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

3/5/2013

Certified Mail

Daniel Lake
Harrison Steel Plant
1835 Dueber Ave, S.W.
Canton, OH 44706-2798

Facility ID: 1576222002
Permit Number: P0101487
County: Stark

RE: DRAFT AIR POLLUTION TITLE V PERMIT
Permit Type: Renewal

Dear Permit Holder:

A draft of the OAC Chapter 3745-77 Title V permit for the referenced facility has been issued. The purpose of this draft is to solicit public comments. A public notice will appear in the Ohio Environmental Protection Agency (EPA) Weekly Review and the local newspaper, The Canton Repository. A copy of the public notice, the Statement of Basis, and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

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

and

Canton City Health Department
420 Market Avenue
Canton, OH 44702-1544

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified if a public hearing is scheduled. A decision on processing the Title V permit will be made after consideration of comments received and oral testimony if a public hearing is conducted. You will then be provided with a Preliminary Proposed Title V permit and another opportunity to comment prior to the 45-day Proposed Title V permit submittal to U.S. EPA Region 5. The permit will be issued final after U.S. EPA review is completed and no objections to the final issuance have been received. If you have any questions, please contact Canton City Health Department at (330)489-3385.

Sincerely,

Michael W. Ahern

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

Cc: U.S. EPA Region 5 - *Via E-Mail Notification*
Canton; Pennsylvania; West Virginia

PUBLIC NOTICE
3/5/2013 Issuance of Draft Air Pollution Title V Permit

Harrison Steel Plant
1835 Dueber Avenue, S.W.,
Canton, OH 44706
Stark County
FACILITY DESC.: Iron and Steel Mills
PERMIT #: P0101487
PERMIT TYPE: Renewal
PERMIT DESC: Title V Renewal permit for steel bloom and billet manufacturing facility utilizing molten steel from two 63 tph Electric Arc Furnaces.

The Director of the Ohio Environmental Protection Agency issued the draft permit above. The permit and complete instructions for requesting information or submitting comments may be obtained at: http://epa.ohio.gov/dapc/permitsonline.aspx by entering the permit # or: Ed Pabin, Canton City Health Department, 420 Market Avenue, Canton, OH 44702-1544. Ph: (330)489-3385

Statement of Basis For Air Pollution Title V Permit

Facility ID:	1576222002
Facility Name:	Harrison Steel
Facility Description:	Steel Mill with EAFs
Facility Address:	1835 Dueber Avenue, S.W., Canton, OH 44706
Permit #:	P0101487, Renewal

This facility is subject to Title V because it is major for:

☐ Lead ☒ Sulfur Dioxide ☒ Carbon Monoxide ☒ Volatile Organic Compounds ☒ Nitrogen Oxides

☒ Particulate Matter ≤ 10 microns ☐ Single Hazardous Air Pollutant ☐ Combined Hazardous Air Pollutants

☐ Maximum Available Control Technology Standard(s) ☒ GHG ☐ Title IV

A. Standard Terms and Conditions

Has each insignificant emissions unit been reviewed to confirm it meets the definition in OAC rule 3745-77-01(U)?	YES
Were there any "common control" issues associated with this facility? If yes, provide a summary of those issues and explain how the DAPC decided to resolve them.	N/A
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a minor permit modification per OAC rule 3745-77-08(C)(1)	N/A
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a significant permit modification per OAC rule 3745-77-08(C)(3)	N/A

Please identify the affected unit(s)and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a reopening per OAC rule 3745-77-08(D)	N/A
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document resulting from a renewal per OAC rule 3745-77-08(E)	**EUs added or modified:** The initial TV air permit for Timken's Harrison Steel Plant (HSP) was issued on 4-24-2002. This is the first TV renewal permit being issued. The following PTIs for new EUs and PSD Chapter 31 EU modifications have been included in this TV renewal permit: EU Description PTI No. Date issued P293 New 20.1 mmBtu/hr natural gas fired boiler 15-01555 7-1-2004 P294 New 20.1 mmBtu/hr natural gas fired boiler 15-01555 7-1-2004 P295 New 20.1 mmBtu/hr natural gas fired boiler 15-01555 7-1-2004 P297 New 20.1 mmBtu/hr natural gas fired boiler 15-01555 7-1-2004 P298 New 32.5 mmBtu/hr natural gas fired furnace P0106428 6-10-2010 P258 PSD to modify EAF #9 for increased capacity and burning of used tires P0105790 12-29-2010 P292 PSD to modify EAF #2 for increased capacity and burning of used tires. P0105790 12-29-2010 **EU change of status** New inks, solvents, and dyes now used in the Krautkramer Inspection Unit, K207, have resulted in this EU being classified as deminimis. In accordance with the permittee's request, the PTI for this EU has been revoked. Changes in coating and cleanup solvent constituents used in the Elkham Inspection Unit, K206, have resulted in this EU's classification changing from "significant" to "insignificant with applicable requirements" since VOC emissions have been reduced to only 3.3 tpy. All EU IDs which began with a "Z" have been renamed using Engineering Guide No. 81 protocol. **Combined Limit** The emissions from the EAFs (P258 and P292) and all other melt shop emissions units (P201, P202, P222, P264, P282, P288, and P289), are captured by local canopy hoods and by the building enclosure. The canopy hoods and the entire meltshop building are exhausted to common baghouses #4 and #5. Combined baghouse emissions limits were established to demonstrate compliance in PTI P0105790 and have been incorporated.
Please identify the affected unit(s) and pollutant(s) for which a Compliance Assurance Monitoring (CAM) Plan is required per 40 CFR 64. Provide more emissions unit specific detail in Section C.	CAM requirements apply to emissions units P258, P292, P271, and P272 for particulate matter emissions.

B. Facility-Wide Terms and Conditions

Term and Condition (paragraph)	Basis		Comments
	SIP (3745-)	Other	
B.1	N	N	Lists facility-wide terms and conditions that are enforceable under state law only (None).
B.2	N	N	Lists insignificant emissions units that have applicable requirements.
B.3	N	Y	States applicability of 40 CFR, Part 63, Subpart YYYYY for P258 and P292.
B.4	N	Y	States applicability of 40 CFR, Part 60, Subpart AA for P258
B.5	N	Y	States applicability of 40 CFR, Part 60, Subpart Dc for P293, P294, P295, and P297 restricted to monitoring, recordkeeping, and notification requirements only.
B.6	N	Y	States applicability of 40 CFR Part 64, CAM plan requirements, for particulate emissions to P258, P292, P271, and P272.
B.7	25-03	N	States applicability of emergency emissions control action programs.

C. Emissions Unit Terms and Conditions

Key:
EU = emissions unit ID
ND = negative declaration (i.e., term that indicates that a particular rule(s) is (are) not applicable to a specific emissions unit)
OR = operational restriction
M = monitoring requirements
ENF = did noncompliance issues drive the monitoring requirements?
R = record keeping requirements
Rp = reporting requirements
ET = emission testing requirements (not including compliance method terms)
St = streamlining term used to replace a PTI monitoring, record keeping, or reporting requirement with an equivalent or more stringent requirement
Misc = miscellaneous requirements

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
P284 P285 P298	Exempt	17-07(A)		Y	N	N	N	N	N	N	N	N	ND- The emissions units are exempt from the visible emission limitation specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because the emissions units are not subject to the requirements of OAC rule 3745-17-11.
P201 P202 P222 P264	None	17-07(A)		Y	N	Y	N	Y	Y	N	N	N	ND- The visible emissions limitation specified by this rule is less stringent than the visible emissions limitation pursuant 40 CFR, Part 60, Subpart AA, which is effective because these sources share a control device/stack with P258.

P282 P288 P289													M, R, Rp- Daily visible emissions checks. Daily was chosen as a reasonable and practical monitoring frequency.
P258 P292	None	17-07(A)		Y	N	N	N	N	N	N	N	N	ND- The visible emissions limitation specified by this rule is less stringent than the visible emissions limitation pursuant 40 CFR, Part 60, Subpart AA and ORC 3704.03(T).
P287	Stack opacity ≤ 20% as a 6-minute average	17-07(A)		N	Y	N	N	N	N	Y	N	N	OR- The emissions units shall be vented to their baghouses at all times. Monitoring of VEs was determined to be un-necessary taking into consideration pressure drop monitoring per OAC rule 3745-31-05(A)(3), which is adequate, and no VE issues experienced for this emission unit. ET- Compliance with the opacity limit shall be determined through observations in accordance with U.S. EPA Method 9 during testing required within 6 months of the TV renewal permit issuance date.
P271 P272	Stack opacity ≤ 20% as a 6-minute average	17-07(A)		N	Y	Y	N	Y	Y	Y	N	N	OR- The emissions units shall be vented to their baghouses at all times. M, R, Rp- Daily visible emissions checks. Daily was chosen as a reasonable and practical monitoring frequency. ET- Compliance with the opacity limit shall be determined through observations in accordance with U.S. EPA Method 9 during testing required within 6 months of the TV renewal permit issuance date and within 6 months of permit expiration date.
P293 P294 P295 P297	Stack opacity ≤ 20% as a 6-minute average	17-07(A)		N	Y	Y	N	Y	Y	N	N	N	OR- Only natural gas shall be burned in the emission units. M, R, Rp- Record and report each day a fuel other than natural gas was burned. No visible emissions checks are required because these emissions units are inherently clean if fired with natural gas only.
P201 P202 P222 P264 P282 P288 P289	Fugitive dust opacity ≤ 20% as a 3-minute average	17-07(B)		N	Y	Y	N	Y	Y	Y	N	N	OR – The building evacuation control system shall be in service at all times the emissions unit is in operation. M, R, Rp- Daily visible emissions checks for fugitive dust. Daily was chosen as a reasonable and practical monitoring frequency. ET –Testing 6 months after permit issuance was waived taking into consideration the short time span from most recent testing performed in June, 2012, which demonstrated compliance with the limitations. Testing within 6 months of the TV renewal permit expiration date is required using U.S. EPA Method 9.
P271 P272	Fugitive dust opacity ≤ 20% as a 3-minute average	17-07(B)(1)		N	Y	Y	N	Y	Y	Y	N	N	OR – Emissions units shall be vented to the baghouses when one or more of the emissions units are operating. M, R, Rp- Daily visible emissions checks for fugitive dust. Daily was chosen as a reasonable and practical monitoring

													frequency. ET- Compliance with the opacity limit shall be determined through observations in accordance with U.S. EPA Method 9 during testing required within 6 months of the TV renewal permit issuance date and within 6 months of permit expiration date.
P258 P292	None	17-07(B)(3)		Y	N	N	N	N	N	N	N	N	ND- The visible emissions limitation specified by this rule is less stringent than the visible emissions limitation pursuant 40 CFR, Part 60, Subpart AA and ORC 3704.03(T).
F201	Fugitive dust opacity ≤ 10%	17-07(B)(8)(a)		N	N	Y	N	Y	Y	N	N	N	M, R, Rp- Weekly inspections of roadways and parking areas to determine need for implementing control measures (sweeping and/or watering). Weekly was chosen as a reasonable and practical monitoring frequency.
P201 P202 P222 P264 P282	Reasonably available control measures to prevent fugitive dust from becoming airborne	17-08(B)		N	Y	Y	N	Y	Y	N	N	N	OR – The building evacuation control system shall be in service at all times the emissions unit is in operation., which satisfies this requirement. M, R, Rp- Daily visible emissions checks for fugitive dust to ensure RACM is sufficient. Daily was chosen as a reasonable and practical monitoring frequency.
P288 P289	Reasonably available control measures to prevent fugitive dust from becoming airborne	17-08(B)		N	Y	Y	N	Y	Y	N	N	N	OR, - Burn natural gas only, which satisfies this requirement. M, R, Rp- Record and report each day fuel other than NG fired.
P258 P292	None	17-08(B)		Y	N	N	N	N	N	N	N	N	ND- The visible emissions limitation specified by this rule is less stringent than the visible emissions limitation pursuant 40 CFR, Part 60, Subpart AA and ORC 3704.03(T).
P271 P272	Reasonably available control measures to prevent fugitive dust from becoming airborne	17-08(B)		N	Y	Y	N	Y	Y	N	N	N	OR – Emissions units shall be vented to the baghouse when one or more of the emissions units are operating. M, R, Rp- Daily visible emissions checks for fugitive opacity to ensure RACM is sufficient. Daily was chosen as a reasonable and practical monitoring frequency.
F201	Reasonably available control measures to	17-08(B)		N	N	Y	N	Y	Y	N	N	N	M, R, Rp- Weekly inspections of roadways and parking areas to determine need for implementing control measures (sweeping and/or watering). Weekly was chosen as a reasonable and practical monitoring frequency.

	minimize visible emissions of fugitive dust												
P293 P294 P295 P297	None	17-10		Y	N	N	N	N	N	N	N	N	ND – The particulate emissions limitation specified by this rule is less stringent than the particulate emissions limitation pursuant to OAC rule 3745-31-05(A)(3).
P298	None	17-10		Y	N	N	N	N	N	N	N	N	ND – The emissions limitations and control requirements specified by this rule do not apply since this source doesn't meet the definition of fuel burning equipment in OAC rule 3745-17-01(B)(5).
P284 P285 P298	Exempt	17-11		Y	N	N	N	N	N	N	N	N	ND – The uncontrolled mass rate of particulate emissions from each of these emissions units is less than 10 lbs/hr. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight rate that causes any emissions of particulate matter is equal to zero.
P287 P271 P272	None	17-11		Y	N	N	N	N	N	N	N	N	ND – The particulate emissions limitation specified by this rule is less stringent than the particulate emissions limitation pursuant to OAC rule 3745-31-05(A)(3).
P258 P292	None	17-11		Y	N	N	N	N	N	N	N	N	ND – The particulate emissions limitation specified by this rule is less stringent than the emissions limitation pursuant to ORC 3704.03(T).
P201 P202 P222	**None**	17-11		Y	Y	Y	N	Y	Y	Y	N	N	ND- Compliance with each individual particulate emissions limitation specified by this rule is assumed provided the total PE emissions from baghouses #4 and #5 combined do not exceed 0.095 lbs PE per ton of steel produced by the EAFs. OR – The building evacuation control system shall be in service at all times the emissions unit is in operation. M, R, Rp- Daily pressure drop readings. Daily was chosen as a reasonable and practical monitoring frequency. ET – Testing 6 months after permit issuance was waived taking into consideration the short time span from most recent testing performed in June, 2012, which demonstrated compliance with the limitations. Testing within 6 months of the TV renewal permit expiration date is required using U.S. EPA Method 201 or 201A.
P264 P282 P288 P289	None	17-11		Y	N	N	N	N	N	N	N	N	ND – The particulate emissions limitation specified by this rule is less stringent than the emissions limitation pursuant to OAC rule 3745-31-05(A)(3).

P258 P292	None	18-06		Y	N	N	N	N	N	N	N	N	ND – The SO2 emissions limitation specified by this rule is less stringent than the emissions limitation pursuant to ORC 3704.03(T).
P293 P294 P295 P297	None	18-06		Y	N	N	N	N	N	N	N	N	ND – The SO2 emissions limitation specified by this rule is less stringent than the emissions limitation pursuant to OAC rule 3745-31-05(A)(3).
P284 P285	None	18-06(E)		Y	N	N	N	N	N	N	N	N	ND – The SO2 emissions limitation specified by this rule is less stringent than the emissions limitation pursuant to OAC rule 3745-31-05(A)(3).
P264 P288 P289	None	18-06(E)(1)		Y	N	N	N	N	N	Y	N	N	ND- Compliance with each individual SO2 emissions limitation specified by this rule is assumed provided the total SO2 emissions from baghouses #4 and #5 combined do not exceed 19.753 lbs SO2 per ton of steel produced by the EAFs. ET – Testing 6 months after permit issuance was waived taking into consideration the short time span from most recent testing performed in June, 2012, which demonstrated compliance with the limitations. Testing within 6 months of the TV renewal permit expiration date is required using U.S. EPA Method 6 or 6A.
P282	None	18-06(E)(1)		Y	N	N	N	N	N	N	N	N	ND- The SO2 emissions limitation specified by this rule is less stringent than the emissions limitation pursuant to OAC rule 3745-31-05(A)(3).
P293 P294 P295 P297	None	18-82		Y	N	N	N	N	N	N	N	N	ND – The emissions limitations specified by this rule do not apply per OAC rule 3745-18-06(A) since this source burns only natural gas as fuel.
P284	PE/PM_{10}≤ 1.67 lb/hr and 7.31 tpy NOx ≤ 0.13 lb/mmBtu, 30.0 lb/hr, and 131.4 tpy CO ≤ 18.48 lb/hr and 80.94 tpy VOC ≤ 1.21 lb/hr and 5.3 tpy SO2 ≤ 0.13 lb/hr and 0.6 tpy	31-05(A)(3)		N	Y	Y	N	Y	Y	N	N	N	OR – Use only natural gas as fuel. M, R, Rp – Identify and report each day a fuel other than natural gas is burned. Record total annual amount of natural gas burned. ET – Not required. Calculations using AP-42 emissions factors for natural gas firing at maximum capacity determines compliance.

