with the requirements of 40 CFR Part 63, Subpart EEEEE.

OAC rule 3745-17-07(A)(1)	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-07(B)(1)	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-08(B)	The control measures specified by this rule are equivalent to the control measures established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-11	The particulate emission limitation specified by this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
40 CFR Part 63, Subpart EEEEE	40 CFR Part 63.7690(a)(7) - facility-wide fugitive opacity limitation - see Part II.A.2

2. Additional Terms and Conditions

- 2.a** Best available control measures consisting of iron runners being adequately covered or hooded. The permittee shall operate and maintain a system for the capture and collection of particulate emissions from this emissions unit that meets the accepted engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in "Industrial Ventilation: A Manual Recommended Practice". The system shall be sufficient to minimize or eliminate visible emissions of fugitive dust from this emissions unit.

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

1. The permittee shall operate a bag leak detection system on the baghouse serving this emissions unit in accordance with the requirements established in 40 CFR Part 63 Subpart EEEEE.
2. The permittee shall comply with the applicable restrictions required under 40 CFR Part 63, Subpart EEEEE, including the following sections:

63.7710(a) and (b)	operation and maintenance requirements
63.7720(a), (b), and (c)	startup, shutdown, and malfunction plan

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform weekly checks, when the emissions unit is processing materials and when the weather conditions allow, for any visible emissions of fugitive dust (excluding uncombined water vapor) from the non-stack egress points (e.g., windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be recorded electronically or in an operations log. If visible emissions are observed, the permittee shall also record the following:
 - 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 emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.
2. The permittee shall properly install, operate, and maintain equipment to monitor bag leaks within the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record all periods of time during which the bag leak detector alarm is triggered and identify the corrective actions that were taken to resolve the problem.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that:
 - a. identify all days during which any visible emissions of fugitive dust were observed from the non-stack egress points serving this emissions unit; and
 - b. describe any corrective actions taken to eliminate the visible emissions.

These reports shall be submitted to the Cleveland DAQ by February 15 and August 15 of each year and shall cover the previous 6-month calendar period.

2. The permittee shall submit quarterly bag leak detection reports to the Cleveland DAQ that identify all periods of time during which the bag leak detector alarm was triggered and identify the corrective actions that were taken to resolve the problem. The above quarterly reports shall be submitted by February 15, May 15, August 15, and November 15 of each year and shall address the data obtained during the previous calendar quarter.
3. The permittee shall submit annual reports to the Cleveland DAQ that specify the total particulate and PM10 emissions (for the baghouse stack), and lead emissions, in tons, from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emissions Report.
4. The permittee shall submit semiannual reports and such other notifications and reports to the Cleveland DAQ as are required pursuant to 40 CFR Part 63, in accordance with the following sections:

63.7751 (a)	semi-annual compliance report
63.7751 (b)	content of compliance reports
63.7751 (c)	startup, shutdown, malfunction report
63.7751 (d)	Title V monitoring report allowance
63.7746(a)	submission of deviation reports

V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):
 - a. Emission Limitations:
Particulate emissions (PE) and particulate matter emissions less than 10 microns in diameter (PM₁₀ emissions) from the baghouse stack serving this emissions unit shall not exceed 0.005 gr/dscf.

Applicable Compliance Method:
Compliance shall be determined by performing a stack test using USEPA methods 1 through 5 of 40 CFR Part 60, Appendix A.
 - b. Emission Limitations:
PE and PM₁₀ emissions from the baghouse stack serving this emissions unit shall not exceed 1.50 lbs/hour.

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Applicable Compliance Method:

The pound per hour limits were established from the gr/dscf limit in accordance with the following calculations:

$$0.005 \text{ gr/dscf} \times 35,000 \text{ dscf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr} = 1.5 \text{ lb PE/PM}_{10} / \text{hr}$$

Provided compliance is demonstrated with the gr/dscf limitation, compliance will also be shown with the pound per hour limit since 35,000 dscf/min represents the maximum flow rate from this emissions unit to the G-Unit baghouse.

Alternatively, compliance may be determined using the actual gr/dscf and air flow rate determined from the most recent stack test which demonstrated compliance with the gr/dscf limitation.

- c. Emission Limitation:
Fugitive dust emissions from this emissions unit shall not exceed 0.64 lb PM/hr.

Applicable Compliance Method:

Compliance with the above fugitive dust limitation shall be determined by using the following formula:

$$0.02141 \text{ gr/cf} \times 35,000 \text{ cf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr} \times 0.10 = 0.64 \text{ lb PM/hr}$$

where 0.10 represents the uncaptured emissions assuming 90% capture efficiency per Table 2.7-3 for the hooding of cupola furnace charging and tapping emissions with venting to a fabric filter of the OEPA referene document "Reasonably Available Control Measures for Fugitive Dust Sources."

The above emission factor of 0.02141 gr/dscf Fugitive PE is the uncontrolled fugitive emission factor and was derived from the stack test of the Cupola 7 Holding Furnace (F005) on 2/9/99. This factor was determined as follows:

$$3.12 \text{ lb/hr} \times \text{min}/17000 \text{ dscf} \times 1 \text{ hr}/60 \text{ min} \times 7000 \text{ gr/lb} = 0.02141 \text{ gr/dscf}$$

- d. Emission Limitation:
Fugitive dust emissions from this emissions unit shall not exceed 2.81 TPY PM.

Applicable Compliance Method:

Compliance with the above fugitive dust limitation shall be determined by using the following formula:

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$$0.02141 \text{ gr/cf} \times 35,000 \text{ cf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr} \times 0.10 \times 8760 \text{ hr/yr} \times \text{ton}/2000 \text{ lbs} \\ = 2.81 \text{ TPY PM}$$

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e. Emission Limitations:

Lead emissions from the baghouse stack serving this emissions unit shall not exceed 0.03 lb/hr.

Applicable Compliance Method:

According to USEPA publication "National Emission Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries - Background Information for Proposed Standards" (EPA - 453/R-02-013, December 2002), per data on page 3-14 of the this publication, lead emission rates are based on a lead percentage of 1.92% of the TSP/PE from the cupola baghouse emissions. The lead emission rate is based on the following calculation:

$$0.0192 \times [0.005 \text{ gr/dscf} \times 35,000 \text{ dscf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr}] = 0.03 \text{ lb lead / hr}$$

Provided compliance is demonstrated with the gr/dscf limitation for particulates, compliance will also be shown with the pound per hour limit since 35,000 dscf/min represents the maximum flow rate from this emissions unit to G-Unit baghouse.

Alternatively, compliance may be determined using the actual gr/dscf and air flow rate determined from the most recent stack test which demonstrated compliance with the gr/dscf limitation.

If required, compliance shall be demonstrated by performing a stack test using USEPA methods 1 through 4 and 12 of 40 CFR Part 60, Appendix A.

f. Emission Limitations:

PE and PM₁₀ emissions from the baghouse stack serving this emissions unit shall not exceed 6.57 tons per year (TPY).

Lead emissions from the baghouse stack serving this emissions unit shall not exceed 0.13 TPY..

Applicable Compliance Method:

The annual emission limitations were established by multiplying the hourly emission rate by 8760 hours of operation per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitations shall be assumed provided compliance is maintained with the pounds per hour limitation.

g. Emission Limitations:

Visible PE emissions from any stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average at any time.

Visible emissions of fugitive dust shall not exceed 10% opacity as a 3-minute average from

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any non-stack egress point at this emissions unit.

Applicable Compliance Method:

Compliance with the visible emission limitations shall be determined using USEPA Method 9 of 40 CFR Part 60, Appendix A. Compliance with the fugitive dust limitation shall be determined by observing the non-stack egress points (e.g., windows, doors, roof monitors, etc.) serving this emissions unit.

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

The emission testing shall be conducted within 6 months after beginning full-time operation of the emissions unit

Subsequent performance tests to demonstrate compliance with the fugitive opacity limits shall be conducted no less frequently than once every 6 months.