P285	PE/PM_{10}≤ 0.28 lb/hr and 1.22 tpy NOx ≤ 0.13 lb/mmBtu, 5.0 lb/hr, and 21.9 tpy CO ≤ 3.1 lb/hr and 13.58 tpy VOC ≤ 0.2 lb/hr and 0.88 tpy SO2 ≤ 0.022 lb/hr and 0.1 tpy	31-05(A)(3)		N	Y	Y	N	Y	Y	N	N	N	OR – Use only natural gas as fuel. M, R, Rp – Identify and report each day a fuel other than natural gas is burned. Record total annual amount of natural gas burned. ET – Not required. Calculations using AP-42 emissions factors for natural gas firing at maximum capacity determines compliance.
P287	PE/PM_{10}≤ 0.01 gr/dscf, 0.43 lb/hr and 1.88 tpy	31-05(A)(3)		N	Y	Y	N	Y	Y	Y	N	N	OR- The emissions units shall be vented to their baghouses at all times. M, R, Rp- Daily baghouse ΔP checks. Daily was chosen as a reasonable and practical monitoring frequency. ET – Stack testing required 6 months after TV renewal permit issuance using U.S. EPA Method 201 or 201A.
P298	NOx ≤ 3.2 lb/hr, and 14 tpy CO ≤ 2.7 lb/hr and 12 tpy		OAC rule 3745-31-05(A)(3)	N	Y	Y	N	Y	Y	N	N	N	OR – Use only natural gas as fuel. M, R, Rp – Identify and report each day a fuel other than natural gas is burned. ET – Not required. Calculations using AP-42 emissions factors for natural gas firing at maximum capacity determines compliance.
P271 P272	PE/PM_{10}≤ 0.68 lb/hr	31-05(A)(3)		N	Y	Y	N	Y	Y	Y	N	N	OR – The emissions units shall be vented to the baghouse when one or more of the emissions units are in operation. M, R, Rp- Daily visible emissions checks and daily baghouse ΔP checks. Daily was chosen as a reasonable and practical monitoring frequency. ET – Stack testing required within 6 months of the TV renewal permit issuance date and within 6 months of permit expiration date using U.S. EPA Method 201 or 201A.
P258	Pb ≤ 0.00027 lb/ton, 0.017 lb/hr, and 0.054 tpy	31-05(A)(3)		N	Y	Y	N	Y	Y	Y	N	N	OR – The building evacuation control system shall be in service at all times the emissions unit is in operation. M, R, Rp- Daily visible emissions checks and once-per-shift baghouse ΔP checks were chosen as a reasonable and practical monitoring frequency. ET – Stack testing 6 months after permit issuance was waived taking into consideration the short time span from most recent testing performed in June, 2012, which demonstrated compliance with the hourly and lb/ton emissions limitations. Stack testing within 6 months of the TV renewal permit expiration date is still required using U.S. EPA Method 12 or 29.

P292	Pb ≤ 0.00042 lb/ton, 0.026 lb/hr, and 0.084 tpy	31-05(A)(3)		N	Y	Y	N	Y	Y	Y	N	N	OR – The building evacuation control system shall be in service at all times the emissions unit is in operation. M, R, Rp- Daily stack and fugitive visible emissions checks, daily baghouse ΔP checks, and continuous monitoring of baghouse fan motor amps were chosen as reasonable and practical monitoring parameters. ET – Stack testing 6 months after permit issuance was waived taking into consideration the short time span from most recent testing performed in June, 2012, which demonstrated compliance with the hourly and lb/ton emissions limitations. Stack testing within 6 months of the TV renewal permit expiration date is still required using U.S. EPA Method 12 or 29.
P264	PE/PM_{10}≤ 5.49 lb/hr	31-05(A)(3)		Y	Y	Y	N	Y	Y	Y	N	N	ND - Compliance with the particulate emissions limitation specified by this rule is assumed provided the total particulate emissions from baghouses #4 and #5 combined do not exceed 0.095 lbs PE/PM_{10} per ton of steel produced by the EAFs. OR- Oxygen injection prohibited. OR, M, R, Rp- The melt shop building evacuation system captures the emissions from this emissions unit and the emissions from the EAFs (P258 and P292). The combined emissions exhaust to shared baghouses #4 and #5. The OR, M, R, and Rp requirements for the EAFs are therefore applicable to P264. ET- Stack testing of this EU is included in the stack testing done for the EAFs.
P282	PE/PM_{10}≤ 0.0052gr/dscf, 3.2lb/hr and 14.1 tpy CO ≤ 65lb/hr, and 51.44 tpy SO_2≤ 1.62 lb/hr, 195 lb/day,2.61 tons/month, and 31.33 tpy	31-05(A)(3)		Y	Y	Y	N	Y	Y	Y	N	N	ND - Compliance with the particulate, CO, and SO2 emissions limitations specified by this rule are assumed provided the total emissions from baghouses #4 and #5 combined do not exceed 0.095 lbs PE/PM_{10} per ton, 9.84 lbs CO per ton, and 19.753 lbs SO2 per ton of steel produced by the EAFs. OR, Rp- Oxygen injection prohibited, report each violation. OR- Sulfur addition not to exceed 500lb/hr, 1500lb/day, 21.9 tons/month, and 263 tpy. M, R, Rp- Daily records of Sulfur addition, report exceedances. OR, M, R, Rp- The melt shop building evacuation system captures the emissions from this emissions unit and the emissions from the EAFs (P258 and P292). The combined emissions exhaust to shared baghouses #4 and #5. The OR, M, R, and Rp requirements for the EAFs are therefore applicable to P282. ET- Stack testing of this EU is included in the stack testing done for the EAFs.
P288 P289	PE/PM_{10}≤ 0.03lb/hr and 0.131 tpy CO ≤ 0.035	31-05(A)(3)		Y	Y	Y	N	Y	Y	Y	N	N	ND - Compliance with the particulate, CO, and NOx emissions limitations specified by this rule are assumed provided the total emissions from baghouses #4 and #5 combined do not exceed 0.095 lbs PE/PM_{10} per ton, 9.84 lbs CO per ton, and 0.42 lbs

	lb/mmBtu, 0.42 lb/hr and 1.84 tpy NOx ≤ 0.14 lb/mmBtu, 1.68 lb/hr and 7.36 tpy												NOx per ton of steel produced by the EAFs. OR – Use only natural gas as fuel. M, R, Rp – Identify and report each day a fuel other than natural gas is burned. Record total annual amount of natural gas burned. OR, M, R, Rp- The melt shop building evacuation system captures the emissions from this emissions unit and the emissions from the EAFs (P258 and P292). The combined emissions exhaust to shared baghouses #4 and #5. The OR, M, R, and Rp requirements for the EAFs are therefore applicable to P288 and P289. ET- Stack testing of this EU is included in the stack testing done for the EAFs.
P293 P294 P295 P297	PE/PM_{10}≤ 0.15 lb/hr and 0.66 tpy NOx ≤ 2.32 lb/hr, and 10.16 tpy CO ≤ 1.62 lb/hr and 7.10 tpy VOC ≤ 0.11 lb/hr and 0.48 tpy SO2 ≤ 0.1 lb/hr and 0.04 tpy	31-05(A)(3)		N	Y	Y	N	Y	Y	N	N	N	OR – Use only natural gas as fuel. M, R, Rp – Identify and report each day a fuel other than natural gas is burned. ET – Not required. Calculations using AP-42 emissions factors for natural gas firing at maximum capacity determines compliance.
P258 P292	Synthetic Minor restriction on SO2 emissions of 419 tpy to avoid major NSR for SO2 as a combined limit with P102 from the Faircrest Steel Plant	31-05(D)		N	Y	Y	N	Y	Y	Y	N	N	OR – Burning of used tires in the EAFs as a substitute for coke is expected to increase SO2 emissions. Quantity of tires burned shall not exceed 12,930 tpy. OR – Sulfur shall not be added to these emissions units. OR - Calculate SO2 emissions as a rolling 12-month summation based on emissions factors developed with and without tire burning. M, R, Rp – Monitor and record monthly: the steel production with and without tire burning, weight of tires burned, and SO2 emissions calculated. Report exceedances of 12-month summation limit on SO2 emissions, steel production rate, and weight of tires burned. ET - Stack testing for SO2 emissions required within 6 months prior to TV permit expiration using U.S. EPA Method 6 or 6A. Stack testing 6 months after permit issuance was waived taking into consideration the short time span from most recent testing performed in June, 2012, which demonstrated compliance with the hourly and lb/ton emissions limitation.

P258 P292	CO ≤ 4.8 lb/ton, 302 lb/hr, and 960 tpy	31-10 to 31-20		N	N	N	N	N	N	Y	N	N	Employ BACT of acceptance of the CO emission limitation. ET - Stack testing for CO emissions is required within 6 months prior to the TV permit expiration using U.S. EPA Method 10. Stack testing 6 months after permit issuance was waived taking into consideration the short time span from most recent testing performed in June, 2012, which demonstrated compliance with the hourly and lb/ton emissions limitation.
P258 P292	VOC ≤ 0.37 lb/ton, 23.3 lb/hr and 74 tpy	31-10 to 31-20		N	Y	Y	N	Y	Y	Y	N	N	Employ BACT of the OR, M, R, and Rp requirements. OR – Facility shall implement and maintain a scrap management plan for control of chlorinated plastics and free organic liquid contaminants in the metallic scrap charged to the EAFs. M, R, Rp – Comply with M, R, Rp requirements of 40 CFR 63 Subpart YYYYY. ET - Stack testing for VOC emissions is required within 6 months prior to the TV permit expiration. Stack testing 6 months after permit issuance was waived taking into consideration the short time span from most recent testing performed in June, 2012, which demonstrated compliance with the hourly and lb/ton emissions limitation.
P258 P292	Hg ≤ 0.00020 lb/ton, 0.013 lb/hr and 0.04 tpy	114		N	Y	Y	N	Y	Y	Y	N	N	OR – Facility shall implement and maintain a scrap management plan (SMP) for control of mercury in the metallic scrap charged to the EAFs. M, R, Rp – Keep records and report deviations per SMP. ET - Stack testing for Hg emissions is required within 6 months prior to the TV permit expiration. Stack testing 6 months after permit issuance was waived taking into consideration the short time span from most recent testing performed in June, 2012, which demonstrated compliance with the hourly and lb/ton emissions limitation.
P258 P292	Stack opacity ≤ 3% as a 6-minute average Fugitive dust opacity from the meltshop ≤ 6% at any time Fugitive dust opacity from the meltshop baghouse dust handling system ≤ 10% as a 6-minute average		ORC 3704.03(T)	N	Y	Y	N	Y	Y	Y	N	N	OR – The building evacuation control system shall be in service at all times the emissions unit is in operation. M, R, Rp- Daily visible emissions observations for VE from baghouse stacks and fugitive dust VE using USEPA Method 9. Daily was chosen as a reasonable and practical monitoring frequency. ET- Compliance with the opacity limit shall be determined through daily observations in accordance with U.S. EPA Method 9. Also, opacity observations required simultaneously with PE stack testing within 6 months prior to the TV permit expiration date.

P258 P292	SO2 ≤ 0.44 lb/ton NOx ≤ 0.44 lb/ton		ORC 3704.03(T)	N	Y	Y	N	Y	Y	Y	N	N	OR – Sulfur shall not be added to these emissions units. M, R, Rp – Monitor and record monthly: the steel production with and without tire burning, weight of tires burned, and SO2 emissions calculated. Report exceedances of 12-month summation limit on SO2 emissions, steel production rate, and weight of tires burned in accordance with OAC rule 3745-31-05(D). ET - Stack testing for SO2 & NOx emissions required within 6 months prior to TV permit expiration. Stack testing 6 months after permit issuance was waived taking into consideration the short time span from most recent testing performed in June, 2012, which demonstrated compliance with the lb/ton emissions limitations.
P258	Filterable PM10/PM2.5 ≤ 0.00032 gr/dscf and 0.043 lb/ton		ORC 3704.03(T)	N	Y	Y	N	Y	Y	Y	N	N	OR – The building evacuation control system shall be in service at all times the emissions unit is in operation. M, R, Rp- Daily stack and fugitive visible emissions checks and daily baghouse ΔP checks were chosen as reasonable and practical monitoring parameters. ET – Stack testing for particulate emissions is required within 6 months prior to the TV permit expiration. Stack testing 6 months after permit issuance was waived taking into consideration the short time span from most recent testing performed in June, 2012, which demonstrated compliance with the gr/dscf emissions limitation.
P292	Filterable PM10/PM2.5 ≤ 0.00048 gr/dscf and 0.052 lb/ton		ORC 3704.03(T)	N	Y	Y	N	Y	Y	Y	N	N	OR – The building evacuation control system shall be in service at all times the emissions unit is in operation. M, R, Rp- Daily stack and fugitive visible emissions checks and daily baghouse ΔP checks were chosen as reasonable and practical monitoring parameters. ET – Stack testing for particulate emissions is required within 6 months prior to the TV permit expiration. Stack testing 6 months after permit issuance was waived taking into consideration the short time span from most recent testing performed in June, 2012, which demonstrated compliance with the gr/dscf emissions limitation.
P258	None		40 CFR Part 60, Subpart AA	Y	Y	Y	N	Y	Y	N	N	N	ND – The particulate emission limitations and opacity limitations specified by this rule are equal to or less stringent than the particulate emissions limitations and opacity limitations pursuant to ORC 3704.03(T). OR – The building evacuation control system shall be in service at all times the emissions unit is in operation. M, R, Rp- Daily stack and fugitive visible emissions checks were chosen as reasonable and practical monitoring parameters.

P293 P294 P295 P297	None		40 CFR Part 60, Subpart Dc	N	Y	N	N	Y	Y	N	N	N	OR – Use only natural gas as fuel. R, Rp – Only recordkeeping and notification requirements apply since only natural gas is burned. Record monthly total amount of natural gas burned.
P271 P272	None		40 CFR Part 64 (CAM)	N	Y	Y	N	Y	Y	N	N	N	OR – The emissions units shall be vented to the baghouse when one or more of the emissions units is in operation. M, R, Rp – The CAM performance indicators for particulate emissions are the static pressure drop across the baghouse and visible emissions checks representative of normal operations. Daily monitoring of these parameters were chosen as reasonable and practical. A baghouse maintenance program is required and sufficient spare parts must be maintained.
P258 P292	None		40 CFR Part 64 (CAM)	N	Y	Y	N	Y	Y	N	N	N	OR – The building evacuation control system shall be in service at all times the emissions units are in operation. M, R, Rp – The CAM performance indicators for particulate emissions are the static pressure drop across the baghouse monitored once-per-shift, the baghouse exhaust fans motor amps, monitored once-per-shift, and visible emissions checks of the stacks and fugitive dust from the meltshop representative of normal operations monitored daily. The monitoring frequency of these parameters was chosen as reasonable and practical. A baghouse maintenance program is required and sufficient spare parts must be maintained.
P258 P292	None		40 CFR Part 63, Subpart YYYYY.	Y	Y	Y	N	Y	Y	N	N	N	ND - With the exception of the requirements for maintaining a Scrap Management Plan and participation in an approved mercury plan, the control measures, particulate emissions, and opacity limitations specified by this rule are less stringent than the limitations pursuant to 40 CFR Part 60, Subpart AA, and ORC 3704.03(T). OR – Maintain a Scrap procurement and Management Plan (SMP) to control mercury, lead, chlorinated plastics and free organic liquid contaminants in the metallic scrap charged to the EAFs. M, R, Rp – Keep records and report deviations per SMP.

DRAFT

Division of Air Pollution Control
Title V Permit
for
Harrison Steel Plant

Facility ID:	1576222002
Permit Number:	P0101487
Permit Type:	Renewal
Issued:	3/5/2013
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance

Division of Air Pollution Control
Title V Permit
for
Harrison Steel Plant

Table of Contents

Authorization 1
A. Standard Terms and Conditions 2
1. Federally Enforceable Standard Terms and Conditions 3
2. Monitoring and Related Record Keeping and Reporting Requirements 3
3. Scheduled Maintenance 6
4. Risk Management Plans 6
5. Title IV Provisions 7
6. Severability Clause 7
7. General Requirements 7
8. Fees 8
9. Marketable Permit Programs 8
10. Reasonably Anticipated Operating Scenarios 9
11. Reopening for Cause 9
12. Federal and State Enforceability 9
13. Compliance Requirements 9
14. Permit Shield 11
15. Operational Flexibility 11
16. Emergencies 11
17. Off-Permit Changes 12
18. Compliance Method Requirements 12
19. Insignificant Activities or Emissions Levels 12
20. Permit to Install Requirement 13
21. Air Pollution Nuisance 13
22. Permanent Shutdown of an Emissions Unit 13
23. Title VI Provisions 13
24. Reporting Requirements Related to Monitoring and Record Keeping Requirements Under State Law Only 14
25. Records Retention Requirements Under State Law Only 14
26. Inspections and Information Requests 14
27. Scheduled Maintenance/Malfunction Reporting 15
28. Permit Transfers 15

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

B. Facility-Wide Terms and Conditions 16

C. Emissions Unit Terms and Conditions 18

1. F201, Roadways and Parking Areas 19
2. P284, New Bar Mill 23
3. P285, Reheat Furnace 29
4. P287, Pangborn Shot Blaster 35
5. P298, Finishing Furnace 41
6. Emissions Unit Group -Bloom Grinders: P271,P272 45
7. Emissions Unit Group -Electric Arc Furnaces: P258,P292, ... 54
8. Emissions Unit Group -Melt Shop EUs: P201,P202,P222,P264,P282,P288,P289, ... 79
9. Emissions Unit Group -Steam Generators, 20.1 mmBtu/hr: P293,P294,P295,P297, ... 96

Authorization

Facility ID:	1576222002
Facility Description:	Steel mill w/ EAFs
Application Number(s):	A0033283, A0033284, A0033285, A0041794, A0044149, A0045977, A0046328
Permit Number:	P0101487
Permit Description:	Title V Renewal permit for steel bloom and billet manufacturing facility utilizing molten steel from two 63 tph Electric Arc Furnaces.
Permit Type:	Renewal
Issue Date:	3/5/2013
Effective Date:	To be entered upon final issuance
Expiration Date:	To be entered upon final issuance
Superseded Permit Number:	P0101486

This document constitutes issuance of an OAC Chapter 3745-77 Title V permit to:

Harrison Steel Plant
1835 Dueber Avenue, S.W.
Canton, OH 44706

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Canton City Health Department
420 Market Avenue
Canton, OH 44702-1544
(330)489-3385

The above named entity is hereby granted a Title V permit pursuant to Chapter 3745-77 of the Ohio Administrative Code. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. You will be sent a notice approximately 18 months prior to the expiration date regarding the renewal of this permit. If you do not receive a notice, please contact the Canton City Health Department. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, if a timely renewal application is submitted. A renewal application will be considered timely if it is submitted no earlier than 18 months (540 days) and no later than 6 months (180 days) prior to the expiration date.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally
Director

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:

(1) Standard Term and Condition A. 24., Reporting Requirements Related to Monitoring and Record Keeping Requirements of State-Only Enforceable Permit Terms and Conditions

(2) Standard Term and Condition A. 25., Records Retention Requirements for State-Only Enforceable Permit Terms and Conditions

(3) Standard Term and Condition A. 27., Scheduled Maintenance/Malfunction Reporting

(4) Standard Term and Condition A. 29., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

(Authority for term: ORC 3704.036(A))

2. Monitoring and Related Record Keeping and Reporting Requirements

a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit), the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

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

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

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

(4) The analytical techniques or methods used.

(5) The results of such analyses.

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

(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))

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 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.

(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))

c) The permittee shall submit required reports in the following manner:

(1) All reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations caused by malfunctions shall be submitted in the following manner:

Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the OAC rule 3745-77-07(A)(3)(c) deviation reporting requirements for malfunctions, written reports that identify each malfunction that occurred during each calendar quarter (including each malfunction reported only verbally in accordance with OAC rule 3745-15-06) shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year in accordance with Standard Term and Condition A.2.c)(2) below; and each report shall cover the previous calendar quarter. An exceedance of the visible emission limitations specified in OAC rule 3745-17-07(A)(1) that is caused by a malfunction is not a violation and does not need to be reported as a deviation if the owner or operator of the affected air contaminant source or air pollution control equipment complies with the requirements of OAC rule 3745-17-07(A)(3)(c).

In accordance with OAC rule 3745-15-06, a malfunction reportable under OAC rule 3745-15-06(B) is a deviation of the federally enforceable permit requirements. Even though verbal notifications and written reports are required for malfunctions pursuant to OAC rule 3745-15-06, the written reports required pursuant to this term must be submitted quarterly to satisfy the prompt reporting provision of OAC rule 3745-77-07(A)(3)(c).

In identifying each deviation caused by a malfunction, the permittee shall specify the emission limitation(s) (or control requirement(s)) for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing on a quarterly basis.

Any scheduled maintenance, as referenced in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described above for malfunctions.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

(2) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit or, in some cases, in section B. Facility-Wide Terms and Conditions of this Title V permit), all reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations of the emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:

Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the probable cause of such deviations, and (c) any corrective actions or preventive

measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. Except as provided below, the written reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

In identifying each deviation, the permittee shall specify the emission limitation(s), operational restriction(s), and/or control device operating parameter limitation(s) for which the deviation occurred, describe each deviation, and provide the estimated magnitude and duration of each deviation.

These written deviation reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations. Full compliance with OAC rule 3745-77-07(A)(3)(c) requires reporting of all other deviations of the federally enforceable requirements specified in the permit as required by such rule.

If an emissions unit has a deviation reporting requirement for a specific emission limitation, operational restriction, or control device operating parameter limitation that is not on a quarterly basis (e.g., within 30 days following the end of the calendar month, or within 30 or 45 days after the exceedance occurs), that deviation reporting requirement satisfies the reporting requirements specified in this Standard Term and Condition for that specific emission limitation, operational restriction, or control device parameter limitation. Following the provisions of that non-quarterly deviation reporting requirement will also satisfy (for the deviations so reported) the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations, and additional quarterly deviation reports for that specific emission limitation, operational restriction, or control device parameter limitation are not required pursuant to this Standard Term and Condition.

See A.29 below if no deviations occurred during the quarter.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

(3) All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) for other deviations of the federally enforceable permit requirements which are not reported in accordance with Standard Term and Condition A.2)c)(2) above shall be submitted in the following manner:

Unless otherwise specified by rule, written reports that identify deviations of the following federally enforceable requirements contained in this permit; Standard Terms and Conditions: A.3, A.4, A.5, A.7.e), A.8, A.13, A.15, A.19, A.20, A.21, and A.23 of this Title V permit, as well as any deviations from the requirements in section C. Emissions Unit Terms and Conditions of this Title V permit, and any monitoring, record keeping, and reporting requirements, which are not reported in accordance with Standard Term and Condition A.2.c)(2) above shall be submitted (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency by January 31 and July 31 of each year; and each report shall cover the previous six calendar months. Unless otherwise specified by rule, all other deviations from federally enforceable requirements identified in this permit shall be submitted annually as part of the annual compliance certification, including deviations of federally enforceable requirements not specifically addressed by permit or rule for the

insignificant activities or emissions levels (IEU) identified in section B. Facility-Wide Terms and Conditions of this Title V permit. Annual reporting of deviations is deemed adequate to meet the deviation reporting requirements for IEUs unless otherwise specified by permit or rule.

In identifying each deviation, the permittee shall specify the federally enforceable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation.

These semi-annual and annual written reports shall satisfy the reporting requirements of OAC rule 3745-77-07(A)(3)(c) for any deviations from the federally enforceable requirements contained in this permit that are not reported in accordance with Standard Term and Condition A.2.c)(2) above.

If no such deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no such deviations occurred during that period.

(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii) and OAC rule 3745-77-07(A)(13)(b))

(4) 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 (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete."

(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))

(5) Reports of any required monitoring and/or record keeping information shall be submitted to Canton City Health Department.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

3. Scheduled Maintenance

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. Except as provided in OAC rule 3745-15-06(A)(3), any scheduled maintenance necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s). Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described for malfunctions in Standard Term and Condition A.2.c)(1) above.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

4. Risk Management Plans

If applicable, the permittee shall 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"); and, pursuant to 40 C.F.R. 68.215(a), the permittee shall submit either of the following:

a) a compliance plan for meeting the requirements of 40 C.F.R. Part 68 by the date specified in 40 C.F.R. 68.10(a) and OAC 3745-104-05(A); or

b) as part of the compliance certification submitted under 40 C.F.R. 70.6(c)(5), a certification statement that the source is in compliance with all requirements of 40 C.F.R. Part 68 and OAC Chapter 3745-104, including the registration and submission of the risk management plan.

(Authority for term: OAC rule 3745-77-07(A)(4))

5. 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.

(Authority for term: OAC rule 3745-77-07(A)(5))

6. 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.

(Authority for term: OAC rule 3745-77-07(A)(6))

7. 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, in accordance with Standard Term and Condition A.11 below. 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.

f) Except as otherwise indicated below, this Title V permit, or permit modification, is effective for five years from the original effective date specified in the permit. In the event that this facility becomes eligible for non-title V permits, this permit shall cease to be enforceable when:

(1) the permittee submits an approved facility-wide potential to emit analysis supporting a claim that the facility no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on the permanent shutdown and removal of one or more emissions units identified in this permit; or

(2) the permittee no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on obtaining restrictions on the facility-wide potential(s) to emit that are federally enforceable or legally and practically enforceable ; or

(3) a combination of (1) and (2) above.

The permittee shall continue to comply with all applicable OAC Chapter 3745-31 requirements for all regulated air contaminant sources once this permit ceases to be enforceable. The permittee shall comply with any residual requirements, such as quarterly deviation reports, semi-annual deviation reports, and annual compliance certifications covering the period during which this Title V permit was enforceable. All records relating to this permit must be maintained in accordance with law.

(Authority for term: OAC rule 3745-77-01(W), OAC rule 3745-77-07(A)(3)(b)(ii), OAC rule 3745-77(A)(7))

8. 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.

(Authority for term: OAC rule 3745-77-07(A)(8))

9. Marketable Permit Programs

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.

(Authority for term: OAC rule 3745-77-07(A)(9))

10. Reasonably Anticipated Operating Scenarios

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these standard terms and conditions shall apply to all operating scenarios authorized in this permit.

(Authority for term: OAC rule 3745-77-07(A)(10))

11. Reopening for Cause

This Title V permit will be reopened prior to its expiration date under the following conditions:

a) Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.

b) This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.

c) The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.

d) The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

(Authority for term: OAC rules 3745-77-07(A)(12) and 3745-77-08(D))

12. 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.

(Authority for term: OAC rule 3745-77-07(B))

13. Compliance Requirements

a) Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V 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:

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

(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.

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

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

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:

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

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

d) Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) and the Administrator of the U.S. EPA in the following manner and with the following content:

(1) Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted (i.e., postmarked) on or before April 30th of each year during the permit term.

(2) Compliance certifications shall include the following:

a. An identification of each term or condition of this permit that is the basis of the certification.

b. The permittee's current compliance status.

c. Whether compliance was continuous or intermittent.

d. The method(s) used for determining the compliance status of the source currently and over the required reporting period.

e. Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.

(3) Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

(Authority for term: OAC rules 3745-77-07(C)(1),(2),(4) and (5) and ORC section 3704.03(L))

14. Permit Shield

a) Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.

b) This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

(Authority for term: OAC rule 3745-77-07(F))

15. Operational Flexibility

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the appropriate Ohio EPA District Office or local air agency with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the appropriate District Office of the Ohio EPA or local air agency as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).

(Authority for term: OAC rules 3745-77-07(H)(1) and (2))

16. Emergencies

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met. This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.

(Authority for term: OAC rule 3745-77-07(G))

17. Off-Permit Changes

The owner or operator of a Title V source may make any change in its operations or emissions at the source that is not specifically addressed or prohibited in the Title V permit, without obtaining an amendment or modification of the permit, provided that the following conditions are met:

a) The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.

b) The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA, except that no such notice shall be required for changes that qualify as insignificant emissions levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.

c) The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).

d) The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

e) The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

Paragraph (I) of rule 3745-77-07 of the Administrative Code applies only to modification or amendment of the permittee's Title V permit. The change made may require a permit-to-install under Chapter 3745-31 of the Administrative Code if the change constitutes a modification as defined in that Chapter. Nothing in paragraph (I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.

(Authority for term: OAC rule 3745-77-07(I))

18. Compliance Method Requirements

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Fed. Reg. 8314, Feb. 24, 1997), in the context of any future proceeding.

(This term is provided for informational purposes only.)

19. Insignificant Activities or Emissions Levels

Each IEU that has one or more applicable requirements shall comply with those applicable requirements.

(Authority for term: OAC rule 3745-77-07(A)(1))

20. Permit to Install Requirement

Prior to the "installation" or "modification" of any "air contaminant source," as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.

(Authority for term: OAC rule 3745-77-07(A)(1))

21. 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.

(Authority for term: OAC rule 3745-77-07(A)(1))

22. Permanent Shutdown of an Emissions Unit

The permittee may notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification from the responsible official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the responsible official that the emissions unit was permanently shut down.

After the date on which an emissions unit is permanently shut down (i.e., that has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31 and therefore ceases to meet the definition of an "emissions unit" as defined in OAC rule 3745-77-01(O)), rendering existing permit terms and conditions irrelevant, the permittee shall not be required, after the date of the certification and submission to Ohio EPA, to meet any Title V permit requirements applicable to that emissions unit, except for any residual requirements, such as the quarterly deviation reports, semi-annual deviation reports and annual compliance certification covering the period during which the emissions unit last operated. All records relating to the shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law.

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

(Authority for term: OAC rule 3745-77-01)

23. Title VI Provisions

If applicable, the permittee shall comply with the standards for recycling and reducing emissions of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 CFR 82.156.

b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment specified in 40 CFR 82.158.

c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

(Authority for term: OAC rule 3745-77-01(H)(11))

24. Reporting Requirements Related to Monitoring and Record Keeping RequirementsUnder State Law Only

The permittee shall submit required reports in the following manner:

a) Reports of any required monitoring and/or record keeping 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 (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) 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. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

25. Records Retention RequirementsUnder State Law Only

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.

26. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. 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 verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

(Authority for term: OAC rule 3745-77-07(C))

27. 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 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. 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 emissions unit(s) that is (are) served by such control system(s).

28. 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.

(Authority for term: OAC rule 3745-77-01(C))

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

If no emission limitation (or control requirement), operational restriction and/or control device parameter limitation deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

The permittee is not required to submit a quarterly report which states that no deviations occurred during that quarter for the following situations:

a) where an emissions unit has deviation reporting requirements for a specific emission limitation, operational restriction, or control device parameter limitation that override the deviation reporting requirements specified in Standard Term and Condition A.2.c)(2); or

b) where an uncontrolled emissions unit has no monitoring, record keeping, or reporting requirements and the emissions unit's applicable emission limitations are established at the potentials to emit; or

c) where the company's responsible official has certified that an emissions unit has been permanently shut down.

B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

a) None.

2. The following insignificant emissions unit(s) at this facility must comply with all applicable State and Federal regulations, as well as any emissions limitations and/or control requirements contained within the identified permit to install for the emissions unit. The insignificant emissions unit(s) listed below is/are subject to one or more applicable requirements contained in a permit-to-install or in the SIP-approved versions of OAC Chapters 3745-17, 3745-21 and 3745-31.

a) K206: Elkem Inspection Unit (PTI 15-849 issued on 9/2/1992).

3. The following emissions units in this permit are subject to National Emissions Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63, Subpart YYYYY, Maximum Achievable Control Standards (MACT): P258 and P292. The complete NESHAP/MACT requirements, including the NESHAP/MACT General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the Canton City Health Department, Air Pollution Control Division.

4. The following emission unit in this permit is subject to New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart AA, for Electric Arc Furnaces in Steel Plants: P258. The complete NSPS requirements, including the NSPS General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the Canton City Health Department, Air Pollution Control Division.

5. The following emission units in this permit are subject to New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc, for Small Industrial-Commercial-Institutional Steam Generating Units: P293, P294, P295, and P297. Based on firing natural gas only, these emissions units are subject only to the monitoring, recordkeeping, and notification requirements of 40 CFR Part 60, Subpart Dc. The applicable sections of 40 CFR Part 60, Subpart Dc, have been cited in the appropriate sections of this permit for these emissions units. The complete NSPS requirements, including the NSPS General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the Canton City Health Department, Air Pollution Control Division.

6. Pursuant to 40 CFR Part 64, the permittee is subject to Compliance Assurance Monitoring (CAM) plans for particulate emissions from emissions units P258, P292, P271, and P272 at this facility. The permittee shall comply with the provisions of the CAM plans during any operation of the aforementioned emissions units.

7. This facility is subject to the applicable requirements specified in OAC Chapter 3745-25. In accordance with Ohio EPA Engineering Guide #64, the emission control action programs, as specified in OAC rule 3745-25-03, shall be developed and submitted within 60 days after receiving notification from the Ohio EPA.

C. Emissions Unit Terms and Conditions

1. F201, Roadways and Parking Areas

Operations, Property and/or Equipment Description:

Paved and Unpaved Roadways and Parking Areas used by vehicles with 4 to 18 wheels.

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-17-07(B)(8)(a)	Visible particulate emissions from any roadway or parking area shall not exceed 10% opacity as determined in accordance with paragraph (B)(3) of OAC rule 3745-17-03. See b)(2)a.
b.	OAC rule 3745-17-08(B)	Reasonably available control measures (RACM) shall be employed that are sufficient to minimize or eliminate visible emissions of fugitive dust. See b)(2)a. through b)(2)h.

(2) Additional Terms and Conditions

a. The paved roadways and parking areas that are covered by this permit and subject to the requirements of OAC rules 3745-17-07 and 3745-17-08 are listed below:

Identification	**Surface**	**Composition**	**Approx. Area (sq. ft.)**
Parking Areas 1	Unpaved	Gravel	80,820
Parking Areas 2	Paved	Asphalt	80,820
Plantwide Road 1	Paved	Asphalt	279,320
Plantwide Road 2	Paved	Chip and Seal	300,000

b. The permittee shall employ reasonably available control measures on all paved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's

permit application, the permittee has committed to treat the paved roadways and parking areas by vacuum sweeping and broom sweeping at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

c. The permittee shall employ reasonably available control measures on all unpaved parking areas and the unpaved shoulders of all paved roadways for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat these unpaved areas with water and/or any other suitable dust suppression chemicals at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

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

e. Any unpaved roadway or parking area, which during the term of this permit is paved shall be subject to the visible emission limitation for paved roadways and parking areas.

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

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

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

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform inspections of the roadways and parking areas in accordance with the following frequencies:

Identification	Minimum inspection frequency
Parking Areas 1	Weekly
Parking Areas 2	Weekly
Plantwide Road 1	Weekly
Plantwide Road 2	Weekly

[Authority for term: OAC rule 3745-77-07(C)(1)]

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

[Authority for term: OAC rule 3745-77-07(C)(1)]

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

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

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

c. the dates the control measures were implemented; and

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

The information required in d)(3)d. shall be kept separately for (i) the paved roadways and parking areas and (ii) the unpaved roadways and parking areas, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

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

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

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

[Authority for term: OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) Compliance with the emission limitations in b)(1) shall be determined in accordance with the following methods:

a. Emission Limitation:

Visible particulate emissions from any paved roadway or parking area shall not exceed 10% opacity as determined in accordance with paragraph (B)(3) of OAC rule 3745-17-03.