The emission testing shall be conducted to demonstrate compliance with the allowable particulate, lead, and opacity (stack and fugitive) emission limitations .

The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulate, lead, total metal HAPs, and opacity (stack and fugitive):

particulate: methods 1 through 5 of 40 CFR Part 60, Appendix A;

lead: methods 1 through 4 and 12 of 40 CFR Part 60, Appendix A;

opacity: method 9 of 40 CFR Part 60, Appendix A;

This emission testing shall include measurement of air flow from this emissions unit to G-Unit baghouse.

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

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Cleveland Division of Air Quality (Cleveland DAQ).

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland DAQ. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Cleveland DAQ's refusal to accept the results of the emission test(s).

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Personnel from the Cleveland DAQ shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Cleveland DAQ within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Cleveland DAQ.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
none	none	none

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
<p>P423 - West Cupola (Kuttner) 100 Ton iron/hr for production of gray and nodular iron. A combustion chamber oxidizer will control emissions of carbon monoxide (CO), volatile organic compounds (VOC) and volatile organic hazardous air pollutants (VOHAPs) and a 65,000 dscfm fabric filter will control total suspended particulate matter (TSP/PM/PE), particulate matter less than 10 microns (PM₁₀) and metal hazardous air pollutants (metal HAPs).</p>	<p>OAC rule 3745-31-05(A)(3)</p>	<p>Particulate emissions (PE) and particulate matter emissions less than 10 microns in diameter (PM₁₀ emissions) from the baghouse stack serving this emissions unit shall not exceed the following:</p> <p>0.005 gr/dscf of TSP, PE or PM₁₀ or comply with total metal HAP gr/dscf limit below per MACT.</p> <p>PE and PM₁₀ emissions from the baghouse stack serving this emissions unit shall not exceed 2.79 lbs/hour and 12.2 tons per year (TPY).</p> <p>Lead emissions from the baghouse stack serving this emissions unit shall not exceed 0.054 lb/hr and 0.24 TPY.</p>

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Visible PE emissions from any stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average at any time.

Visible emissions of fugitive dust shall not exceed 10% opacity as a 3-minute average from any non-stack egress point at this emissions unit.

The permittee shall employ best available control measures to minimize or eliminate visible emissions of fugitive dust. See A.I.2.a below.

Sulfur dioxide emissions from this emissions unit shall not exceed 35.0 lbs/hr.

Nitrogen oxides emissions from this emissions unit shall not exceed 44.0 lbs/hr.

Carbon monoxide emissions from this emissions unit shall not exceed 40.0 lbs/hr.

Organic and volatile organic compound emissions from this emissions unit shall not exceed 2.0 lbs/hr.

See section A.I.2.b below.

The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-08(B) and 3745-31-05(C) and 40 CFR Part 63, Subpart EEEEE.

	OAC rule 3745-17-07(A)(1)	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(B)(1)	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-08(B)	The control requirements specified or established by this rule are equivalent to or less stringent than the control requirements established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE limitation specified in this rule is less stringent than the particulate emission limitations established pursuant to 40 CFR Part 63, Subpart EEEEE and OAC rule 3745-31-05(A)(3).
	OAC rule 3745-18-06(E)(1)	The sulfur dioxide emission limitation specified by this rule is less stringent than the sulfur dioxide emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rules 3745-21-08(B) OAC rule 3745-31-05(C) Synthetic Minor to avoid PSD and Nonattainment NSR	See A.I.2.c below. 105.0 tons SO ₂ /rolling, 12-months; 132.0 tons NO _x /rolling, 12-months; 120.0 tons CO/rolling, 12-months; and 6.0 tons OC/rolling, 12-months; The above annual limits are based on a rolling, 12-month summation of the combined iron produced for P420 and P423. See A.II.1 below.
	40 CFR Part 63, Subpart EEEEE	See 40 CFR Part 63.7690 0.0005 gr/dscf of total metal HAP or comply with PE gr/dscf limit above per MACT. Volatile organic hazardous air pollutants (VOHAPs) from this emissions unit shall not exceed 20 parts per million by volume (ppmv) corrected to 10 percent oxygen. See A.I.2.b below.

2. Additional Terms and Conditions

- 2.a** Best available control measures consisting of sufficient air flow pulled into the top of the cupola to achieve 100% capture of fugitive emissions. The permittee shall operate and maintain a system for the capture and collection of particulate emissions from this emissions unit that meets the accepted engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in "Industrial Ventilation: A Manual Recommended Practice". The system shall be sufficient to minimize or eliminate visible emissions of fugitive dust from this emissions unit.
- 2.b** CO, VOC and VOHAP gases generated during the operation of this emissions unit shall be combusted such that the 15-minute average combustion zone temperature does not fall below 1,300 degrees Fahrenheit for 0.3 second or greater in a direct-flame afterburner, oxidizer or equivalent device equipped with an indicating pyrometer which is positioned in the working area at the operator's eye level. Periods when the cupola is off blast and for 15 minutes after going on blast from an off blast condition are not included in the 15-minute average.
- 2.c** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3). On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the 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 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.
- 2.d** This emissions unit and its associated air pollution control system(s) shall be maintained regularly in accordance with the Operation, Maintenance, and Monitoring Plan required under 40 CFR 63, Subpart EEEEE in order to minimize air contaminant emissions.

II. Operational Restrictions

1. The maximum annual production for emissions units P420 and P423 combined shall not exceed 600,000 tons iron per year, based on a rolling, 12-month summation of the production rates.
- a. To ensure enforceability during the first twelve months of operation following issuance of this permit, the permittee shall not exceed the iron production levels specified in the following table:

Month	Maximum Allowable Cumulative Combined Iron Production: (Tons Iron)
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1	50,000
1- 2	100,000
1- 3	150,000
1- 4	200,000
1- 5	262,500
1- 6	325,000
1- 7	387,500
1- 8	450,000
1- 9	475,000
1- 10	500,000
1- 11	550,000
1- 12	600,000

- b. After the first 12 calendar months of operation, compliance with the annual production rate limitation of 600,000 tons of iron for P420 and P423 combined shall be based on a rolling, 12-month summation of the production rates.
2. The permittee shall employ only natural gas as the primary fuel and LPG/Propane as back-up fuels to fire the burners associated with this emissions unit's oxidizer.
3. Operational restriction for the combustion chamber oxidizer serving this emissions unit:
The average combustion temperature within the oxidizer combustion chamber (or equivalent devices), for any 3-hour block of time when the emissions unit is in operation, shall not be less than 1,300 degrees Fahrenheit.
4. Low-NOx burner technology (equivalent or better state-of-the-art technology as approved by Ohio EPA) shall be used in the combustion chamber oxidizer.
5. The sulfur content of the coke shall not exceed 1.2% by weight.
6. The permittee shall comply with the applicable restrictions required under 40 CFR Part 63, Subpart EEEEE, including the following sections:

63.7690(b)(1)	capture and collection system
63.7690(b)(3)	temperature for oxidizer for cupola
63.7700(a)	scrap material usage
63.7710(a), (b)(1) through (5)	operation and maintenance plan (including bag leak detection system)
63.7720(c)	startup, shutdown, and malfunction plan
63.7733(a), (e), and (f)	site specific operating limits for capture system

7. The certification or the scrap management plan requirements of 63.7700 shall be met. Use of scrap that may contain organic contaminants, plastics and HAP metals shall be minimized or eliminated.

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Accessible lead components and mercury switches shall be removed from any automotive bodies by suppliers. The permittee shall not charge any radioactive material into the cupola.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for emissions units P420 and P423:
 - a. the weight of iron produced, in tons, for each furnace and the combined total tons per month;
 - b. during the first 12 calendar months of operation, the combined cumulative iron production rate, for each calendar month, in tons;
 - c. beginning after the first 12 calendar months of operation, the rolling, 12-month summation of the combined iron production, in tons.
2. The permittee shall perform weekly checks, when the emissions unit is processing materials and when the weather conditions allow, for any visible emissions of fugitive dust (excluding uncombined water vapor) from the non-stack egress points (e.g., windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be recorded electronically or in an operations log. If visible emissions are observed, the permittee shall also record the following:
 - 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 emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.
3. For each day during which the permittee burns a fuel other than natural gas, LPG or propane the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
4. The permittee shall comply with the applicable monitoring and record keeping requirements required under 40 CFR Part 63, Subpart EEEEE, including the following sections:

63.7740(a)	capture system - maintain a CPMS
63.7740(b)	bag leak detection system for baghouse
63.7740(d)	monitor combustion zone temperature for oxidizer on cupola
63.7741(a)	capture system - install, operate, and maintain CPMS
63.7741(b)	install, operate, and maintain bag leak detection system

63.7741(d)	install and maintain a CPMS to measure and record the combustion zone temperature for the oxidizer
63.7741(f)	operate each CPMS per (f)(1) through (f)(3)
63.7742	monitor continuously except for monitoring malfunctions, associated repairs and required quality control
63.7743(b)	monitor and record capture system data
63.7743(c)	bag leak detection system - maintain records
63.7743(e)	record data for combustion zone temperature
63.7744(a)	maintain records of continuous compliance with certification requirements for scrap collection
63.7745(a)	records for continuous compliance for capture system and each control device
63.7745(b)	maintain current copy of operation and maintenance plans
63.7752(a) and (c)	required overall records that should be maintained

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) that identify all exceedances of the rolling, 12-month production rate limitation for P420 and P423 combined and, for the first 12 calendar months of operation, all exceedances of the maximum allowable cumulative production levels for P420 and P423 combined.
2. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas, LPG or propane was burned in the oxidizer chamber of this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
3. The permittee shall submit semiannual written reports that:
 - a. identify all days during which any visible emissions of fugitive dust were observed from the non-stack egress points serving this emissions unit; and
 - b. describe any corrective actions taken to eliminate the visible emissions.

These reports shall be submitted to the Cleveland DAQ by February 15 and August 15 of each year and shall cover the previous 6-month calendar period.

4. The permittee shall submit annual reports to the Cleveland DAQ that specify the total particulate and PM10 emissions (for the baghouse stack and combustion stack), nitrogen oxides, carbon monoxide, volatile organic compound, sulfur dioxide, and lead emissions, in tons, from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emissions Report.
5. The permittee shall submit semiannual reports and such other notifications and reports to the Cleveland DAQ as are required pursuant to 40 CFR Part 63, Subpart EEEEE, per the following

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sections:

63.7751 (a)	semi-annual compliance report
63.7751 (b)	content of compliance reports
63.7751 (c)	startup, shutdown, malfunction report
63.7751 (d)	Title V monitoring report allowance
63.7746(a)	submission of deviation reports

V. Testing Requirements

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

- a. Emission Limitations:

0.005 gr/dscf of TSP, PE or PM₁₀; or comply with 0.0005 gr/dscf of total metal HAP.

Applicable Compliance Method:

If required, compliance shall be determined by performing a stack test using USEPA methods 1 through 5 of 40 CFR Part 60, Appendix A for particulates. If required, compliance shall be determined by performing a stack test using USEPA methods 1 through 4 and 29 of 40 CFR Part 60, Appendix A for total metal HAPS.

- b. Emission Limitations:

PE and PM₁₀ emissions from the baghouse stack serving this emissions unit shall not exceed 2.79 lbs/hour.

Applicable Compliance Method:

The pound per hour limit was established from the gr/dscf limit in accordance with the following calculations:

$$0.005 \text{ gr/dscf} \times 65,000 \text{ dscf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr} = 2.79 \text{ lbs PE/PM}_{10} / \text{hr}$$

Provided compliance is demonstrated with the gr/dscf limitation, compliance will also be shown with the pound per hour limit since 65,000 dscf/min represents the maximum flow rate for the baghouse.

Alternatively, compliance may be determined using the actual gr/dscf and air flow rate determined from the most recent stack test which demonstrated compliance with the gr/dscf limitation.

c. Emission Limitations:

Lead emissions from the baghouse stack serving this emissions unit shall not exceed 0.054 lb/hr.

Applicable Compliance Method:

According to USEPA publication "National Emission Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries - Background Information for Proposed Standards" (EPA - 453/R-02-013, December 2002), per data on page 3-14 of the this publication, lead emission rates are based on a lead percentage of 1.92% of the TSP/PE from the cupola baghouse emissions. The lead emission rate is based on the following calculation:

$$0.0192 \times [0.005 \text{ gr/dscf} \times 65,000 \text{ dscf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr}] = 0.054 \text{ lb lead / hr}$$

Provided compliance is demonstrated with the gr/dscf limitation for particulates, compliance will also be shown with the pound per hour limit since 65,000 dscf/min represents the maximum flow rate for this emissions unit.

Alternatively, compliance may be determined using the actual gr/dscf and air flow rate determined from the most recent stack test which demonstrated compliance with the gr/dscf limitation for particulates.

If required, compliance shall be demonstrated by performing a stack test using USEPA methods 1 through 4 and 12 of 40 CFR Part 60, Appendix A.

d. Emission Limitations:

PE and PM₁₀ emissions from the baghouse stack serving this emissions unit shall not exceed 12.2 TPY.

Lead emissions from the baghouse stack serving this emissions unit shall not exceed 0.24 TPY.

Applicable Compliance Method:

The annual emission limitations were established by multiplying the hourly emission rate by 8760 hours of operation per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitations shall be assumed provided compliance is maintained with the pounds per hour limitations.

e. Emission Limitations:

Visible PE emissions from any stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average at any time.

Visible emissions of fugitive dust shall not exceed 10% opacity as a 3-minute average from any non-stack egress point at this emissions unit.

Applicable Compliance Method:

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If required, compliance with the visible emission limitations shall be determined using USEPA Method 9 of 40 CFR Part 60, Appendix A. Compliance with the fugitive dust limitation shall be determined by observing the non-stack egress points (e.g., windows, doors, roof monitors, etc.) serving this emissions unit.

- f. Emission Limitation:
Sulfur dioxide emissions from this emissions unit shall not exceed 35.0 lbs/hr.

Applicable Compliance Method:

The pound per hour emission limit was established using the maximum hourly production rate from the following equation:

$$0.35 \text{ lb SO}_2/\text{ ton iron} \times 100 \text{ tons iron/hr} = 35.0 \text{ lbs SO}_2/\text{hr}$$

The emission factor - 0.35 lb SO₂/ ton iron - was proposed by Ford CCP from a BAT study done by using US EPA's "top down" approach as a manufacturer's estimate.

If required, compliance shall be determined by performing a stack test using USEPA test methods 1 through 4 and 6 of 40 CFR Part 60, Appendix A.

- g. Emission Limitation:
Nitrogen oxides emissions from this emissions unit shall not exceed 44.0 lbs/hr.

Applicable Compliance Method:

The pound per hour emission limit was established using the maximum hourly production rate from the following equation:

$$0.44 \text{ lb NO}_x/\text{ ton iron} \times 100 \text{ tons iron/hr} = 44.0 \text{ lbs NO}_x/\text{hr}$$

The emission factor - 0.44 lb NO_x/ ton iron - was proposed by Ford CCP from a BAT study done by using US EPA's "top down" approach as a manufacturer's estimate.

If required, compliance shall be determined by performing a stack test using USEPA test methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A.