Applicable Compliance Method:

If required, compliance with the visible particulate emissions limitation listed above shall be determined in accordance with U.S. EPA Method 9 and the modifications listed in paragraph (B)(3)(d) of OAC rule 3745-17-03.

[Authority for term: OAC rule 3745-77-07(C)(1)] .

g) Miscellaneous Requirements

(1) None.

2. P284, New Bar Mill

Operations, Property and/or Equipment Description:

228 mmBtu/hr natural gas fired reheat furnace; new bar mill

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 15-01250 issued 10/16/2003)	Particulate emissions less than 10 microns in diameter (PE/PM_{10}) shall not exceed 1.67 lbs/hr and 7.31 tons/yr. See b)(2)a. Nitrogen oxide (NOx) emissions shall not exceed 0.13 lb/mmBtu, 30.0 lbs/hr, and 131.4 tons/yr. Carbon monoxide (CO) emissions shall not exceed 18.48 lbs/hr and 80.94 tons/yr. Volatile organic compound (VOC) emissions shall not exceed 1.21 lb/hr and 5.3 tons/yr. Sulfur dioxide (SO_2) emissions shall not exceed 0.13 lbs/hr and 0.6 tons/yr. See b)(2)b.
b.	OAC rule 3745-17-11	Exempt. See b)(2)d.
c.	OAC rule 3745-17-07(A)	Exempt. See b)(2)e.
d.	OAC rule 3745-18-06(E)(1)	See b)(2)f.

(2) Additional Terms and Conditions

a. All particulate emissions are generated from natural gas combustion and are assumed to be less than 10 microns in diameter (designated as PE/PM_{10}).

b. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) for this emissions unit shall be demonstrated by the use of low NOx burners and compliance with the emissions limits listed in b)(1)a.

c. The emissions limitations for PE/PM_{10}, NOx, CO, VOC, and SO_2 are based on the emission unit's potential to emit. Therefore, no monitoring, record keeping, and reporting requirements are necessary to ensure ongoing compliance with these emissions limitations.

d. The burning of natural gas is the only source of PE/PM_{10} from this emissions unit. The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply pursuant to OAC rule 3745-17-11(A)(4) because the process weight that causes any emissions of particulate matter is equal to zero.

e. This emissions unit is exempt from the visible particulate emissions limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because the emissions unit is not subject to the requirements of OAC rule 3745-17-11.

f. The emission limitation required by this applicable rule is less stringent than the emission limitation pursuant to OAC rule 3745-31-05(A)(3) for Best Available Technology (BAT).

c) Operational Restrictions

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

[Authority for term: OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

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

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) Records shall be maintained of the total annual amount of natural gas burned in this emissions unit.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 15-01250]

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(A)(1)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. each day when a fuel other than natural gas was burned in this emissions unit.

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

[Authority for term: OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

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

a. <u>Emission Limitation:</u>

Particulate emissions less than 10 microns in diameter (PE/PM_{10}) shall not exceed 1.67 lbs/hr and 7.31 tons/yr.

<u>Applicable Compliance Method:</u>

The hourly PE/PM_{10} emissions rate was established by calculation using the following formula:

E = (A) x (B), where:

E= Calculated (PE/PM_{10}) emissions rate from burning natural gas, in lb/hr;

A = 7.6 lb/mmscf, emission factor for (PE/PM_{10}) from natural gas combustion from AP-42, Section 1.4 Natural Gas Combustion, Table 2.4-2, 7/98; and

B = 0.22 mmscf/hr, maximum fuel consumption rate of the furnace calculated by dividing the maximum rated heat input to the furnace of 228 mmBtu/hr by the natural gas heating value of 1040 Btu/scf.

The annual limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore compliance with the hourly PE/PM_{10} emission limitation demonstrates compliance with the annual PE/PM_{10} emission limitation.

If required, the permittee shall demonstrate compliance with the hourly emissions limitation through emissions testing performed in accordance with 40 CFR Part 51, Appendix M,Method 201 or 201A.Alternative U.S. EPA approved test methods may be used with prior approval from the Canton City Health Department, Air Pollution Control Division.

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI 15-1250]

b. Emission Limitation:

Nitrogen oxide (NOx) emissions shall not exceed 0.13 lb/mmBtu, 30.0 lbs/hr, and 131.4 tons/yr.

Applicable Compliance Method:

The hourly NOx emissions rate was established by calculation using the following formula:

E = (A) x (B), where:

E= Calculated NOx emissions rate from burning natural gas, in lb/hr;

A = 140 lb/mmscf, emission factor for NOx from natural gas combustion from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-1, 7/98; and

B = 0.22 mmscf/ hr, maximum fuel consumption rate of the furnace calculated by dividing the maximum rated heat input to the furnace of 228 mmBtu/hr by the natural gas heating value of 1040 Btu/scf.

The NOx emissions rate of 0.13 lb/mmBtu is demonstrated by dividing the emission factor of 140 lb/mmscf by the natural gas heating value of 1040 Btu/scf.

The annual limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore compliance with the hourly NOx emission limitation demonstrates compliance with the annual NOx emission limitation.

If required, the permittee shall demonstrate compliance with the hourly emissions limitation through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4 and 7 or 7E. Alternative U.S. EPA approved test methods may be used with prior approval from the Canton City Health Department, Air Pollution Control Division.

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI 15-1250]

c. Emission Limitation:

Carbon monoxide (CO) emissions shall not exceed 18.48 lbs/hr and 80.94 tons/yr.

Applicable Compliance Method:

The hourly CO emissions rate was established by calculation using the following formula:

E = (A) x (B), where:

E= Calculated CO emissions rate from burning natural gas, in lb/hr;

A = 84 lb/mmscf, emission factor for CO from natural gas combustion from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-1, 7/98; and

B = 0.22 mmscf/ hr, maximum fuel consumption rate of the furnace calculated by dividing the maximum rated heat input to the furnace of 228 mmBtu/hr by the natural gas heating value of 1040 Btu/scf.

The annual limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore compliance with the hourly CO emission limitation demonstrates compliance with the annual CO emission limitation.

If required, the permittee shall demonstrate compliance with the hourly emissions limitation through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4 and 10. Alternative U.S. EPA approved test methods may be used with prior approval from the Canton City Health Department, Air Pollution Control Division.

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI 15-1250]

d. Emission Limitation:

Volatile organic compound (VOC) emissions shall not exceed 1.21 lb/hr and 5.3 tons/yr.

Applicable Compliance Method:

The hourly VOC emissions rate was established by calculation using the following formula:

E = (A) x (B), where:

E= Calculated VOC emissions rate from burning natural gas, in lb/hr;

A = 5.5 lb/mmscf, emission factor for VOC from natural gas combustion from AP-42, Section 1.4 Natural Gas Combustion, Table 2.4-1, 7/98; and

B = 0.22 mmscf/ hr, maximum fuel consumption rate of the furnace calculated by dividing the maximum rated heat input to the furnace of 228 mmBtu/hr by the natural gas heating value of 1040 Btu/scf.

The annual limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore compliance with the hourly VOC emission limitation demonstrates compliance with the annual VOC emission limitation.

If required, the permittee shall demonstrate compliance with the hourly emissions limitation through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 18, 25, or 25A. Alternative U.S. EPA approved test methods may be used with prior approval from the Canton City Health Department, Air Pollution Control Division.

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI 15-1250]

e. Emission Limitation:

Sulfur dioxide (SO_2) emissions shall not exceed 0.13 lbs/hr and 0.6 tons/yr.

Applicable Compliance Method:

The hourly SO_2 emissions rate was established by calculation using the following formula:

E = (A) x (B), where:

E= Calculated SO_2 emissions rate from burning natural gas, in lb/hr;

A = 0.6 lb/mmscf, emission factor for SO_2 from natural gas combustion from AP-42, Section 1.4 Natural Gas Combustion, Table 2.4-1, 7/98; and

B = 0.22 mmscf/ hr, maximum fuel consumption rate of the furnace calculated by dividing the maximum rated heat input to the furnace of 228 mmBtu/hr by the natural gas heating value of 1040 Btu/scf.

The annual limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore compliance with the hourly SO_2 emission limitation demonstrates compliance with the annual SO_2 emission limitation.

If required, the permittee shall demonstrate compliance with the hourly emissions limitation through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Method 6. Alternative U.S. EPA approved test methods may be used with prior approval from the Canton City Health Department, Air Pollution Control Division.

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI 15-1250]

g) Miscellaneous Requirements

(1) None.

3. P285, Reheat Furnace

Operations, Property and/or Equipment Description:

38.4 mmBtu/hr natural gas fired reheat furnace

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 15-01250 issued 10/16/2003)	Particulate emissions less than 10 microns in diameter (PE/PM_{10}) shall not exceed 0.28 lbs/hr and 1.22 tons/yr. See b)(2)a. Nitrogen oxide (NOx) emissions shall not exceed 0.13 lb/mmBtu, 5.0 lbs/hr, and tons/yr. Carbon monoxide (CO) emissions shall not exceed 3.1 lbs/hr and 13.58 tons/yr. Volatile organic compound (VOC) emissions shall not exceed 0.2 lb/hr and 0.88 tons/yr. Sulfur dioxide (SO_2) emissions shall not exceed 0.022 lbs/hr and 0.1 tons/yr. See b)(2)b.
b.	OAC rule 3745-17-11	Exempt. See b)(2)d.
c.	OAC rule 3745-17-07(A)	Exempt. See b)(2)e.
d.	OAC rule 3745-18-06(E)(1)	See b)(2)f.

(2) Additional Terms and Conditions

a. All particulate emissions are generated from natural gas combustion and are assumed to be less than 10 microns in diameter (designated as PE/PM_{10}).

b. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) for this emissions unit shall be demonstrated by the use of low NOx burners and compliance with the emissions limits listed in b)(1)a.

c. The emissions limitations for PE/PM_{10}, NOx, CO, VOC, and SO_2 are based on the emission unit's potential to emit. Therefore, no monitoring, record keeping, and reporting requirements are necessary to ensure ongoing compliance with these emissions limitations.

d. The burning of natural gas is the only source of PE/PM_{10} from this emissions unit. The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply pursuant to OAC rule 3745-17-11(A)(4) because the process weight that causes any emissions of particulate matter is equal to zero.

e. This emissions unit is exempt from the visible particulate emissions limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because the emissions unit is not subject to the requirements of OAC rule 3745-17-11.

f. The emission limitation required by this applicable rule is less stringent than the emission limitation pursuant to OAC rule 3745-31-05(A)(3) for Best Available Technology (BAT).

c) Operational Restrictions

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

[Authority for Term: OAC rule 3745-77-07(A)(1) and PTI 15-1250]

d) Monitoring and/or Recordkeeping Requirements

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

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) Records shall be maintained of the total annual amount of natural gas burned in this emissions unit.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 15-1250]

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. each day when a fuel other than natural gas was burned in this emissions unit.

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

[Authority for Term: OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

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

a. <u>Emission Limitation:</u>

Particulate emissions less than 10 microns in diameter (PE/PM_{10}) shall not exceed 0.28 lbs/hr and 1.22 tons/yr.

<u>Applicable Compliance Method:</u>

The hourly PE/PM_{10} emissions rate was established by calculation using the following formula:

E = (A) x (B), where:

E= Calculated (PE/PM_{10}) emissions rate from burning natural gas, in lb/hr;

A = 7.6 lb/mmscf, emission factor for (PE/PM_{10}) from natural gas combustion from AP-42, Section 1.4 Natural Gas Combustion, Table 2.4-2, 7/98; and

B = 0.037 mmscf/ hr, maximum fuel consumption rate of the furnace calculated by dividing the maximum rated heat input to the furnace of 38.4 mmBtu/hr by the natural gas heating value of 1040 Btu/scf.

The NOx emissions rate of 0.13 lb/mmBtu is demonstrated by dividing the emission factor of 140 lb/mmscf by the natural gas heating value of 1040 Btu/scf

The annual limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hrs/yr and dividing by

2000 lbs/ton. Therefore compliance with the hourly PE/PM_{10} emission limitation demonstrates compliance with the annual PE/PM_{10} emission limitation.

If required, the permittee shall demonstrate compliance with the hourly emissions limitation through emissions testing performed in accordance with 40 CFR Part 51, Appendix M,Method 201 or 201A.Alternative U.S. EPA approved test methods may be used with prior approval from the Canton City Health Department, Air Pollution Control Division.
[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 15-1250]

b. Emission Limitation:

Nitrogen oxide (NOx) emissions shall not exceed 0.13 lb/mmBtu, 5.0 lbs/hr, and 21.9 tons/yr.

Applicable Compliance Method:

The hourly NOx emissions rate was established by calculation using the following formula:

E = (A) x (B), where:

E= Calculated NOx emissions rate from burning natural gas, in lb/hr;

A = 140 lb/mmscf, emission factor for NOx from natural gas combustion from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-1, 7/98; and

B = 0.037 mmscf/ hr, maximum fuel consumption rate of the furnace calculated by dividing the maximum rated heat input to the furnace of 38.4 mmBtu/hr by the natural gas heating value of 1040 Btu/scf.

The NOx emissions rate of 0.13 lb/mmBtu is demonstrated by dividing the emission factor of 140 lb/mmscf by the natural gas heating value of 1040 Btu/scf.

The annual limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore compliance with the hourly NOx emission limitation demonstrates compliance with the annual NOx emission limitation.

If required, the permittee shall demonstrate compliance with the hourly emissions limitation through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4 and 7 or 7E. Alternative U.S. EPA approved test methods may be used with prior approval from the Canton City Health Department, Air Pollution Control Division.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 15-1250]

c. Emission Limitation:

Carbon monoxide (CO) emissions shall not exceed 3.1 lbs/hr and 13.58 tons/yr.

Applicable Compliance Method:

The hourly CO emissions rate was established by calculation using the following formula:

E = (A) x (B), where:

E= Calculated CO emissions rate from burning natural gas, in lb/hr;

A = 84 lb/mmscf, emission factor for CO from natural gas combustion from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-1, 7/98; and

B = 0.037 mmscf/ hr, maximum fuel consumption rate of the furnace calculated by dividing the maximum rated heat input to the furnace of 38.4 mmBtu/hr by the natural gas heating value of 1040 Btu/scf.

The annual limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore compliance with the hourly CO emission limitation demonstrates compliance with the annual CO emission limitation.

If required, the permittee shall demonstrate compliance with the hourly emissions limitation through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4 and 10. Alternative U.S. EPA approved test methods may be used with prior approval from the Canton City Health Department, Air Pollution Control Division.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 15-1250]

d. Emission Limitation:

Volatile organic compound (VOC) emissions shall not exceed 0.2 lb/hr and 0.88 tons/yr.

Applicable Compliance Method:

The hourly VOC emissions rate was established by calculation using the following formula:

E = (A) x (B), where:

E= Calculated VOC emissions rate from burning natural gas, in lb/hr;

A = 5.5 lb/mmscf, emission factor for VOC from natural gas combustion from AP-42, Section 1.4 Natural Gas Combustion, Table 2.4-1, 7/98; and

B = 0.037 mmscf/ hr, maximum fuel consumption rate of the furnace calculated by dividing the maximum rated heat input to the furnace of 38.4 mmBtu/hr by the natural gas heating value of 1040 Btu/scf.

The annual limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore compliance with the hourly VOC emission limitation demonstrates compliance with the annual VOC emission limitation.

If required, the permittee shall demonstrate compliance with the hourly emissions limitation through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 18, 25, or 25A. Alternative U.S. EPA approved test methods may be used with prior approval from the Canton City Health Department, Air Pollution Control Division.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 15-1250]

e. Emission Limitation:

Sulfur dioxide (SO_2) emissions shall not exceed 0.022 lbs/hr and 0.1 tons/yr.

Applicable Compliance Method:

The hourly SO_2 emissions rate was established by calculation using the following formula:

E = (A) x (B), where:

E= Calculated SO_2 emissions rate from burning natural gas, in lb/hr;

A = 0.6 lb/mmscf, emission factor for SO_2 from natural gas combustion from AP-42, Section 1.4 Natural Gas Combustion, Table 2.4-1, 7/98; and

B = 0.037 mmscf/ hr, maximum fuel consumption rate of the furnace calculated by dividing the maximum rated heat input to the furnace of 38.4 mmBtu/hr by the natural gas heating value of 1040 Btu/scf.

The annual limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore compliance with the hourly SO_2 emission limitation demonstrates compliance with the annual SO_2 emission limitation.

If required, the permittee shall demonstrate compliance with the hourly emissions limitation through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Method 6. Alternative U.S. EPA approved test methods may be used with prior approval from the Canton City Health Department, Air Pollution Control Division.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 15-1250]

g) Miscellaneous Requirements

(1) None.

4. P287, Pangborn Shot Blaster

Operations, Property and/or Equipment Description:

Pangborn Shot Blaster, removes scale from steel.

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 15-0849 issued 9/2/1992)	Particulate emissions less than 10 microns in diameter (PE/PM_{10}) shall not exceed 0.01 gr/dscf, 0.43 lb/hr, and 1.88 tons/yr. See b)(2)a. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). See b)(2)b.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by rule.
c.	OAC rule 3745-17-11(B)	See b)(2)c.