- h. Emission Limitation:
Carbon monoxide emissions from this emissions unit shall not exceed 40.0 lbs/hr

Applicable Compliance Method:

The pound per hour emission limit was established using the maximum hourly production rate from the following equation:

$$0.4 \text{ lb CO/ ton iron} \times 100 \text{ tons iron/hr} = 40.0 \text{ lbs CO/hr}$$

The emission factor - 0.4 lb CO/ ton iron - was proposed by Ford CCP from a BAT study done by using US EPA's "top down" approach. This is the most stringent limit found in RBLC and in Ohio EPA's permit database. The most recent cupola PTI issued in Ohio for the Honda Anna Engine Plant cupola limits CO emissions to 0.442 lb/ton of metal.

If required, compliance shall be determined by performing a stack test using USEPA test methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A.

- i. Emission Limitation:
Organic and volatile organic compound emissions from this emissions unit shall not exceed 2.0 lbs/hr.

Applicable Compliance Method:

The pound per hour emission limit was established using the maximum hourly production rate from the following equation:

$$0.02 \text{ lb OC/ ton iron} \times 100 \text{ tons iron/hr} = 2.0 \text{ lbs OC/hr}$$

The emission factor - 0.02 lb VOC/ ton iron - was proposed by Ford CCP from a BAT study done by using US EPA's "top down" approach. This is the most stringent limit found in RBLC and in Ohio EPA's permit database for controlling VOC with the use of a thermal or recuperative off-gas oxidizer.

If required, compliance shall be determined by performing a stack test using USEPA test methods 1 through 4 and 25 or 25A of 40 CFR Part 60, Appendix A.

- j. Emission Limitation:
Volatile organic hazardous air pollutants (VOHAPs) from this emissions unit shall not exceed 20 parts per million by volume (ppmv) corrected to 10 percent oxygen.

Applicable Compliance Method:

If required, compliance shall be determined by performing a stack test using USEPA test methods 1 through 4 and 18 of 40 CFR Part 60, Appendix A. Alternatively, instead of using Method 18, Method 25 or 25A of 40 CFR Part 60, Appendix A can be used in accordance with MACT Subpart EEEEE.

- k. Emission Limitation for P420 and P423 combined at 600,000 tons iron/year total:
105.0 tons/year SO₂;
132.0 tons/year NO_x;
120.0 tons/year CO; and
6.0 tons/year OC;

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The above annual limits are based on a rolling, 12-month summation of the iron produced.

Applicable Compliance Method:

Compliance shall be determined based on the record keeping and reporting in A.III.1 and A.IV.1 respectively for the total annual iron produced and using the following equations:

$$0.35 \text{ lb SO}_2/\text{ ton iron} \times \text{ tons iron/year} \times \text{ ton}/2000 \text{ lbs} = \text{ tons SO}_2/\text{year}$$

$$0.44 \text{ lb NO}_x/\text{ ton iron} \times \text{ tons iron/year} \times \text{ ton}/2000 \text{ lbs} = \text{ tons NO}_x/\text{year}$$

$$0.4 \text{ lb CO}/\text{ ton iron} \times \text{ tons iron/year} \times \text{ ton}/2000 \text{ lbs} = \text{ tons CO}/\text{year}$$

$$0.02 \text{ lb OC}/\text{ ton iron} \times \text{ tons iron/year} \times \text{ ton}/2000 \text{ lbs} = \text{ tons OC}/\text{year}$$

where, tons iron/year is the actual amount of iron produced during any rolling, 12-month period.

Alternatively, compliance may be determined using an emission factor (in lb/ton iron produced) for each pollutant above that was determined from the most recent stack test which demonstrated compliance with the hourly emission limits for each pollutant.

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

The emission testing shall be conducted within 6 months after beginning full-time operation of the emissions unit and no less frequently than every five years thereafter. Testing for facility-wide fugitive opacity shall occur once every six months.

The emission testing shall be conducted to demonstrate compliance with the allowable particulate or metal HAPs, lead, opacity (stack and fugitive), SO₂, NO_x, CO, VOC, and VOHAPs emission limitations .

The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate(s):for particulate, metal HAPs, lead, opacity (stack and fugitive), SO₂, NO_x, CO,VOC, and VOHAPs:

particulate: methods 1 through 5, 5B, 5D, 5F, or 5I of 40 CFR Part 60, Appendix A;

metal HAPs: methods 1 through 4 and 29 of 40 CFR Part 60, Appendix A;

SO₂: methods 1 through 4 and 6 of 40 CFR Part 60, Appendix A;

NO_x: methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A;

opacity: method 9 of 40 CFR Part 60, Appendix A;

CO: methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A;

lead: methods 1 through 4 and 12 of 40 CFR Part 60, Appendix A;

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VOC: methods 1 through 4 and 25 or 25A of 40 CFR Part 60, Appendix A;

VOHAPs: methods 1 through 4 and 18 (or 25 or 25A) of 40 CFR Part 60, Appendix A.

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

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Cleveland Division of Air Quality (Cleveland DAQ). Sampling shall occur only during times when the cupola is on blast. The minimum sample volume collected during each run shall be 60 dscf. The combustion temperature of the afterburner shall be monitored and recorded during each test run. The stack test shall be performed in accordance with the requirements established in 40 CFR Part 63.7732.

The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland DAQ. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Cleveland DAQ's refusal to accept the results of the emission test(s).

Personnel from the Cleveland DAQ shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

The results of the stack test shall be converted from carbon to VOC in accordance with OAC rule 3745-21-10(C)(7) which states the following:

To convert a mass emission value from VOC as carbon to VOC, divide the mass emission value of VOC as carbon by the weight fraction of carbon in the average molecular weight of the VOC emission. The determination of this weight fraction of carbon may be based on standard analytical techniques or material formulation data.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Cleveland DAQ within 60 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Cleveland DAQ.

VI. Miscellaneous Requirements

None

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Emissions Unit ID: P423

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
none	none	none

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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PTI A

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
<p>P424 - West Cupola Charge Preparation Operations consisting of a charge bucket and charge material load hoppers for loading the scrap metal, coke, limestone, steel, iron, alloys and cupola flux into the charge bucket and dumping of the cupola charge (bucket) into the charge receiving hopper at the top of the cupola. Emissions from these operations will be controlled by the G-Unit baghouse (collector #140 with maximum capacity 180,000 scfm) which it shares with emissions units P422, P424, P425 and P426. The maximum flow rate from this emissions unit to G-Unit baghouse is 15,000 scfm.</p>	<p>OAC rule 3745-31-05(A)(3)</p>	<p>Particulate emissions (PE) and particulate matter emissions less than 10 microns in diameter (PM₁₀ emissions) from the baghouse stack serving this emissions unit shall not exceed 0.005 gr/dscf.</p> <p>PE and PM₁₀ emissions from the baghouse stack serving this emissions unit shall not exceed 0.64 lb/hour and 2.82 tons per year (TPY).</p> <p>Emissions of fugitive dust from this process shall not exceed 0.28 lb PM/hour and 1.21 tons PM per year (TPY PM).</p> <p>Lead emissions from the baghouse stack serving this emissions unit shall not exceed 0.012 lb/hour and 0.054 TPY.</p> <p>Visible PE emissions from any stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average at any time.</p>

Visible emissions of fugitive dust shall not exceed 10% opacity as a 3-minute average from any non-stack egress point at this emissions unit.

The permittee shall employ best available control measures to minimize or eliminate visible emissions of fugitive dust - see A.I.2.a.

The requirements of this rule include compliance with the requirements of 40 CFR Part 63, Subpart EEEEE.

OAC rule 3745-17-07(A)(1)

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

OAC rule 3745-17-07(B)(1)

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

OAC rule 3745-17-08(B)

The control measures specified by these rules are equivalent to the control measures established pursuant to OAC rule 3745-31-05(A)(3).

OAC rule 3745-17-11

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

40 CFR Part 63, Subpart EEEEE

40 CFR Part 63.7690(a)(7) - facility-wide fugitive opacity limitation - see Part II.A.2

2. Additional Terms and Conditions

- 2.a** Best available control measures consisting of at a minimum the venting of emissions from the hopper loading and charge bucket loading operations to the new G-unit baghouse. The permittee shall operate and maintain a system for the capture and collection of particulate emissions from this emissions unit that meets the accepted engineering standards for minimum

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exhaust rates as published by the American Conference of Governmental Industrial Hygienists in "Industrial Ventilation: A Manual Recommended Practice,". The system shall be sufficient to minimize or eliminate visible emissions of fugitive dust from this emissions unit. If needed, install and maintain hooding above the charge point atop the cupola to assist in collecting fugitive emissions by the draft in the cupola.

II. Operational Restrictions

1. The permittee shall operate a bag leak detection system on the baghouse serving this emissions unit in accordance with the requirements established in 40 CFR Part 63 Subpart EEEEE.
2. The permittee shall comply with the applicable restrictions required under 40 CFR Part 63, Subpart EEEEE, including the following sections:

63.7700(a)	scrap material usage
63.7700(b)	written certification of scrap material usage
63.7700(c)	written plan for selection and inspection of scrap
63.7710(a) and (b)	operation and maintenance requirements
63.7720(a), (b), and (c)	startup, shutdown, and malfunction plan

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform weekly checks, when the emissions unit is processing materials and when the weather conditions allow, for any visible emissions of fugitive dust from the non-stack egress points (e.g., windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be recorded electronically or in an operations log. If visible emissions are observed, the permittee shall also record the following:
 - 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 emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.
2. The permittee shall properly install, operate, and maintain equipment to monitor bag leaks within the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record all periods of time during which the bag leak detector alarm is triggered and identify the corrective actions that were taken to resolve the

problem.

3. The permittee shall comply with the applicable monitoring and record keeping requirements required under 40 CFR Part 63, Subpart EEEEE, including the following sections:

63.7744(a)	maintain records that document continuous compliance with the scrap certification requirements or scrap plan
------------	--

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that:
 - a. identify all days during which any visible emissions of fugitive dust were observed from the non-stack egress points serving this emissions unit; and
 - b. describe any corrective actions taken to eliminate the visible emissions.

These reports shall be submitted to the Cleveland DAQ by February 15 and August 15 of each year and shall cover the previous 6-month calendar period.

2. The permittee shall submit quarterly bag leak detection reports to the Cleveland DAQ that identify all periods of time during which the bag leak detector alarm was triggered and identify the corrective actions that were taken to resolve the problem. The above quarterly reports shall be submitted by February 15, May 15, August 15, and November 15 of each year and shall address the data obtained during the previous calendar quarter.
3. The permittee shall submit annual reports to the Cleveland DAQ that specify the total particulate and PM10 emissions (for the baghouse stack), and lead emissions, in tons, from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emissions Report.
4. The permittee shall submit semiannual reports and such other notifications and reports to the Cleveland DAQ as are required pursuant to 40 CFR Part 63, Subpart EEEEE, in accordance with the following sections:

63.7751 (a)	semi-annual compliance report
63.7751 (b)	content of compliance reports
63.7751 (c)	startup, shutdown, malfunction report
63.7751 (d)	Title V monitoring report allowance
63.7746(a)	submission of deviation reports

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PTI A

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Issued: To be entered upon final issuance**V. Testing Requirements**

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

- a. Emission Limitations:

Particulate emissions (PE) and particulate matter emissions less than 10 microns in diameter (PM₁₀ emissions) from the baghouse stack serving this emissions unit shall not exceed 0.005 gr/dscf.

Applicable Compliance Method:

If required, compliance shall be determined by performing a stack test using USEPA methods 1 through 5 of 40 CFR Part 60, Appendix A.

- b. Emission Limitations:

PE and PM₁₀ emissions from the baghouse stack serving this emissions unit shall not exceed 0.64 lb/hour.

Applicable Compliance Method:

The pound per hour limit was established from the gr/dscf limit in accordance with the following calculation:

$$0.005 \text{ gr/dscf} \times 15,000 \text{ dscf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr} = 0.64 \text{ lb PE/PM}_{10} / \text{hr}$$

Provided compliance is demonstrated with the gr/dscf limitation, compliance will also be shown with the pound per hour limit since 15,000 dscf/min represents the maximum flow rate from this emissions unit to G-Unit baghouse.

Alternatively, compliance may be determined using the actual gr/dscf and air flow rate determined from the most recent stack test which demonstrated compliance with the gr/dscf limitation.

- c. Emission Limitation:

Emissions of fugitive dust from this emissions unit shall not exceed 0.28 lb PM/hr.

Applicable Compliance Method:

Compliance with the above fugitive dust limitation shall be determined by using the following formula:

Under the maximum emission conditions:

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$$0.02141 \text{ gr/cf} \times 15,000 \text{ cf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr} \times 0.10 = 0.28 \text{ lb PM/hr}$$

where 0.10 represents the uncaptured emissions assuming 90% capture efficiency per Table 2.7-3 for the hooding of cupola furnace charging and tapping emissions with venting to a fabric filter of the OEPA referene document "Reasonably Available Control Measures for Fugitive Dust Sources."

The above emission factor of 0.02141 gr/dscf fugitive PM is the uncontrolled fugitive emission factor and was derived from the stack test of the Cupola 7 Holding Furnace (F005) on 2/9/99. This factor was determined as follows:

$$3.12 \text{ lb/hr} \times \text{min}/17000 \text{ dscf} \times 1 \text{ hr}/60 \text{ min} \times 7000 \text{ gr/lb} = 0.02141 \text{ gr/dscf}$$

- d. Emission Limitation:
Emissions of fugitive dust from this emissions unit shall not exceed 1.21 TPY PM.

Applicable Compliance Method:

Compliance with the above fugitive dust limitation shall be determined by using the following formula:

$$0.02141 \text{ gr/cf} \times 15,000 \text{ cf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr} \times 0.10 \times 8760 \text{ hr/yr} \times \text{ton}/2000 \text{ lbs} \\ = 1.21 \text{ TPY PM}$$

- e. Emission Limitations:
Lead emissions from the baghouse stack serving this emissions unit shall not exceed 0.012 lb/hr.

Applicable Compliance Method:

According to USEPA publication "National Emission Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries - Background Information for Proposed Standards" (EPA - 453/R-02-013, December 2002), per data on page 3-14 of the this publication, lead emission rates are based on a lead percentage of 1.92% of the TSP/PE from the cupola baghouse emissions. The lead emission rate is based on the following calculation:

$$0.0192 \times [0.005 \text{ gr/dscf} \times 15,000 \text{ dscf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr}] = 0.012 \text{ lb lead / hr}$$

Provided compliance is demonstrated with the gr/dscf limitation for particulates, compliance will also be shown with the pound per hour limit since 15,000 dscf/min represents the maximum flow rate from this emissions unit to G-Unit baghouse.

Alternatively, compliance may be determined using the actual gr/dscf and air flow rate determined from the most recent stack test which demonstrated compliance with the gr/dscf limitation.

If required, compliance shall be demonstrated by performing a stack test using USEPA

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methods 1 through 4 and 12 of 40 CFR Part 60, Appendix A.

f. Emission Limitations:

PE and PM₁₀ emissions from the baghouse stack serving this emissions unit shall not exceed 2.82 tons per year (TPY).

Lead emissions from the baghouse stack serving this emissions unit shall not exceed 0.054 TPY.

Applicable Compliance Method:

The annual emission limitations were established by multiplying the hourly emission rate by 8760 hours of operation per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitations shall be assumed provided compliance is maintained with the pounds per hour limitation.

g. Emission Limitations:

Visible PE emissions from any stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average at any time.

Visible emissions of fugitive dust shall not exceed 10% opacity as a 3-minute average from any non-stack egress point at this emissions unit.