(2) Additional Terms and Conditions

a. All particulate emissions are assumed to be less than 10 microns in diameter and are designated as PE/PM_{10}.

b. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) for this emissions unit shall be demonstrated by the use of a fabric filter to control PE/PM_{10} and compliance with the emissions limits listed in b)(1)a.

c. The particulate emission limitation required by OAC rule 3745-17-11 is less stringent than the particulate emission limitation established pursuant to the best available technology requirement specified in OAC rule 3745-31-05(A)(3).

c) Operational Restrictions

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

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI 15-0849]

d) Monitoring and/or Recordkeeping Requirements

(1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 1.0 to 6.0 inches of water.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions units are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee subject to prior approval by the Canton City Health Department, Air Pollution Control Division.

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

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

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

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

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

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Canton City Health Department, Air Pollution Control Division. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;

b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;

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

d. each incident of deviation described in "a" where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

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

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

[Authority for term: OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

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

a. Emission Limitation:

Particulate emissions less than 10 microns in diameter (PE/PM_{10}) shall not exceed 0.01 gr/dscf, 0.43 lb/hr, and 1.88 tons/yr.

Applicable Compliance Method:

The hourly limitation was established by multiplying the baghouse manufacturer's specified outlet grain loading of 0.01 gr/dscf by the specified baghouse exhaust flow of 5000 dscfm then multiplied by conversion factors, as shown below.

(0.01 gr/dscf) x (5000 dscf/min) x (1 lb / 7000 gr) x (60 min/hr) = 0.43 lb/hr

Compliance with the hourly limitation shall be demonstrated based upon the emission testing requirements specified in section f)(2).

The annual limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore compliance with the hourly PE/PM_{10} emission limitation demonstrates compliance with the annual PE/PM_{10} emission limitation.

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI 15-0849]

b. Emission Limitation:

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

Applicable Compliance Method:

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

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI 15-0849]

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

a. The emission testing shall be conducted within 6 months after issuance of the permit.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for PE/PM_{10} identified in b)(1).

c. The following test method(s) shall be employed to demonstrate compliance with the allowable hourly mass emissions rate and the visible emissions limitations:

i. PE/PM_{10}: Method 201 or 201A of 40 CFR Part 51, Appendix M

ii. Visible emissions: Method 9 of 40 CFR Part 60, Appendix A

Alternative U.S. EPA approved test methods may be used with prior approval from the Canton City Health Department, Air Pollution Control Division.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the Canton City Health Department, Air Pollution Control Division. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. Monitoring and recording of the baghouse operating parameters specified in term d)(1) above shall be conducted at 15-minute intervals during the duration of the testing. The hourly average of the readings shall be used to establish and/or re-verify the parameter ranges specified in term d)(1).

f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Canton City Health Department, Air Pollution Control Division. 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 Canton City Health Department, Air Pollution Control Division's refusal to accept the results of the emission test(s).

g. Personnel from the Canton City Health Department, Air Pollution Control Division, shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

h. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Canton City Health Department, Air Pollution Control Division, 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 Canton City Health Department, Air Pollution Control Division.

[Authority for Term: OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

5. P298, Finishing Furnace

Operations, Property and/or Equipment Description:

32.5 mmBtu/hr natural gas-fired finishing furnace

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI P0106428 issued 6/10/2010)	Nitrogen oxides (NOx) emissions shall not exceed 3.2 lb/hr and 14.0 tons/yr. Carbon monoxide (CO) emissions shall not exceed 2.7 lbs/hr and 12.0 tons/yr. See b)(2)a. and b)(2)b.
b.	OAC rule 3745-17-11	Exempt. See b)(2)d.
c.	OAC rule 3745-17-10	Exempt. See b)(2)e.
d.	OAC rule 3745-17-07(A)	Exempt. See b)(2)f.

(2) Additional Terms and Conditions

a. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) for this emissions unit shall be demonstrated by the use of natural gas only as fuel, and the emission limitations listed in b)(1) above.

b. The emissions limitations for NOx and CO are based on the emissions unit's potential to emit. Therefore, no monitoring, record keeping, and reporting requirements are necessary to ensure ongoing compliance with these emissions limitations.

c. This emissions unit has emissions of sulfur dioxide (SO_2), volatile organic compounds (VOC's) and filterable particulate matter 10 microns or less in size (PM_{10}) which are associated with the combustion of natural gas. The potential emissions of SO_2, VOC's and filterable PM_{10} are negligible and therefore emissions limits have not been established in this permit.

d. The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply pursuant to OAC rule 3745-17-11(A)(4) because the process weight that causes any emissions of particulate matter is equal to zero.

e. This emissions unit is designed such that the products of combustion come into direct contact with materials being processed and therefore does not meet the definition of "fuel burning equipment" given in OAC rule 3745-17-01(B)(5) . It is, therefore, exempt from emission limitations and control requirements contained in OAC rule 3745-17-10 for fuel burning equipment.

f. This emissions unit is exempt from the visible particulate emissions limitations specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because this emissions unit is not subject to the requirements of OAC rule 3745-17-11.

c) Operational Restrictions

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

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0106428]

d) Monitoring and/or Recordkeeping Requirements

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

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0106428]

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. each day when a fuel other than natural gas was burned in this emissions unit.

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

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0106428]

f) Testing Requirements

(1) Compliance with the emission limitations in b)(1) shall be determined in accordance with the following method(s):

a. Emission Limitation:

NOx emissions shall not exceed 3.2 lbs/hr and 14 tons/yr

Applicable Compliance Method:

The hourly NOx emission limitation was established by setting the limit equal to the emission rate from burning natural gas using the following equation:

E = (A) x (B), where

E= NOx emission rate from burning natural gas, lb/hr

A = 100 lb/mmscf, emission factor for NOx for uncontrolled natural gas burners from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-1, 7/98

B = 0.0325 mmscf/ hr, maximum fuel consumption rate of the furnace

The annual limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore compliance with the hourly NOx emission limitation demonstrates compliance with the annual NOx emission limitation.

If required, the permittee shall demonstrate compliance with the hourly emissions limitation through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4 and 7 or 7E. Alternative U.S. EPA approved test methods may be used with prior approval from the Canton City Health Department, Air Pollution Control Division.

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI P0106428]

b. Emission Limitation:

CO emissions shall not exceed 2.7 lbs/hour and 12 tons/yr

Applicable Compliance Method:

The hourly CO emission limitation was established by setting the limit equal to the emission rate from burning natural gas using the following equation:

E = (A) x (B), where

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

A = 84 lb/mmscf, emission factor for CO for uncontrolled natural gas burners from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-1, 7/98

B = 0.0325 mmscf/ hr, maximum max fuel consumption rate of the furnace

The annual limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore compliance with the hourly CO emission limitation demonstrates compliance with the annual CO emission limitation.

If required, the permittee shall demonstrate compliance with the hourly emissions limitation through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4 and 10. Alternative U.S. EPA approved test methods may be used with prior approval from the Canton City Health Department, Air Pollution Control Division.

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI P0106428]

g) Miscellaneous Requirements

(1) None.

6. Emissions Unit Group -Bloom Grinders: P271,P272

EU ID	Operations, Property and/or Equipment Description
P271	Bloom Grinder #1 controlled with a Wheelabrator baghouse
P272	Bloom Grinder #2 controlled with a Wheelabrator baghouse

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 15-0464 issued 3/15/1989)	Particulate emissions less than 10 microns in diameter (PE/PM_{10}) shall not exceed 0.68 lb/hr. See b)(2)a. and b)(2)d. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-07(B), and 3745-17-08(B).
b.	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by rule.
c.	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust from this emissions unit shall not exceed 20% opacity as a 3-minute average.
d.	OAC rule 3745-17-08(B)(3)	See b)(2)b. and b)(2)c.
e.	OAC rule 3745-17-11(B)	See b)(2)c.
f.	40 CFR Part 64 Compliance Assurance Monitoring (CAM)	See c)(1) and section d).

(2) Additional Terms and Conditions

a. All particulate emissions from the baghouse are assumed to be less than 10 microns in diameter and are designated as PE/PM_{10}.

b. The permittee shall employ Reasonably Available Control Measures (RACM) to prevent fugitive dust from becoming airborne. These measures shall include, but not be limited to, the following, which are sufficient to minimize or eliminate visible emissions of fugitive dust:

i. The installation and use of hoods, fans, and/or other equipment to adequately enclose, contain, capture, vent, and control fugitive dust from the emissions units, meeting the following requirement:

(a) the collection efficiency shall be sufficient to minimize or eliminate visible emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

c. The gr/dscf emission limitation listed in OAC rule 3745-17-08(B)(3)(b) and the lb/hr limitation from OAC rule 3745-17-11(B) are less stringent than the emission limitation required pursuant to the best available technology requirement under OAC rule 3745-31-05(A)(3).

d. Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) for these emissions units shall be demonstrated by the use of a baghouse with a control efficiency of not less than 99.0%.

c) Operational Restrictions

(1) The emissions from the emissions units listed above shall be vented to the baghouse when one or more of the emissions units are in operation.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI 15-0464]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack and for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

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

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is 2.0 to 10.0 inches of water.

[Authority for Term: OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(3) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions units are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee subject to prior approval of the Canton City Health Department, Air Pollution Control Division.

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

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that

determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

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

The range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Canton City Health Department, Air Pollution Control Division. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for Term: OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(4) The CAM plan for these emissions units has been developed for particulate emissions. The CAM performance indicators for particulate emissions are:

a. the daily inspections for visible emissions from the baghouse stack and fugitive visible emissions from the building; and

b. the daily inspection of the baghouse pressure drop reading.

The CAM performance indicator for daily visible emissions checks was chosen as a reasonable and practical monitoring frequency. The CAM performance indicator values for baghouse pressure drop were established in accordance with baghouse pressure drop readings taken during compliance stack testing performed on October 27,2006, facility recommendations and are being verified during particulate emissions testing

When a performance indicator shows operation outside the indicator range, the permittee shall take corrective actions to restore operation of the emissions unit(s) and/or control equipment to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions, and shall comply with the reporting requirements specified in Section e)

below. The emissions unit and control equipment shall be operated in accordance with the approved CAM Plan, or any approved revision of the Plan. The baghouse shall not be configured to have bypass capability.

[Authority for Term: OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(5) Baghouse operating parameters shall be re-verified as a result of any changes to the operating conditions of the baghouses or emissions units. In addition to periodic monitoring of the baghouse operating parameters, the permittee shall also have an Operating, Maintenance, and Inspection (OM&I) program for the baghouses and capture system, including but not limited to:

a. Checking the bags/filters for deterioration or degradation;

b. Checking the cleaning system for proper operation; and

c. Checking the hoppers and conveyance systems for proper operation.

Based on the results of the (OM&I) program, repairs to the baghouses and capture system shall be made as needed. If the current CAM indicators and/or the baghouse and capture system (OM&I) program is considered inadequate, the permittee shall develop a Quality Improvement Plan.

[Authority for Term: OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(6) The permittee shall maintain necessary parts for routine repairs of the monitoring equipment.

[Authority for Term: OAC rule 3745-77-07(C)(1) and 40 CFR 64.7(b)]

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for Term: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit;

b. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit;

c. any corrective actions taken to minimize or eliminate the visible particulate emissions from the stack and/or visible emissions of fugitive dust;

d. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;

e. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;

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

g. each incident of deviation described in "a" where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

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

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

[Authority for Term: OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

f) Testing Requirements

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

a. <u>Emission Limitation:</u>

Particulate emissions less than 10 microns in diameter (PE/PM_{10}) shall not exceed 0.68 lb/hr.

<u>Applicable Compliance Method:</u>

The hourly emissions limit was established by calculations based on the weight of dust collected in the baghouse hoppers in a one-month period while both grinders were in operation, as explained below.

The weight of dust collected in a typical month was measured as 30 tons. Since the baghouse control efficiency was at least 99%, the 1% dust exiting the stack was considered negligible to the calculations and was ignored. Therefore the weight of dust from the baghouse hoppers, 30 tons/month, was considered as the uncontrolled Particulate Emissions (PE/PM_{10}) from the grinders. Since both grinders were used equally, the uncontrolled PE/PM_{10} from each grinder was assumed to be 15 tons/month.

Converting 15 tons/month to lbs/hr gives:

15 tons/month x 2000 lb/ton x 1 month/730 hrs = 41 lbs/hr uncontrolled PE/PM_{10}.

For a 99% efficient baghouse, the controlled PE/PM_{10} is:

41 lbs/hr x (1.0 – 0.99) = 0.41 controlled PE/PM_{10}.

A factor of 1.67 was applied to allow for future growth to set the allowable limit:

0.41 lbs/hr x 1.67 = 0.68 lbs/hr PE/PM_{10} for each grinder.

Compliance shall be demonstrated based upon the emission testing requirements specified in section f)(2).

b. Control Requirement:

The baghouse control efficiency shall not be less than 99.0%.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing requirements specified in section f)(2).

c. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.

d. Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

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

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 15-0464]

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

a. The emission testing shall be conducted within 6 months after issuance of the permit and within 6 months prior to expiration of the permit.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for PE/PM_{10} and the visible emissions limitations as identified in b)(1), and the control efficiency of the baghouse.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable hourly mass emissions rate, the visible emissions limitations, and the control efficiency of the baghouse as identified in b)(1) and b)(2).

i. PE/PM_{10}: Method 201 or 201A of 40 CFR Part 51, Appendix M

ii. Visible emissions (fugitive and stack): Method 9 of 40 CFR Part 60, Appendix A

iii. Baghouse control efficiency: Methods 1 through 5 of 40 CFR Part 60, Appendix A.

The emissions tests shall be conducted at the baghouse inlet and outlet to establish the control efficiency of the control equipment. The control efficiency is defined as the percent reduction in mass emissions between the inlet and outlet of the control system.

Alternative U.S. EPA approved test methods may be used with prior approval from the Canton City Health Department, Air Pollution Control Division.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the Canton City Health Department, Air Pollution Control Division. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. Monitoring and recording of the baghouse operating parameters specified in term d)(2) above shall be conducted at 15-minute intervals during the duration of the testing. The hourly average of the readings shall be used to establish and/or re-verify the parameter ranges specified in term d)(1).

f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Canton City Health Department, Air Pollution Control Division. 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 Canton City Health Department, Air Pollution Control Division's refusal to accept the results of the emission test(s).

g. Personnel from the Canton City Health Department, Air Pollution Control Division, shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

h. A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Canton City Health Department, Air Pollution Control Division, 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 Canton City Health Department, Air Pollution Control Division.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 15-0464]

g) Miscellaneous Requirements

(1) None.

7. Emissions Unit Group -Electric Arc Furnaces: P258,P292,

EU ID	Operations, Property and/or Equipment Description
P258	#9 EAF at Harrison Steel Mill rated at 63 tons steel per hour
P292	#2 EAF at Harrison Steel Mill rated at 63 tons steel per hour

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rules 3745-31-10 through OAC rule 3745-31-20 (PTI P0105790 issued 12/29/2010) [Best Available Control Technology (BACT) Determinations]	CO emissions shall not exceed 4.8 lbs/ton, 302 lbs/hr, and 960 tons/yr. VOC emissions shall not exceed 0.37 lb/ton, 23.3 lbs/hr, and 74 tons/yr. See b)(2)f.
b.	OAC rule 3745-31-05(D) (PTI P0105790 issued 12/29/2010) [Synthetic Minor Restrictions to Avoid Major Source New Source Review]	SO_2 emissions from Emission Units P102, P258, and P292 combined shall not exceed 419 tons/yr as a rolling, 12-month summation. See c)(3) and c)(4).
c.	ORC 3704.03(T) (PTI P0105790 issued 12/29/2010) [Best Available Technology (BAT) Determinations for NAAQS Pollutants > 10 TPY]	For P258: filterable $PM_{10}/PM_{2.5}$ emissions shall not exceed 0.00032 gr/dscf and 0.043 lb/ton. For P292: filterable $PM_{10}/PM_{2.5}$ emissions shall not exceed 0.00048 gr/dscf and 0.052 lb/ton. See b(2)a through b(2)c. Visible particulate emissions from the baghouse shall not exceed 3% opacity as a 6-minute average.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Visible particulate emissions of fugitive dust from the melt shop shall not exceed 6% opacity at any time. Visible particulate emissions from the meltshop baghouse dust handling equipment shall not exceed 10% opacity as a 6-minute average. SO_2 emissions shall not exceed 0.44 lbs/ton. NOx emissions shall not exceed 0.20 lbs/ton.
d.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001 (PTI P0105790 issued 12/29/2010) [Best Available Technology (BAT) for pollutants less than 10 tpy]	For P258: Pb emissions shall not exceed 0.00027 lbs/ton, 0.017 lbs/hr, and 0.054 tons/yr. For P292: Pb emissions shall not exceed 0.00042 lbs/ton, 0.026 lbs/hr, and 0.084 tons/yr. See b)(2)d.
e.	OAC rule 3745-31-05(A)(3), as effective 12/01/2006 [Less than 10 ton/yr BAT exemption]	See b)(2)e.
f.	OAC rule 3745-114	Mercury (Hg) emissions shall not exceed 0.00020 lbs/ton steel, 0.013 lbs/hr, and 0.04 tons/yr. See b)(2)h.
g.	OAC rule 3745-17-11	The particulate emission (PE) limitation specified by this rule is less stringent than the $PM_{10}/PM_{2.5}$ emissions limitations established pursuant to ORC 3704.03(T).
h.	OAC rule 3745-17-07(A)(1) OAC rule 3745-17-07(B)(3) OAC rule 3745-17-08	The visible emission limitations specified by these rules are less stringent than the visible emission limitations established pursuant to 40 CFR Part 60, Subpart AA and ORC 3704.03(T).
i.	OAC rule 3745-18-06	The SO_2 emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to ORC 3704.03(T).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
j.	40 CFR Part 60, Subpart AA (40 CFR 60.271 - 60.276) Applicable to P258 only.	The opacity limitations specified by this rule for visible particulate emissions from the baghouse are equal to or less stringent than the opacity limitations established pursuant to ORC 3704.03(T). The opacity limitations specified by this rule for fugitive dust from the melt shop are equal to or less stringent than the opacity limitations established pursuant to ORC 3704.03(T). The opacity limitations specified by this rule for visible particulate emissions from the meltshop baghouse dust handling equipment are equal to or less stringent than the opacity limitations established pursuant to ORC 3704.03(T). The mass emissions limitations specified by this rule are equal to or less stringent than the mass emissions limitation established pursuant to ORC 3704.03(T). See c)(1)
k.	40 CFR Part 63, Subpart YYYYY (40 CFR 63.10681 - 63.10692) [In accordance with 40 CFR 63.10680(a) and (b)(1), these emissions units are electric arc furnaces (EAFs) that are area sources of hazardous air pollutants (HAPs) and commenced construction on or before September 20, 2007.]	The mass emissions limitations and opacity limitations specified by 63.10686(b)(1) and (b)(2) of this rule are equal to or less stringent than the emissions limitations established pursuant to 40 CFR Part 60, Subpart AA and ORC 3704.03(T). See b)(2)g., c)(7) and c)(8).
l.	40 CFR 63.1-16 (40 CFR 63.10690)	Table 1 to Subpart YYYYY of 40 CFR Part 63 – Applicability of General Provisions to Subpart YYYYY shows which parts of the General Provisions in 40 CFR 63.1-16 apply.
m.	40 CFR Part 64 Compliance Assurance Monitoring (CAM)	See c)(1), d)(1), d)(2), and d)(5) through d)(9).