Applicable Compliance Method:

Compliance with the visible emission limitations shall be determined using USEPA Method 9 of 40 CFR Part 60, Appendix A. Compliance with the fugitive dust limitation shall be determined by observing the non-stack egress points (e.g., windows, doors, roof monitors, etc.) serving this emissions unit.

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

The emission testing shall be conducted within 6 months after beginning full-time operation of the emissions unit

Subsequent performance tests to demonstrate compliance with the fugitive opacity limits shall be conducted no less frequently than once every 6 months.

The emission testing shall be conducted to demonstrate compliance with the allowable particulate, lead, and opacity (stack and fugitive) emission limitations .

The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate(s):for particulate, lead, and opacity (stack and fugitive):

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particulate: methods 1 through 5 of 40 CFR Part 60, Appendix A;
lead: methods 1 through 4 and 12 of 40 CFR Part 60, Appendix A;
opacity: method 9 of 40 CFR Part 60, Appendix A;

This emission testing shall include measurement of air flow from this emissions unit to G-Unit baghouse.

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

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Cleveland Division of Air Quality (Cleveland DAQ).

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland DAQ. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Cleveland DAQ's refusal to accept the results of the emission test(s).

Personnel from the Cleveland DAQ shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Cleveland DAQ within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Cleveland DAQ.

VI. Miscellaneous Requirements

None

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PTI A

Emissions Unit ID: P424

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
none	none	none

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
<p>P425 - West Cupola Tapping and Runner Operations. The runners receive the hot metal from the cupola taphole and gravitate it either into the holding furnace either directly or via the porous plug desulfurization process. Emissions from these tapping and runner operations will be controlled by the G-Unit baghouse (collector #140 with maximum capacity 180,000 scfm) which it shares with emissions units P421, P424, P425 and P426. The maximum flow rate from this emissions unit to G-Unit baghouse is 35,000 scfm.</p>	<p>OAC rule 3745-31-05(A)(3)</p>	<p>Particulate emissions (PE) and particulate matter emissions less than 10 microns in diameter (PM₁₀ emissions) from the baghouse stack serving this emissions unit shall not exceed the following:</p> <p style="padding-left: 40px;">0.005 gr/dscf of TSP, PE or PM₁₀;</p> <p>PE and PM₁₀ emissions from the baghouse stack serving this emissions unit shall not exceed 1.50 lbs/hour and 6.57 tons per year (TPY).</p> <p>Fugitive dust emissions from this process shall not exceed 0.64 lb PM/hour and 2.81 tons per year PM (TPY).</p> <p>Lead emissions from the baghouse stack serving this emissions unit shall not exceed 0.03 lb/hr and 0.13 TPY.</p> <p>Visible PE emissions from any stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average at any time.</p> <p>Visible emissions of fugitive dust shall not exceed 10% opacity as a 3-minute average from any non-stack egress point at this emissions unit.</p>

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The permittee shall employ best available control measures to minimize or eliminate visible emissions of fugitive dust - see A.I.2a below.

The requirements of this rule include compliance with the requirements of 40 CFR Part 63, Subpart EEEEE.

OAC rule 3745-17-07(A)(1)	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-07(B)(1)	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-08(B)	The control measures specified by this rule are equivalent to the control measures established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-11	The particulate emission limitation specified by this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
40 CFR Part 63, Subpart EEEEE	40 CFR Part 63.7690(a)(7) - facility-wide fugitive opacity limitation - see Part II.A.2

2. Additional Terms and Conditions

- 2.a** Best available control measures consisting of iron runners being adequately covered or hooded. The permittee shall operate and maintain a system for the capture and collection of particulate emissions from this emissions unit that meets the accepted engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in "Industrial Ventilation: A Manual Recommended Practice". The system shall be sufficient to minimize or eliminate visible emissions of fugitive dust from this emissions unit.

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

1. The permittee shall operate a bag leak detection system on the baghouse serving this emissions unit in accordance with the requirements established in 40 CFR Part 63 Subpart EEEEE.
2. The permittee shall comply with the applicable restrictions required under 40 CFR Part 63, Subpart EEEEE, including the following sections:

63.7710(a) and (b)	operation and maintenance requirements
63.7720(a), (b), and (c)	startup, shutdown, and malfunction plan

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform weekly checks, when the emissions unit is processing materials and when the weather conditions allow, for any visible emissions of fugitive dust (excluding uncombined water vapor) from the non-stack egress points (e.g., windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be recorded electronically or in an operations log. If visible emissions are observed, the permittee shall also record the following:
 - 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 emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.
2. The permittee shall properly install, operate, and maintain equipment to monitor bag leaks within the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record all periods of time during which the bag leak detector alarm is triggered and identify the corrective actions that were taken to resolve the problem.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that:
 - a. identify all days during which any visible emissions of fugitive dust were observed from the non-stack egress points serving this emissions unit; and

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

These reports shall be submitted to the Cleveland DAQ by February 15 and August 15 of each year and shall cover the previous 6-month calendar period.

2. The permittee shall submit quarterly bag leak detection reports to the Cleveland DAQ that identify all periods of time during which the bag leak detector alarm was triggered and identify the corrective actions that were taken to resolve the problem. The above quarterly reports shall be submitted by February 15, May 15, August 15, and November 15 of each year and shall address the data obtained during the previous calendar quarter.
3. The permittee shall submit annual reports to the Cleveland DAQ that specify the total particulate and PM₁₀ emissions (for the baghouse stack), and lead emissions, in tons, from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emissions Report.
4. The permittee shall submit semiannual reports and such other notifications and reports to the Cleveland DAQ as are required pursuant to 40 CFR Part 63, in accordance with the following sections:

63.7751 (a)	semi-annual compliance report
63.7751 (b)	content of compliance reports
63.7751 (c)	startup, shutdown, malfunction report
63.7751 (d)	Title V monitoring report allowance
63.7746(a)	submission of deviation reports

V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):
 - a. Emission Limitations:
Particulate emissions (PE) and particulate matter emissions less than 10 microns in diameter (PM₁₀ emissions) from the baghouse stack serving this emissions unit shall not exceed 0.005 gr/dscf.

Applicable Compliance Method:
Compliance shall be determined by performing a stack test using USEPA methods 1 through 5 of 40 CFR Part 60, Appendix A.
 - b. Emission Limitations:
PE and PM₁₀ emissions from the baghouse stack serving this emissions unit shall not exceed

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1.50 lbs/hour.

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Applicable Compliance Method:

The pound per hour limits were established from the gr/dscf limit in accordance with the following calculations:

$$0.005 \text{ gr/dscf} \times 35,000 \text{ dscf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr} = 1.5 \text{ lb PE/PM}_{10} / \text{hr}$$

Provided compliance is demonstrated with the gr/dscf limitation, compliance will also be shown with the pound per hour limit since 35,000 dscf/min represents the maximum flow rate from this emissions unit to the G-Unit baghouse.

Alternatively, compliance may be determined using the actual gr/dscf and air flow rate determined from the most recent stack test which demonstrated compliance with the gr/dscf limitation.

- c. **Emission Limitation:**
Fugitive dust emissions from this emissions unit shall not exceed 0.64 lb PM/hr.

Applicable Compliance Method:

Compliance with the above fugitive dust limitation shall be determined by using the following formula:

$$0.02141 \text{ gr/cf} \times 35,000 \text{ cf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr} \times 0.10 = 0.64 \text{ lb PM/hr}$$

where 0.10 represents the uncaptured emissions assuming 90% capture efficiency per Table 2.7-3 for the hooding of cupola furnace charging and tapping emissions with venting to a fabric filter of the OEPA referene document "Reasonably Available Control Measures for Fugitive Dust Sources."

The above emission factor of 0.02141 gr/dscf Fugitive PE is the uncontrolled fugitive emission factor and was derived from the stack test of the Cupola 7 Holding Furnace (F005) on 2/9/99. This factor was determined as follows:

$$3.12 \text{ lb/hr} \times \text{min}/17000 \text{ dscf} \times 1 \text{ hr}/60 \text{ min} \times 7000 \text{ gr/lb} = 0.02141 \text{ gr/dscf}$$

- d. **Emission Limitation:**
Fugitive dust emissions from this emissions unit shall not exceed 2.81 TPY PM.

Applicable Compliance Method:

Compliance with the above fugitive dust limitation shall be determined by using the following formula:

$$0.02141 \text{ gr/cf} \times 35,000 \text{ cf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr} \times 0.10 \times 8760 \text{ hr/yr} \times \text{ton}/2000 \text{ lbs} = 2.81 \text{ TPY PM}$$

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e. Emission Limitations:

Lead emissions from the baghouse stack serving this emissions unit shall not exceed 0.03 lb/hr.

Applicable Compliance Method:

According to USEPA publication "National Emission Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries - Background Information for Proposed Standards" (EPA - 453/R-02-013, December 2002), per data on page 3-14 of the this publication, lead emission rates are based on a lead percentage of 1.92% of the TSP/PE from the cupola baghouse emissions. The lead emission rate is based on the following calculation:

$$0.0192 \times [0.005 \text{ gr/dscf} \times 35,000 \text{ dscf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr}] = 0.03 \text{ lb lead / hr}$$

Provided compliance is demonstrated with the gr/dscf limitation for particulates, compliance will also be shown with the pound per hour limit since 35,000 dscf/min represents the maximum flow rate from this emissions unit to G-Unit baghouse.

Alternatively, compliance may be determined using the actual gr/dscf and air flow rate determined from the most recent stack test which demonstrated compliance with the gr/dscf limitation.

If required, compliance shall be demonstrated by performing a stack test using USEPA methods 1 through 4 and 12 of 40 CFR Part 60, Appendix A.

f. Emission Limitations:

PE and PM₁₀ emissions from the baghouse stack serving this emissions unit shall not exceed 6.57 tons per year (TPY).

Lead emissions from the baghouse stack serving this emissions unit shall not exceed 0.13 TPY..

Applicable Compliance Method:

The annual emission limitations were established by multiplying the hourly emission rate by 8760 hours of operation per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitations shall be assumed provided compliance is maintained with the pounds per hour limitation.

g. Emission Limitations:

Visible PE emissions from any stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average at any time.

Visible emissions of fugitive dust shall not exceed 10% opacity as a 3-minute average from

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any non-stack egress point at this emissions unit.

Applicable Compliance Method:

Compliance with the visible emission limitations shall be determined using USEPA Method 9 of 40 CFR Part 60, Appendix A. Compliance with the fugitive dust limitation shall be determined by observing the non-stack egress points (e.g., windows, doors, roof monitors, etc.) serving this emissions unit.

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

The emission testing shall be conducted within 6 months after beginning full-time operation of the emissions unit

Subsequent performance tests to demonstrate compliance with the fugitive opacity limits shall be conducted no less frequently than once every 6 months.

The emission testing shall be conducted to demonstrate compliance with the allowable particulate, lead, and opacity (stack and fugitive) emission limitations .

The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulate, lead, total metal HAPs, and opacity (stack and fugitive):

particulate: methods 1 through 5 of 40 CFR Part 60, Appendix A;

lead: methods 1 through 4 and 12 of 40 CFR Part 60, Appendix A;

opacity: method 9 of 40 CFR Part 60, Appendix A;

This emission testing shall include measurement of air flow from this emissions unit to G-Unit baghouse.

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

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Cleveland Division of Air Quality (Cleveland DAQ).

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland DAQ. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Cleveland DAQ's refusal to accept the results of the emission test(s).

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Personnel from the Cleveland DAQ shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Cleveland DAQ within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Cleveland DAQ.

VI. Miscellaneous Requirements

None

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
none	none	none

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Emissions Unit ID: P426

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
<p>P426 - East-West Cupolas Central Iron Runners System. Emissions from this emissions unit will be controlled by the G-Unit baghouse (collector #140 with maximum capacity 180,000 scfm) which it shares with emissions units P421, P422, P424 and P425. A total of 100,000 scfm obtained from a combination of the G-Unit baghouse and most likely the D-Unit baghouse will be used to control emissions from this source.</p>	<p>OAC rule 3745-31-05(A)(3)</p>	<p>Particulate emissions (PE) and particulate matter emissions less than 10 microns in diameter (PM₁₀ emissions) from the baghouse stack serving this emissions unit shall not exceed the following:</p> <p style="padding-left: 40px;">0.005 gr/dscf of TSP, PE or PM₁₀</p> <p>PE and PM₁₀ emissions from the baghouse stack serving this emissions unit shall not exceed 4.29 lbs/hour and 18.8 tons per year (TPY).</p> <p>Fugitive dust emissions from this process shall not exceed 1.84 lb PM/hour and 8.04 tons per year PM (TPY).</p> <p>Lead emissions from the baghouse stack serving this emissions unit shall not exceed 0.082 lb/hr and 0.36 TPY.</p> <p>Visible PE emissions from any stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average at any time.</p> <p>Visible emissions of fugitive dust shall not</p>

exceed 10% opacity as a 3-minute average from any non-stack egress point at this emissions unit.

The permittee shall employ best available control measures to minimize or eliminate visible emissions of fugitive dust. See A.I.2a below.

The requirements of this rule include compliance with the requirements of 40 CFR Part 63, Subpart EEEEE.

OAC rule 3745-17-07(A)(1)

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

OAC rule 3745-17-07(B)(1)

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

OAC rule 3745-17-08(B)

The control measures specified by this rule are less stringent than the control measures established pursuant to OAC rule 3745-31-05(A)(3).

OAC rule 3745-17-11

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

40 CFR Part 63, Subpart EEEEE

40 CFR Part 63.7690(a)(7) - facility-wide fugitive opacity limitation - see Part II.A.2

2. Additional Terms and Conditions

- 2.a** Best available control measures consisting of iron runners being adequately covered or hooded. The permittee shall operate and maintain a system for the capture and collection of particulate emissions from this emissions unit that meets the accepted engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in "Industrial Ventilation: A Manual of Recommended Practice.". The system shall be sufficient to minimize or eliminate visible emissions of fugitive dust from this

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emissions unit.

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Emissions Unit ID: P426

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

1. The permittee shall operate a bag leak detection system on the G-unit baghouse serving this emissions unit in accordance with the requirements established in 40 CFR Part 63, Subpart EEEEE.
2. The permittee shall comply with the applicable restrictions required under 40 CFR Part 63, Subpart EEEEE, including the following sections:

63.7710(a) and (b)	operation and maintenance requirements
63.7720(a), (b), and (c)	startup, shutdown, and malfunction plan

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform weekly checks, when the emissions unit is processing materials and when the weather conditions allow, for any visible emissions of fugitive dust from the non-stack egress points (e.g., windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be recorded electronically or in an operations log. If visible emissions are observed, the permittee shall also record the following:
 - 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 emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.
2. The permittee shall perform weekly checks, when the emissions unit is processing materials and when the weather conditions allow, for any visible particulate emissions from the D-unit baghouse stack serving this emissions unit. The presence or absence of any visible emissions shall be recorded electronically or in an operations log. If visible emissions are observed, the permittee shall also record the following:
 - 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 emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.
3. The permittee shall properly install, operate, and maintain equipment to monitor bag leaks within the

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G-unit baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record all periods of time during which the bag leak detector alarm is triggered and identify the corrective actions that were taken to resolve the problem.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that:
 - a. identify all days during which any visible emissions of fugitive dust were observed from the non-stack egress points serving this emissions unit; and
 - b. describe any corrective actions taken to eliminate the visible emissions.

These reports shall be submitted to the Cleveland DAQ by February 15 and August 15 of each year and shall cover the previous 6-month calendar period.