(2) Additional Terms and Conditions

a. The Best Available Technology (BAT) requirements under ORC 3704.03(T) for these emissions units shall be demonstrated by compliance with the terms and conditions of this permit.

b. The particulateemissions from these emissions units shall be collected and controlled by the melt shop building evacuation system exhausting to baghouse #4 and baghouse #5. Emissions units P222, P288, P289, P201, P202, P264, and P282 also exhaust to Baghouses #4 and #5 through the building evacuation system and are typically in operation during the operation of the EAFs.

The melt shop evacuation system shall achieve and maintain a minimum capture efficiency that is sufficient to prevent violations of the six (6) percent opacity emission limitation for fugitive emissions from the melt shop at any time as required in b)(1)c.

c. PM_{10} is used as a surrogate for $PM_{2.5}$. Compliance with PM_{10} emission limitations demonstrates compliance with the $PM_{2.5}$ limitations. The permittee has provided a demonstration that PM_{10} is a reasonable surrogate for $PM_{2.5}$.

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

e. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the Pb emissions from this air contaminant source since the potential to emit , taking into account air pollution controls serving this unit, is less than ten tons per year of Pb emissions.

This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan

f. The permittee shall employ "Best Available Control Technology" (BACT) for controlling emissions of CO and VOC. BACT for this emissions unit has been determined to be the following:

i. CO – Acceptance of an emissions limitation of 4.8 lbs/ton.

ii. VOC – The development, maintenance, and process operations under a Scrap Management Plan (SMP) that achieves a maximum emissions rate of 0.37 lbs/ton of steel produced. Compliance with 40 CFR Part 63, Subpart YYYYY.

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

g. The scrap metals processed in this emissions unit are restricted to only those materials that comply with the Scrap Management Plan (SMP) described in c)(8).

h. For scrap containing motor vehicle scrap, the permittee shall procure the scrap pursuant to one of the options identified in paragraphs (b)(1), (2), (3), or (4) of 40 CFR 63.10685.

c) Operational Restrictions

(1) The building evacuation control system exhausting to Baghouse #4 and Baghouse #5 shall be in service at all times that the emissions units are in operation. Pursuant to 40 CFR 60.274(h), the capture system shall be designed and operated such that all emissions are captured and ducted to the baghouses.

[Authority for term: OAC rule 3745-77-07(A)(1), 40 CFR 60, Subpart AA (for P258 only), and PTI P0105790]

(2) The annual molten steel production of each of these emissions units shall not exceed 400,000 tons/yr as a rolling 12-month average.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0105790]

(3) The burning of used tires as a substitute for coke in the Electric Arc Furnaces is expected to increase SO_2 emissions. Accordingly, the annual combined quantity of used tires burned at the Faircrest Steel Plant (in P102) and the Harrison Steel Plant (in P258 and P292) shall not exceed 12,930 tons/yr based upon a rolling, 12-month summation of the weight of tires burned.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0105790]

(4) The rolling, 12-month summation of the combined SO_2 emissions from the EAF's at the Harrison Steel Plant (HSP) and the Faircrest Steel Plant (FSP) shall not exceed 419 tons as calculated from the combined monthly sums of items a.i.(a), a.ii.(a), b.i.(a), b.ii.(a), c.i.(a), and c.ii.(a) below

a. P258 at HSP

i. SO_2 emissions without tire burning

(a) 0.07 lbs SO_2/ ton steel x tons steel/month x 1 ton SO_2/2000 lbs SO_2

ii. SO_2 emissions with tire burning

(a) 0.44 lbs SO_2/ ton steel x tons steel/month x 1 ton SO_2/2000 lbs SO_2

b. P292 at HSP

i. SO_2 emissions without tire burning

(a) 0.07 lbs SO_2/ ton steel x tons steel/month x 1ston SO_2/2000 lbs SO_2

ii. SO_2 emissions with tire burning

(a) 0.44 lbs SO_2/ ton steel x tons steel/month x 1ston SO_2/2000 lbs SO_2

c. P102 at FSP

i. SO_2 emissions without tire burning

(a) 0.15 lbs SO_2/ ton steel x tons steel/month x 1 ton SO_2/2000 lbs/S

ii. SO_2 emissions with tire burning

(a) 0.52 lbs SO_2/ ton steel x tons steel/month x 1ston SO_2/2000 lbs/S

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0105790]

(5) Sulfur shall not be added to these Electric Arc Furnaces.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0105790]

(6) The emission factors in f)(1), expressed in lb/ton, are derived from emissions data obtained from stack testing during trial runs at the Faircrest Steel Plant while adding used tires to the EAF charge at the average rate of 2000 lbs tires/150 tons steel, or13.3 lbs tires/ ton steel. Therefore the tire addition rate to each EAF at the Harrison Steel Plant shall not exceed 13.3 lbs tires/ ton steel x 63 tons steel hr* = 838 lbs tires/hr.

* maximum rated hourly capacity of each EAF

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0105790]

(7) For control of chlorinated plastic, lead, and free organic liquid contaminants in the metallic scrap utilized in the EAFs, the permittee shall comply with the following applicable requirements identified in 40 CFR 63 Subpart YYYYY:

Applicable Rule	Requirement
63.10685(a)(1)	Implement and maintain a pollution prevention plan for metallic scrap selection and inspection, generally called a Scrap Management Plan (SMP)
63.10685(a)(2)	Restrictions on contaminants in metallic scrap charged to the EAFs

(8) For control of mercury contaminants in the metallic scrap utilized in the EAFs, the permittee shall comply with the following applicable requirements identified in 40 CFR 63 Subpart YYYYY:

Applicable Rule	Requirement
63.10685(b)(1)	Implement and maintain a site specific plan for the removal of mercury switches as part of the Scrap Management Plan (SMP)
63.10685(b)(2)	Participate in and purchase motor vehicle scrap only from providers who participate in an approved mercury removal program
63.10685(b)(3)	Documentation requirements for motor vehicle scrap materials recovered for their specialty alloy content only
63.10685(b)(4)	Documentation requirements for non-motor vehicle scrap

(9) As part of the Scrap Management Plan (SMP), the permittee shall install a radionuclide detector which will be used to inspect all incoming scrap material into the facility. Radioactive scrap material shall not be used at this facility.

[Authority for Term: OAC rule 3745-77-07(A)(1) and PTI P0105790]

d) Monitoring and/or Recordkeeping Requirements

(1) Pursuant to 40 CFR 60.273(c) and ORC 3704.03(T), observations of the opacity of the visible emissions from Baghouses #4 and #5 shall be performed by a certified visible emission observer as follows:

a. Visible emission observations shall be conducted at least once per day for at least three 6-minute periods when the furnace is operating in the meltdown and refining period. All visible emissions observations shall be conducted in accordance with Method 9. If visible emissions occur from more than one point, the opacity shall be recorded for any points where visible emissions are observed. Where it is possible to determine that a number of visible emission sites relate to only one incident of the visible emission, only one set of three 6-minute observations will be required. In that case, the Method 9 observations

must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident. The permittee shall maintain copies of all daily opacity observations.

[Authority for Term: OAC rule 3745-77-07(C)(1); 40 CFR Part 60, Subpart AA (for P258 only); 40 CFR Part 64; and PTI P0105790]

(2) As part of the BAT determination requiring the permittee to maintain a capture system which is designed and operated such that all emissions are captured and ducted to a control device, visible emission observations of all fugitive emissions points associated with the melt shop area shall be performed by a certified visible emission observer as follows:

a. The company shall have at least two persons at the facility "certified" to conduct visible emission observations in accordance with Method 9 procedures at all times when either emissions unit is operating. Visible emission observations shall be conducted at least once per day when either furnace is operating in the melting and refining period. In addition, visible emissions observations shall be conducted at least once per day during charging of the furnace. Shop opacity shall be determined as the arithmetic average of 24 or more consecutive 15-second opacity observations of emissions from the shop taken in accordance with Method 9. Shop opacity shall be recorded for any point(s) where visible emissions from the meltshop are observed. Where it is possible to determine that a number of visible emission sites relate to only one incident of visible emissions, only one observation of shop opacity will be required. In this case, the shop opacity observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident. The permittee shall maintain copies of all daily opacity observations.

[Authority for Term: OAC rule 3745-77-07(C)(1); 40 CFR Part 60, Subpart AA (for P258 only); 40 CFR Part 64; and PTI P0105790]

(3) The permittee shall maintain records to identify the persons responsible for conducting the opacity readings and to verify that their Method 9 certifications are valid.

[Authority for Term: OAC rule 3745-77-07(C)(1), 40 CFR Part 60, Subpart AA, and PTI P0105790]

(4) In order to maintain compliance with the applicable emissions limitations contained in this permit, the acceptable range established for the pressure drop across baghouse #4 and #5 is 3.0 to 13.0 inches of water.

[Authority for Term: OAC rule 3745-77-07(C)(1); 40 CFR Part 64; and PTI P0105790]

(5) In order to maintain compliance with the applicable emissions limitations contained in this permit, the acceptable range established for the amperage of the fan motors serving baghouse #4 and #5 is 135 to 150 amps.

[Authority for Term: OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(6) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse and fan motor amperage when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse and fan motor amperage on a once per shift basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee subject to prior approval by the Canton City Health Department, Air Pollution Control Division.

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

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

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

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the monitored parameter value immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

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

The range or limit of the monitored parameters are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Canton City Health Department, Air Pollution Control Division. The permittee may request revisions to the permitted limit or range for the parameter based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification to the TV permit.

[Authority for Term: OAC rule 3745-77-07(C)(1); 40 CFR Part 64; and PTI P0105790]

(7) The CAM plan for these emissions units has been developed for particulate emissions. The CAM performance indicators for baghouses #4 and #5 controlling these emissions units are:

a. the static pressure drop across the baghouses;

b. the fan motor amperage of the fans exhausting the baghouses; and

c. the opacity of visible emissions from the baghouse stacks and the opacity of visible fugitive emissions from the meltshop egress points.

The CAM performance indicator values were established in accordance with the facility recommendations and recent in-compliance particulate emissions testing performed in July, 2012.

When a performance indicator shows operation outside the indicator range, the permittee shall take corrective actions to restore operation of the emissions unit(s) and/or control equipment to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions, and shall comply with the reporting requirements specified in Section e) below. The emissions unit(s) and control equipment shall be operated in accordance with the approved CAM Plan, or any approved revision of the Plan. The baghouse(s) shall not be configured to have bypass capability.

[Authority for Term: OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(8) Baghouse operating parameters shall be re-verified as a result of any changes to the operating conditions of the baghouses or emissions units. In addition to periodic monitoring of the baghouse operating parameters, the permittee shall also have an Operating, Maintenance, and Inspection (OM&I) program for the baghouses and capture system, including but not limited to:

a. Checking the bags/filters for deterioration or degradation;

b. Checking the cleaning system for proper operation; and

c. Checking the hoppers and conveyance systems for proper operation.

Based on the results of the (OM&I) program, repairs to the baghouses and capture system shall be made as needed. If the current CAM indicators and/or the baghouse and capture system (OM&I) program is considered inadequate, the permittee shall develop a Quality Improvement Plan.

[Authority for Term: OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(9) The permittee shall maintain necessary parts for routine repairs of the monitoring equipment.

[Authority for Term: OAC rule 3745-77-07(C)(1)and 40 CFR 64.7(b)]

(10) The permittee shall maintain daily records of:

a. the time, duration, and weight of each charge;

b. the time, duration, and weight of each tap in tons;

c. the time interval for tap to tap cycle; and

d. the hourly tap to tap (tons/hr) for each tap.

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI P0105790]

(11) The permittee shall calculate and record daily the total weight of tires added per ton of steel for each EAF tap to tap cycle and the total weight of tires added per hour.

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI P0105790]

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

a. the molten steel production rate for each month without tire burning;

b. the molten steel production rate for each month with tire burning;

c. the rolling,12-month summation of the molten steel production rates;

d. the combined weight of tires burned in P102, P258, and P292 for each month;

e. the rolling, 12-month summation of the tires burned in P102, P258, and P292;

f. the combined SO_2 emissions from P102, P258, and P292 for each month; and

g. the rolling, 12-month summation of the combined SO_2 emissions from P102, P258, and P292.

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI P0105790]

(13) The permittee shall comply with the recordkeeping requirements for the control of contaminants from scrap pursuant to 40 CFR 63 Subpart YYYYY, Section 63.10685(c); 63.10685(c)(1)(i); and 63.10685(c)(2).

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for Term: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. each period of time (start time and date, and end time and date) when the pressure drop across baghouses #4 and/or #5 was outside of the acceptable range specified in d)(4);

b. each period of time (start time and date, and end time and date) when recorded motor amperage(s) of the fans exhausting baghouses #4 and/or #5 were outside of the acceptable range(s) specified in d)(5);

c. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;

d. all exceedances of the visible particulate emission limit for the fabric filter control device. For the purpose of these reports, an exceedance is defined as any six-minute period during which the average opacity is three percent or greater;

e. all exceedances of the fugitive visible particulate emission limit for the melt shop shop. For the purpose of these reports, an exceedance is defined as any six-minute period during which the opacity is six percent or greater;

f. all exceedances of the visible particulate emission limit for the melt shop baghouse dust handling equipment. For the purpose of these reports, an exceedance is defined as any six-minute period during which the average opacity is ten percent or greater;

g. each incident of deviation described in “a”, “b”, “c”, “d”, “e”, and/or “f” (above) where a prompt investigation was not conducted;

h. each incident of deviation described in “a” or “b” where prompt corrective action, that would bring the specified parameters into compliance with the acceptable range, was determined to be necessary and was not taken;

i. each incident of deviation described in “a” and “b” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit;

j. all exceedances of the rolling 12-month summation of the molten steel production rate;

k. all exceedances of the rolling 12-month summation of the weight of tires burned;

l. all exceedances of the rolling 12-month summation of the combined SO_2 emissions from P258, P292, and P102; and

m. all deviations from the Scrap Management Plan.

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

[Authority for Term: OAC rule 3745-77-07(C)(1); 40 CFR Part 60; Subpart AA (for P258 only); 40 CFR Part 64; and PTI P0105790]

(3) The permittee shall comply with the reporting requirements for the control of contaminants from scrap pursuant to 40 CFR 63 Subpart YYYYY, Section 63.10685(c)(1)(ii) and 63.10685(c)(3).

f) Testing Requirements

(1) Compliance with the emission limitations and/or control requirements specified in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emission Limitation (for P258 only):</u>

Filterable $PM_{10}/PM_{2.5}$ emissions shall not exceed 0.00032 gr/dscf and 0.043 lb/ton

<u>Applicable Compliance Method:</u>

Two stack tests at FSP were compared: one test while burning tires, another without tires. An increase in PM emissions was seen in the tire-burn test. It was assumed that an equal increase in PM (in lbs/ton) would be seen at HSP for tire burning in the EAF's there. This Δ PM from FSP was added to the allowable PM permitted in PTI 15-01475 to determine the new allowable EF for tire burning in the HSP EAFs in PTI P0105790 as follows:

PM from April 2006 tire test-burn at FSP, Table 3, Run 2, (highest PM with tires)	0.042 lb/ton
PM from May 2008 stack test at FSP, Table 1, Run 3, (lowest value, no tires)	- 0.007 lb/ton
Δ PM (worst case)	0.035 lb/ton
PM allowable from PTI 15-01475	0.022 lb/ton
Δ PM (worst case)	+ 0.035 lb/ton
Post Project Allowable EF for PM with tires	0.057 lb/ton

Post Project Allowable PM grain loading with tires:

0.057lb PM/ton x7000gr / lb x1 min/ 1,000,000 dscf x 63 ton/hr x1 hr/ 60 min = 0.00042 gr/dscf

where 63 ton/hr is the maximum capacity of the EAF, and 1,000,000 dscf is the nominal exhaust gas flow rate of baghouse #5.