2. The permittee shall submit semiannual written reports that:
 - a. identify all days during which any visible emissions were observed from the D-unit baghouse stack serving this emissions unit; and
 - b. describe any corrective actions taken to eliminate the visible emissions.

These reports shall be submitted to the Cleveland DAQ by February 15 and August 15 of each year and shall cover the previous 6-month calendar period.

3. The permittee shall submit quarterly bag leak detection reports to the Cleveland DAQ that identify all periods of time during which the bag leak detector alarm was triggered and identify the corrective actions that were taken to resolve the problem. The above quarterly reports shall be submitted by February 15, May 15, August 15, and November 15 of each year and shall address the data obtained during the previous calendar quarter.
4. The permittee shall submit annual reports to the Cleveland DAQ that specify the total particulate and PM10 emissions (for the baghouse stack), and lead emissions, in tons, from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emissions Report.
5. The permittee shall submit semiannual reports and such other notifications and reports to the Cleveland DAQ as are required pursuant to 40 CFR Part 63, Subpart EEEEE, in accordance with the following sections:

63.7751 (a)	semi-annual compliance report
63.7751 (b)	content of compliance reports

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63.7751 (c)	startup, shutdown, malfunction report
63.7751 (d)	Title V monitoring report allowance
63.7746(a)	submission of deviation reports

V. Testing Requirements

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

- a. Emission Limitations:

Particulate emissions (PE) and particulate matter emissions less than 10 microns in diameter (PM₁₀ emissions) from the D-Unit and G-Unit baghouse stacks serving this emissions unit shall not exceed 0.005 gr/dscf.

Applicable Compliance Method:

If required, compliance shall be determined by performing a stack test using USEPA methods 1 through 5 of 40 CFR Part 60, Appendix A.

Compliance shall be based on the results for the D-Unit and G-Unit baghouses.

- b. Emission Limitations:

PE and PM₁₀ emissions from the baghouse stacks serving this emissions unit shall not exceed 4.29 lbs/hour.

Applicable Compliance Method:

The pound per hour limits were established from the gr/dscf limit in accordance with the following calculations:

For G-Unit baghouse:

$$0.005 \text{ gr/dscf} \times 80,000 \text{ dscf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr} = 3.43 \text{ lbs PE/PM}_{10} / \text{hr}$$

For D-Unit baghouse:

$$0.005 \text{ gr/dscf} \times 20,000 \text{ dscf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr} = 0.86 \text{ lb PE/PM}_{10} / \text{hr}$$

Provided compliance is demonstrated with the gr/dscf limitation, compliance will also be shown with the pound per hour limit since 100,000 (80,000 for G-Unit and 20,000 for D-Unit baghouse) dscf/min represents the maximum total combined flow rate for this emissions unit.

Alternatively, compliance may be determined using the actual gr/dscf and air flow rate determined from the most recent stack test which demonstrated compliance with the gr/dscf limitation.

- c. Emission Limitation:
Fugitive dust emissions from this emissions unit shall not exceed 1.84 lb PM/hr.

Applicable Compliance Method:

Compliance with the above fugitive dust limitation shall be determined by using the following formula:

$$0.02141 \text{ gr/cf} \times 100,000 \text{ cf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr} \times 0.10 = 1.84 \text{ lb PM/hr}$$

where 0.10 represents the uncaptured emissions assuming 90% capture efficiency per Table 2.7-3 for the hooding of cupola furnace charging and tapping emissions with venting to a fabric filter of the OEPA referene document "Reasonably Available Control Measures for Fugitive Dust Sources."

The above emission factor of 0.02141 gr/dscf fugitive dust is the uncontrolled fugitive emission factor and was derived from the stack test of the Cupola 7 Holding Furnace (F005) on 2/9/99. This factor was determined as follows:

$$3.12 \text{ lb/hr} \times \text{min}/17000 \text{ dscf} \times 1 \text{ hr}/60 \text{ min} \times 7000 \text{ gr/lb} = 0.02141 \text{ gr/dscf}$$

- d. Emission Limitation:
Fugitive dust emissions from this emissions unit shall not exceed 8.04 TPY PM.

Applicable Compliance Method:

Compliance with the above PE limitation shall be determined by using the following formula:

$$0.02141 \text{ gr/cf} \times 100,000 \text{ cf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr} \times 0.10 \times 8760 \text{ hr/yr} \times \text{ton}/2000 \text{ lbs} \\ = 8.04 \text{ TPY PM}$$

- e. Emission Limitations:
Lead emissions from the baghouse stack serving this emissions unit shall not exceed 0.082 lb/hr.

Applicable Compliance Method:

According to USEPA publication "National Emission Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries - Background Information for Proposed Standards" (EPA - 453/R-02-013, December 2002), per data on page 3-14 of the this publication, lead emission rates are based on a lead percentage of 1.92% of the TSP/PE from the cupola baghouse emissions. The lead emission rate is based on the following calculation:

For G-Unit baghouse:

$$0.0192 \times [0.005 \text{ gr/dscf} \times 80,000 \text{ dscf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr}] = 0.066 \text{ lb lead / hr}$$

For D-Unit baghouse:

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$$0.0192 \times [0.005 \text{ gr/dscf} \times 20,000 \text{ dscf/min} \times 60 \text{ min/hr} \times \text{lb}/7000 \text{ gr}] = 0.016 \text{ lb lead / hr}$$

Provided compliance is demonstrated with the gr/dscf limitation for particulates, compliance will also be shown with the pound per hour limit since 100,000 (80,000 for G-Unit and 20,000 for D-Unit baghouse) dscf/min represents the maximum total combined flow rate for this emissions unit.

Alternatively, compliance may be determined using the actual gr/dscf and air flow rate determined from the most recent stack test which demonstrated compliance with the gr/dscf limitation.

If required, compliance shall be demonstrated by performing a stack test using USEPA methods 1 through 4 and 12 of 40 CFR Part 60, Appendix A.

- f. Emission Limitations:
PE and PM₁₀ emissions from the baghouse stacks serving this emissions unit shall not exceed 18.8 tons per year (TPY).

Lead emissions from the baghouse stacks serving this emissions unit shall not exceed 0.36 TPY..

Applicable Compliance Method:

The annual emission limitations were established by multiplying the hourly emission rate by 8760 hours of operation per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitations shall be assumed provided compliance is maintained with the pounds per hour limitation.

- g. Emission Limitations:
Visible PE emissions from any stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average at any time.

Visible emissions of fugitive dust shall not exceed 10% opacity as a 3-minute average from any non-stack egress point at this emissions unit.

Applicable Compliance Method:

Compliance with the visible emission limitations shall be determined using USEPA Method 9 of 40 CFR Part 60, Appendix A. Compliance with the fugitive dust limitation shall be determined by observing the non-stack egress points (e.g., windows, doors, roof monitors, etc.) serving this emissions unit.

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

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The emission testing shall be conducted within 6 months after beginning full-time operation of the emissions unit

Subsequent performance tests to demonstrate compliance with the fugitive opacity limits shall be conducted no less frequently than once every 6 months.

The emission testing shall be conducted to demonstrate compliance with the allowable particulate, lead, and opacity (stack and fugitive) emission limitations .

The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate(s):for particulate, lead, and opacity (stack and fugitive):

particulate: methods 1 through 5 of 40 CFR Part 60, Appendix A;

lead: methods 1 through 4 and 12 of 40 CFR Part 60, Appendix A;

opacity: method 9 of 40 CFR Part 60, Appendix A;

This emission testing shall include measurement of air flow from this emissions unit to G-Unit baghouse and to D-Unit baghouse.

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

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Cleveland Division of Air Quality (Cleveland DAQ).

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland DAQ. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Cleveland DAQ's refusal to accept the results of the emission test(s).

Personnel from the Cleveland DAQ shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Cleveland DAQ within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Cleveland DAQ.

VI. Miscellaneous Requirements

None

Ford F

PTI A

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
none	none	none

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None