PM_{10} is assumed to be 76% 0f PM from AP-42, Table 12.5-2, pg. 12.5-19.

Post Project Allowable PM_{10} with tires is therefore:

PM_{10} = PM x 0.76 = 0.057 lb/ton x 0.76 = 0.043 lb/ton

Post Project Allowable PM_{10} grain loading with tires:

PM_{10} = 0.00042 gr/dscf x 0.76 = 0.00032 gr/dscf

PM_{10} is used as a surrogate for $PM_{2.5}$. Compliance with PM_{10} emissions limitations demonstrates compliance with the $PM_{2.5}$ limitations. The permittee has provided a demonstration that PM_{10} is a reasonable surrogate for $PM_{2.5}$.

Compliance shall be demonstrated by conducting the testing required in f)(2) below.

b. Emission Limitation (for P292 only):

Filterable $PM_{10}/PM_{2.5}$ emissions shall not exceed 0.00048 gr/dscf and 0.052 lb/ton

Applicable Compliance Method:

Two stack tests at FSP were compared: one test while burning tires, another without tires. An increase in PM emissions was seen in the tire-burn test. It was assumed that an equal increase in PM (in lb/ton) would be seen at HSP for tire burning in the EAF's there. This Δ PM from FSP was added to the allowable PM permitted in PTI 15-01475 to determine the new allowable EF for tire burning in the HSP EAFs in PTI P0105790 as follows:

PM from April 2006 tire test-burn at FSP, Table 3, Run 2, (highest PM with tires)	0.042 lb/ton
PM from May 2008 stack test at FSP, Table 1, Run 3, (lowest value, no tires)	- 0.007 lb/ton
Δ PM (worst case)	0.035 lb/ton
PM allowable from PTI 15-01475	0.034 lb/ton
Δ PM (worst case)	+ 0.035 lb/ton
Post Project Allowable EF for PM with tires	0.069 lb/ton

Post Project Allowable PM grain loading with tires:

0.069lb PM/ton x7000gr / lb x1 min/ 800,000 dscf x 63 ton/hr x1 hr/ 60 min = 0.00063 gr/dscf

where 63 ton/hr is the maximum capacity of the EAF, and 800,000 dscf is the nominal exhaust gas flow rate of baghouse #4.

PM_{10} is assumed to be 76% 0f PM from AP-42, Table 12.5-2, pg. 12.5-19.

Post Project Allowable PM_{10} with tires is therefore:

PM_{10} = PM x 0.76 = 0.069 lb/ton x 0.76 =0.052 Lb/ton

Post Project Allowable PM_{10} grain loading with tires:

PM_{10} = 0.00063 gr/dscf x 0.76 = 0.00048 gr/dscf

Compliance shall be demonstrated by conducting the testing required in f)(2) below.

c. Emission Limitation:

0.20 lb NOx ton steel

Applicable Compliance Method:

Stack test results from a test-burn at FSP in April 2006 with and without tires showed a NOx increase when burning tires. It was assumed that an equal increase in NOx (in lb/ton) would be seen at HSP for tire burning in the EAF's there. This Δ NOx from FSP was added to the allowable NOx permitted in PTI 15-01475 to determine the new allowable EF for tire burning in the HSP EAFs in PTI P0105790 as follows:

NOx from April 2006 tire test burn at FSP, Table 2, Run1 (highest NOx with tires)	0.15 lb/ton
NOx from April 2006 tire test burn at FSP, Table 2, Run 3 (no tires)	- 0.12 lb/ton
Δ NOx (worst case)	0.03 lb/ton
NOx allowable from PTI 15-01475	0.20 lb/ton
Δ NOx (worst case)	+ 0.03 lb/ton
Post Project Allowable NOx with tires:	0.23 lb/ton

Because both test runs show NOx emissions close to, but not exceeding, the permitted allowable of 0.20 lb/ton, the post project allowable NOx emissions will be kept the same as the current PTI 15-01475 allowable:

0.20 lb/ton

Compliance shall be demonstrated by conducting the testing required in f)(2) below.

d. Emission Limitation:

4.8 lb CO/ ton steel

Applicable Compliance Method:

Testing done at the HSP in April 2006 while burning tires showed CO emissions of 2.5 lb/ton and 1.79 lb/ton (Runs 1 and 2, Table 2 of test report). However, the EAF at the FSP is equipped with a Direct Shell Evacuation (DSE) control system, while the EAFs at HSP are equipped only with a fourth-hole evacuation system venting to a canopy hood.

At the HSP, upgrading of the fourth-hole evacuation system on the EAF's to a DSE control system is not cost effective as demonstrated in the Permittee's BACT Analysis for CO included with the PTI Application. Therefore no reduction in CO emissions are expected and the CO limitation has been maintained at the currently permitted limit of 4.8 lb CO/ton.

Compliance shall be demonstrated by conducting the testing required in f)(2) below.

e. Emission Limitation:

0.44 lb SO_2/ ton steel

Applicable Compliance Method:

Stack test results from a test-burn at FSP in April 2006 with and without tires showed an SO_2 increase when burning tires. It was assumed that an equal increase in SO_2 (in lb/ton) would be seen at HSP for tire burning in the EAF's there. This Δ SO_2 from FSP was added to the allowable SO_2 permitted in PTI 15-01475 to determine the new allowable EF for tire burning in the HSP EAF's.

SO_2 from April 2006 tire test burn at FSP, Table 2, Run1 (highest SO_2 with tires)	0.51 lb/ton
SO_2 from April 2006 tire test burn at FSP, Table 2, Run 3 (no tires)	- 0.14 lb/ton
Δ SO_2 (worst case)	0.37 lb/ton
SO_2 allowable from PTI 15-01475	0.07 lb/ton
Δ SO_2 (worst case)	+ 0.37 lb/ton

Post Project Allowable SO_2 with tires: 0.44 lb/ton

Compliance shall be demonstrated by conducting the testing required in f)(2) below.

f. Emission Limitation:

0.37 lb VOC/ ton steel

Applicable Compliance Method:

Stack test results from a test-burn at FSP in April 2006 with and without tires showed a VOC increase when burning tires. This Δ in VOC was added to average VOC emissions measured in a 7-2001 stack test at HSP to derive the post project EF with tire burning.

VOC from April 2006 tire test burn at FSP, Table 2, Run1 (highest VOC with tires)	0.09 lb/ton
VOC from April 2006 tire test burn at FSP, Table 2, Run 3 (no tires)	- 0.02 lb/ton
Δ VOC (worst case)	0.07 lb/ton
VOC allowable from current PTI 15-01475	0.30 lb/ton
Δ VOC (worst case)	+ 0.07 lb/ton
Post Project Allowable VOC with tires:	0.37 lb/ton

Compliance shall be demonstrated by conducting the testing required in f)(2) below.

g. Emission Limitation (for P258 only):

Pb emissions shall not exceed 0.00027 lb/ton steel

Applicable Compliance Method:

Pb content in the baghouse dust is 1.24% based on a 2005 baghouse dust analysis. Burning tires is not expected to increase Pb emissions. Therefore the post project Pb emissions factor is based on using the emissions factor for PM of 0.022 lb/ton from PTI 15-01475 for the EAF and the following calculation:

0.022 lb PM /ton steel x 0.0124 lb Pb / lb PM = 0.00027 lb Pb /ton steel

Compliance shall be demonstrated by conducting the testing required in f)(2) below.

h. Emission Limitation (for P292 only):

Pb emissions shall not exceed 0.00042 lb/ton steel

Applicable Compliance Method:

Pb content in the baghouse dust is 1.24% based on a 2005 baghouse dust analysis. Burning tires is not expected to increase Pb emissions. Therefore the post project Pb emissions factor is based on using the emissions factor for PM of 0.034 lb/ton from PTI 15-01475 for the EAF and the following calculation:

0.034 lb PM /ton steel x 0.0124 lb Pb / lb PM = 0.00042 lb Pb /ton steel

Compliance shall be demonstrated by conducting the testing required in f)(2) below.

i. Emission Limitation:

Mercury (Hg) emissions shall not exceed 0.0002 lb/ton

Applicable Compliance Method:

The allowable emissions factor is the same as used in the previous PTI 15-01475. The proposed used tire feedstock contains no Hg, and consequently the burning of tires is not expected to affect the emissions factor. The permittee shall control mercury in the scrap in accordance with the requirements in c)(8) and d)(13).

Compliance shall be demonstrated by conducting the testing required in f)(2) below.

j. Emission Limitation:

CO emissions shall not exceed 302 lbs/hr, and 960 tons per year

VOC emissions shall not exceed 23.3 lbs/hr, and 74 tons per year

For P258 only: Pb emissions shall not exceed 0.017 lbs/hr, and 0.054 tons per year

For P292 only: Pb emissions shall not exceed 0.026 lbs/hr, and 0.084 tons per year

Mercury (Hg) emissions shall not exceed 0.013 lb/hr and 0.04 tons per year

Applicable Compliance Method:

Each hourly emission limitation was established by multiplying the applicable allowable emissions factor from f)(1)a. through f)(1)i., in lb/ton steel, by the maximum capacity of the EAF (63 tons steel/hr). Therefore, compliance with the

applicable allowable emission factors from f)(1)a. through f)(1)i. demonstrates compliance with the corresponding hourly emission limitations.

Each annual limitation was established by multiplying the applicable allowable emissions factor, in lb/ton steel, by the maximum annual production capacity of the EAF (400,000 tons steel/yr) from c)(2) and dividing by a conversion factor of 2000 lb/ton. Therefore, compliance with the applicable allowable emission factors from f)(1)a. through f)(1)i. demonstrates compliance with the corresponding annual emission limitations.

k. Emission Limitation:

SO_2 emissions from Emission Units P102, P258, and P292 combined shall not exceed 419 tons/yr as a rolling, 12-month summation.

Applicable Compliance Method:

The tons/yr was established as a synthetic minor limitation based on the permittee's netting analysis to avoid exceeding New Source Review/Prevention of Significant Deterioration (NSR/PSD) significance levels for SO_2 emissions.

Compliance with the annual combined SO_2 limitation shall be demonstrated by the records required in section d)(12)f. and d)(12)g.

l. Emission Limitation:

Visible particulate emissions from the baghouse shall not exceed 3% opacity. Visible particulate emissions of fugitive dust shall not exceed 6% opacity from the melt shop area and 10% opacity from the associated dust handling equipment.

Applicable Compliance Method:

Compliance with the allowable visible emissions limitations shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9. The points of observation for visible emissions of fugitive dust determination shall include all non-stack egress points from the building housing the emissions units. Such points include, but are not limited to, doorways, windows, and roof monitors.

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI P0105790]

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

a. The emission testing shall be conducted within 6 months prior to the permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the allowable emission factors in lbs/ton identified in f)(2)f. below for emissions offilterable $PM_{10}/PM_{2.5}$, NOx, CO, SO_2, VOC, Pb, and Hg, to demonstrate compliance with the visible emission limitations in b)(1), and to demonstrate the exhaust gas flow rate of Baghouse #4 and Baghouse #5 in dscfm.

c. The following test methods found in 40 CFR Part 60, Appendix A shall be employed (alternative U.S. EPA approved test methods may be used with prior approval from the Canton City Health Department, Air Pollution Control Division):

i.	Filterable PM_{10}:	Method 201 or 201A
ii.	Filterable $PM_{2.5}$	Filterable PM_{10} is used as a surrogate
iii.	NOx:	Method 7 or 7A
iv.	CO:	Method 10
v.	SO_2:	Method 6 or 6A
vi.	VOC:	Method 18, 25, or 25A
vii.	Pb:	Method 12 or 29
viii.	Hg:	Method 29
ix.	Visible Emissions:	Method 9

d. The tests shall be conducted at each baghouse outlet while the appropriate EAF (P292 when testing at Baghouse #4, and P258 when testing at Baghouse #5) is operating at or near its maximum steel production capacity of 63 tph with the maximum allowable amount of tires included in the furnace charge (13.3 lb tires/ ton steel), unless otherwise specified or approved by the Canton City Health Department, Air Pollution Control Division.

The sampling time shall include an integral number of heats.

Compliance demonstration results shall be based on the arithmetical average of (3) back-to-back test runs.

e. Emissions from the EAF's (P292 and P258) are controlled by the Meltshop building evacuation system which is serviced by Baghouse #4 and Baghouse #5 combined. The following EU's also contribute emissions to the Meltshop and are exhausted to the same baghouses:

P282 (#1 Ladle Furnace)

P264 (Ladle Refiner)

P222 (Continuous Caster),

P288 and P289, (Tundish Preheaters),

P201 (Slag Processing), and

P202 (Hot Metal Transfer)

The emissions from these EU's are captured by both baghouses in undetermined proportions. Since it is not practical to operate both EAF's simultaneously at their maximum ratings, the testing to demonstrate compliance for P292 and/or P258 shall be conducted such that test results from testing at each baghouse individually are summed to determine a combined limit. Compliance of P292 and/or P258 is presumed if compliance with the combined limit is demonstrated.

If the combined limit for any pollutant is exceeded, then all emissions units which contribute to that pollutant's emissions factor identified in f)(2)f. below shall be considered out of compliance.

Compliance testing done at Baghouse #4 shall be performed while P292 is operating at or near its maximum steel production capacity, and sulfur is being added to P282 at or near to its maximum permitted rate of 500 lb/hr. (This maximum sulfur feed rate has been established by the Permittee as the maximum hourly sulfur feed rate for steel grades produced).

Compliance testing done at Baghouse #5 shall be performed while P258 is operating at or near its maximum steel production capacity.

f. The combined limits, for the purpose of compliance demonstration by stack testing, are derived as follows:

i. for SO_2 compliance demonstration: 19.753 lb/ton

EU #	Emissions Contribution Lb SO_2/ton steel	Basis for Contribution
P292 (EAF #2)	0.44	PTI P0105790
P282 (#1 Ladle Furnace)	$\frac{65 \text{ lb } SO_2/\text{hr}}{\text{tph steel}}$ = 0.103	PTI 15-575
P264 (Ladle Refiner)	$\frac{457.84 \text{ lb } SO_2/\text{hr}}{63 \text{ tph steel}}$ = 7.27	OAC rule 3745-18-06(E)(1) using 107 tph maximum molten steel refining rate
P201 (Slag Processing)	0.0	Negligible
P202 (Hot Metal Transfer)	0.0	Negligible
P258 (EAF #9)	0.44	PTI P0105790
P222 (Caster)	0.0	Negligible
P288 (Tundish Preheater)	$\frac{362.5 \text{ lb } SO_2/\text{hr}}{63 \text{ tph steel}}$ = 5.75	OAC rule 3745-18-06(E)(1) using 75.5 tph maximum molten steel handling capacity
P289 Tundish Preheater)	$\frac{362.5 \text{ lb } SO_2/\text{hr}}{63 \text{ tph steel}}$ = 5.75	OAC rule 3745-18-06(E)(1) using 75.5 tph maximum molten steel handling capacity

EU #	Emissions Contribution Lb SO_2/ton steel	Basis for Contribution
Total SO_2 emissions not to be exceeded for stack testing compliance	**19.753**	Sum of Baghouses #4 and #5

ii. for $PM_{10}/PM_{2.5}$ compliance demonstration: 0.095 lb/ton steel

EU #	Emissions Contribution Lb $PM_{10}/PM_{2.5}$/ton steel	Basis for Contribution
P292 (EAF #2)	0.052	PTI P0105790
P282 (#1 Ladle Furnace)	0.0034x0.076 = 0.00003	AP-42 Table 12.5.1-1 for PM x 76% of PM assumed as PM_{10}
P264 (Ladle Refiner)	0.0000	Included with P282
P201 (Slag Processing)	0.0	Negligible
P202 (Hot Metal Transfer)	0.0	Included in P222
P258 (EAF #9)	0.043	PTI P0105790
P222 (Caster)	0.00012x0.76 = 0.00009	AP-42 Table 12.5.1-1 for PM x 76% of PM assumed as PM_{10}. Baghouse efficiency of 99.9% assumed
P288 (Tundish Preheater)	0.0	Negligible PM_{10}, gas fired
P289 Tundish Preheater)	0.0	Negligible PM_{10}, gas fired
Total $PM_{10}/PM_{2.5}$ emissions not to be exceeded for stack testing compliance	**0.095**	Sum of Baghouses #4 and #5

iii. For CO compliance demonstration: 9.84 lb/ton steel

Only P282 (#1 Ladle Furnace), and P222 (Caster) contribute any relevant additional CO emissions to the EAF emissions leaving the baghouses

P282 is permitted at 11.75 lb/hr CO. The maximum CO emissions contributed by P282 in lb/ton is

11.75 lb/hr ÷ 63 ton/hr = 0.20 lb CO/ton

P222 (Caster) is rated at 30 mmBtu/hr of natural gas heat input/hr, or 0.030 mmscf/hr of nat. gas. Applying an emissions factor taken from AP-42 gives the following contribution of NOx from P222:

$$\frac{0.03 \text{ mmscf/hr} \times 84 \text{ lb CO/mmscf}}{63 \text{ tph steel}} = 0.04 \text{ lb CO/ton}$$

The maximum permit allowable CO for P292 is 4.8 lb CO/ton

The maximum permit allowable CO for P258 is 4.8 lb CO/ton

Total CO emissions limit for demonstrating compliance

by stack testing (summation of above) **9.84 lb CO/ton**

iv. For NOx compliance demonstration: 0.42 lb/ton steel

Only P222 (Caster), contributes any relevant additional NOx emissions to the EAF emissions leaving the baghouses. It is rated at 30 mmBtu/hr of natural gas heat input/hr, or 0.030 mmscf/hr of nat. gas. Applying an emissions factor taken from AP-42 gives the following contribution of NOx from P222:

$$\frac{0.03 \text{ mmscf/hr} \times 50 \text{ lb NOx/mmscf}}{63 \text{ tph steel}} = 0.02 \text{ lb NOx/ton}$$

The maximum permit allowable NOx for P292 is 0.20 lb NOx/ton

The maximum permit allowable NOx for P258 is 0.20 lb NOx/ton

Total NOx emissions limit for demonstrating compliance

by stack testing (summation of above) **0.42 lb NOx/ton**

v. For VOC, Pb, and Hg:

(a) Emissions of these pollutants from EU's other than the EAF's are negligible. Therefore no adjustment to the stack test results for emissions of these pollutants from other EU's shall be required.

(b) For VOC compliance demonstration: 0.74 lb/ton steel

Maximum permitted VOC from P292 is 0.37 lb VOC/ton

Maximum permitted VOC from P258 is 0.37 lb VOC /ton

Total VOC emissions limit for demonstrating compliance

by stack testing (summation of above) **0.74 lb VOC /ton**

(c) For Pb compliance demonstration: 0.00069 lb/ton steel

Maximum permitted Pb from P292 is 0.00042 lb Pb/ton

Maximum permitted Pb from P258 is 0.00027 lb Pb/ton

Total Pb emissions limit for demonstrating compliance

by stack testing (summation of above) **0.00069 lb Pb/ton**

(d) For Hg compliance demonstration: 0.00040 lb/ton steel

Maximum permitted Hg from P292 is 0.00020 lb Hg/ton

Maximum permitted Hg from P258 is 0.00020 lb Hg/ton

Total Hg emissions limit for demonstrating compliance

by stack testing (summation of above) **0.00040 lb Hg/ton**

g. Monitoring and recording of the operating parameters of the baghouses specified in terms d)(4) and d)(5) above shall be conducted at 15 minute intervals during the duration of the test(s). Hourly averages of the readings shall be used to establish and/or re-verify the parameter ranges or minimum limits specified in those terms.

h. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Canton City Health Department, Air Pollution Control Division. 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 Canton City Health Department, Air Pollution Control Division's refusal to accept the results of the emission test(s).

i. Personnel from the Canton City Health Department, Air Pollution Control Division, 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.

j. 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 Canton City Health Department, Air Pollution Control Division, 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 Canton City Health Department, Air Pollution Control Division.

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI P0105790]

g) Miscellaneous Requirements

(1) None.

8. Emissions Unit Group -Melt Shop EUs: P201,P202,P222,P264,P282,P288,P289,

EU ID	Operations, Property and/or Equipment Description
P201	Slag Processing - formerly Z201
P202	Hot Metal Transfer - formerly Z202
P222	Continuous Caster
P264	Ladle Refiner #1
P282	#1 Ladle Furnace
P288	12 mmBtu/hr natural gas-fired Tundish Preheater South
P289	12 mmBtu/hr natural gas-fired Tundish Preheater North

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	See b)(2)b.
b.	OAC rule 3745-17-07(A)	See b)(2)c.
c.	OAC rule 3745-17-11(B)	For P264, P282, P288, and P289, the particulate emission (PE) limitations specified by this rule are less stringent than the $PM_{10}/PM_{2.5}$ emissions limitations established pursuant to OAC rule 3745-31-05(A)(3). See b)(2)d.i.
d.	OAC rule 3745-17-07(B)	Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average
e.	OAC rule 3745-17-08(B)(3)	See b)(2)e.
f.	OAC rule 3745-18-06(E)(1)	For P282 the SO_2 limitation specified by this rule is less stringent than the SO_2 emissions limitation established pursuant to OAC rule 3745-31-05(A)(3). For P264, P282, P288, and P289: See b)(2)d.iv.

(2) Additional Terms and Conditions

a. All particulate emissions are assumed to be less than 10 microns in diameter and are designated as PE/PM_{10} .

b. The following are the Best Available Technology (BAT) requirements for the emissions units that comprise the Melt Shop Emissions Unit Group. BAT requirements also include compliance with the terms and conditions of this permit:

Emissions Unit / PTI	OAC rule 3745-31-05(A)(3) BAT Requirements
P264(PTI 15-216 issued10/31/1984)	Particulate emissions less than 10 microns in diameter (PE/PM_{10}) shall not exceed 5.49 lbs/hr. See b)(2)d.i. Emissions shall be controlled by the use of capture hoods and the building evacuation system which is ducted to Baghouses #4 and #5. See c)(2).
P282 (PTI 15-575 issued7/16/1997)	Particulate emissions less than 10 microns in diameter (PE/PM_{10}) shall not exceed 0.0052 gr/dscf, 3.2 lbs/hr, and 14.1 tons/yr.See b)(2)d.i. CO emissions shall not exceed 11.75 lbs/hr and 51.44 tons/yr. See b)(2)d.ii. SO_2 emissions shall not exceed 65 lbs/hr, 195 lbs/day, 2.61 tons/month, and 31.33 tons/yr. See b)(2)d.iv. Emissions shall be controlled by the use of capture hoods and the building evacuation system which is ducted to Baghouses #4 and #5. See c)(1) and c)(2).
P288 and P289 (PTI 15-1096 issued3/22/1995)	Particulate emissions less than 10 microns in diameter (PE/PM_{10}) shall not exceed 0.03 lbs/hr and 0.131 tons/yr. See b)(2)d.i. CO emissions shall not exceed 0.035 lb/mmBtu, 0.42 lbs/hr and 1.84 tons/yr. See b)(2)d.ii. NO_x emissions shall not exceed 0.14 lb/mmBtu, 1.68 lbs/hr and 7.36 tons/yr. See b)(2)d.iii. See c)(3).
P222, P201, P202	Because these emissions units were installed prior to the year 1974, BAT is not applicable.

c. Pursuant to OAC rule 3745-17-07(A), the visible particulate emission limitation for the stacks serving this emission unit group is less stringent than the visible particulate emission limitation established in 40 CFR Part 60, Subpart AA. Although 40 CFR Part 60, Subpart AA is not an applicable rule for this emissions unit group, the emissions from these emissions units are combined with the emissions from the EAFs in the meltshop and are vented to shared baghouses #4 and #5. Therefore the visible particulate emissions exiting either of the baghouses shall not exceed 3.0% opacity as a 6-minute average.

d. The emissions from emissions units P201, P202, P222, P258, P264, P282, P288, P289, and P292 are captured by the melt shop building evacuation system. The combined emissions exhaust to shared baghouses #4 and #5. These emissions units are therefore subject to complying with the maximum allowable combined emissions limitations specified in the stack testing procedure of section f)(2) for the applicable pollutant as set forth in PTI P0105790.

i. For emissions units P201, P202, P222, P264, P282, P288, and P289 compliance with the individual emissions unit PE limitations pursuant to OAC rule 3745-17-11(B) and OAC rule 3745-31-05(A)(3), if applicable, is assumed provided compliance with the combined PE emissions limitation of 0.095 lb PE/PM_{10}/$PM_{2.5}$/ton steel specified in section f)(2) is met.

ii. For emissions units P282, P288, and P289, compliance with the individual emissions unit CO emissions limitations pursuant to OAC rule 3745-31-05(A)(3) is assumed provided compliance with the combined CO emissions limitation of 9.84 lb CO/ton steel specified in section f)(2) is met.

iii. For emissions units P288 and P289, compliance with the individual emissions unit NOx emissions limitations pursuant to OAC rule 3745-31-05(A)(3) is assumed provided compliance with the combined NOx emissions limitation of 0.42 lb NOx/ton steel specified in section f)(2) is met.

iv. For emissions units P264, P282, P288, and P289, compliance with the individual emissions unit SO_2 emissions limitations pursuant to OAC rule 3745-18-06(E)(1) and OAC rule 3745-31-05(A)(3), if applicable, is assumed provided compliance with the combined SO_2 emissions limitation of 19.753 lb SO_2/ton steel specified in section f)(2) is met.

e. The permittee shall employ Reasonably Available Control Measures (RACM) to prevent fugitive dust from becoming airborne. These measures shall include, but not be limited to, the following, which are sufficient to minimize or eliminate visible particulate emissions of fugitive dust:

i. the installation and use of hoods, fans, and/or other equipment to adequately enclose, contain, capture, vent, and control fugitive dust from the emissions units, meeting the following requirement:

(a) the collection efficiency shall be sufficient to minimize or eliminate visible emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

ii. for emissions units P288 and P289, the burning of natural gas only satisfies RACM.

c) Operational Restrictions

(1) For P282, sulfur injection shall be done by wire feed only and shall not exceed the following amounts of sulfur: 500 lbs/hr, 1500 lbs/day, 21.9 tons/month, and 263 tons/yr (as a 12-month rolling average).

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI 15-575]

(2) Emissions units P264 and P282 shall not employ oxygen injection.

[Authority for term: OAC rule 3745-77-07(A)(1); PTI 15-216 for P264; and PTI 15-575 for P282]

(3) Emissions units P288 and P289 shall burn natural gas only as fuel.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI 15-1096]

d) Monitoring and/or Recordkeeping Requirements

(1) In order to maintain compliance with the applicable emissions limitations contained in this permit, the acceptable range established for the pressure drop across baghouse #4 and #5 is 3.0 to 13.0 inches of water.

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI P0105790]

(2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions units are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a once per shift basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee subject to approval by the Canton City Health Department, Air Pollution Control Division.

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

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

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

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

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

The range or limit on the pressure drop across the baghouses is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Canton City Health Department, Air Pollution Control Division. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification to the TV permit.

[Authority for Term: OAC rule 3745-77-07(C)(1); 40 CFR Part 64; and PTI P0105790]

(3) The permittee shall perform daily checks, when the emissions units are in operation and when the weather conditions allow, for any visible particulate emissions from the stacks and for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving these emissions units. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

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

[Authority for Term: OAC rule 3745-77-07(C)(1)]

(4) For emissions unit P282, the permittee shall maintain daily records of the following information:

a. the amount of sulfur added to the ladle furnace, in pounds;

b. the number of hours the emissions unit was in operation; and

c. the average amount of sulfur added to the ladle furnace in pounds per hour (i.e., a./b.).

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 15-575]

(5) For emissions units P288 and P289, the permittee shall maintain a record of the type and quantity of fuel burned in the emissions units for each day during which the permittee burns a fuel other than natural gas.

[Authority for term: OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit;

b. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit;

c. any corrective actions taken to minimize or eliminate the visible particulate emissions from the stack and/or visible emissions of fugitive dust;

d. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;

e. each day when a fuel other than natural gas was burned in emissions units P288 or P289;

f. any time periods for which the sulfur injection rate for P282 exceeded 500 lbs/hr, 1500 lbs/day, 21.9 tons/month, or 263 tons/yr (as a 12-month rolling average);

g. any time periods for which P282 employed oxygen injection; and

h. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse.

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

[Authority for term: OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) Compliance with the emission limitations and/or control requirements specified in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emission Limitation (for P264 only):</u>

Particulate emissions less than 10 microns in diameter (PE/PM_{10}) shall not exceed 5.49 lbs/hr.

<u>Applicable Compliance Method:</u>

The hourly PE/PM_{10} emissions rate was established by calculation based on particulate emissions factors and control efficiencies as provided in the PTI application and utilizing the emission unit's maximum production rate of 100 tons/hr as follows:

EF for melting, charging, refining, tapping = 15.93 lb /ton*
EF for teeming = 0.07 lb/ton**

Control efficiency for melting, refining, and tapping = 99.66%
Control efficiency for teeming = 99.0%

Controlled emissions from melting, refining, and tapping:

100 ton steel/hr x 15.93 lb PE/ton x (1-0.9966) = 5.42 lb/hr PE/PM_{10}

Controlled emissions from teeming:

100 ton steel/hr x 0.07 lb PE/ton x (1-0.99) = 0.07 lb/hr PE/PM_{10}

Total = 5.49 lb/hr PE/PM_{10}

See f)(1)j. below.

b. Emission Limitation (for P282 only):

Particulate emissions less than 10 microns in diameter (PE/PM_{10}) shall not exceed 0.0052 gr/dscf, 3.2 lbs/hr, and 14.1 tons/yr.

Applicable Compliance Method:

Since the baghouses serving this emissions unit are shared with an EAF (P258) subject to NSPS 40 CFR 60, Subpart AA, the PE/PM_{10} limitation for this emissions unit was established to be equal to the baghouse outlet particulate grain loading limitation required to meet the 0.0052 gr/dscf PE/PM_{10} emissions rate required by this regulation. The portion of the total flow exhausted to the baghouses which is attributable to P282 was estimated by the permittee to be 72,109 dscfm. This is converted to a lb/hr rate as follows:

72,109 dscfm x 0.0052 gr/dscf x 1 lb/7000 gr x 60 min/hr = 3.2 lb/hr PE/PM_{10}

The annual limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton.

See f)(1)j. below.

c. Emission Limitation (for P282 only):

CO emissions shall not exceed 11.75 lbs/hr and 51.44 tons/yr.

Applicable Compliance Method:

The hourly emission limitation was established by setting it equal to the COemissions rate for P282 as provided in the PTI application by the permittee, which is based on stack testing results performed on 12/7/1990 for a similar ladle furnace at Timken's Faircrest Steel Plant.

The annual limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton.

See f)(1)k. below.

d. Emission Limitation (for P282 only):

SO_2 emissions shall not exceed 65 lbs/hr, 195 lbs/day, 2.61 tons/month, and 31.33 tons/yr.

Applicable Compliance Method:

The hourly SO_2 emissions rate was established by multiplying (500 lb Sulfur added/ hr) x (64 lb SO_2/ 32 lb Sulfur) x 6.5%*.

The daily SO_2 emissions rate was established by multiplying (1500 lb Sulfur added/ day) x (64 lb SO_2/ 32 lb Sulfur) x 6.5%*.

The monthly SO_2 emissions rate was established by multiplying (20 tons Sulfur added/ month) x (64 lb SO_2/ 32 lb Sulfur) x 6.5%*.

The annual SO_2 emissions rate was established by multiplying the monthly SO_2 emissions rate x 12 months/yr.

Compliance shall be demonstrated by the recordkeeping requirements in term d)(4) above. See f)(1)m. below.

e. Emission Limitation (for P288 and P289 only):

Particulate emissions less than 10 microns in diameter (PE/PM_{10}) shall not exceed 0.03 lbs/hr and 0.131 tons/yr.

Applicable Compliance Method:

The hourly PE/PM_{10} emissions rate was established by calculation using the following formula:

E = (A) x (B), where:

E= Calculated (PE/PM_{10}) emissions rate from burning natural gas, in lb/hr;

A = 2.5 lb/mmscf, PE/PM_{10} emission factor for natural gas combustion from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-1, 1/95. The emission factor is given as a range of 1-5 lb/mmscf in the table; a mid-range value of 2.5 lb/mmscf was assumed applicable to these emissions units.

B = 0.012 mmscf/hr, maximum fuel consumption rate of the tundish preheater calculated by dividing the maximum rated heat input to the tundish preheater of 12 mmBtu/hr by the natural gas heating value of 1000 Btu/scf.

The annual limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton.

See f)(1)j. below.

f. Emission Limitation (for P288 and P289 only):

CO emissions shall not exceed 0.035 lb/mmBtu, 0.42 lbs/hr and 1.84 tons/yr.

Applicable Compliance Method:

The hourly CO emissions rate was established by calculation using the following formula:

E = (A) x (B), where:

E= Calculated CO emissions rate from burning natural gas, in lb/hr;

A = 35 lb/mmscf, CO emission factor for natural gas combustion, from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 1/95.

B = 0.012 mmscf/hr, maximum fuel consumption rate of the tundish preheater calculated by dividing the maximum rated heat input to the tundish preheater of 12 mmBtu/hr by the natural gas heating value of 1000 Btu/scf.

The 0.035 lb/mmBtu rate was established by dividing the 0.42 lbs/hr CO emissions rate by the heat input to the tundish preheater (12 mmBtu/hr).

The annual limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton.

See f)(1)k. below.

g. Emission Limitation (for P288 and P289 only):

NOx emissions shall not exceed 0.14 lb/mmBtu, 1.68 lbs/hr and 7.36 tons/yr.

Applicable Compliance Method:

The hourly NOx emissions rate was established by calculation using the following formula:

E = (A) x (B), where:

E= Calculated NOx emissions rate from burning natural gas, in lb/hr;

A = 140 lb/mmscf, NOx emission factor for natural gas combustion, from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 1/95.

B = 0.012 mmscf/hr, maximum fuel consumption rate of the tundish preheater calculated by dividing the maximum rated heat input to the tundish preheater of 12 mmBtu/hr by the natural gas heating value of 1000 Btu/scf.

The 0.14 lb/mmBtu rate was established by dividing the 1.68 lbs/hr NOx emissions rate by the heat input to the tundish preheater (12 mmBtu/hr).

The annual limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton.

See f)(1)l. below.

h. Emission Limitation:

The visible particulate emissions exiting either of the baghouses shall not exceed 3.0% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the procedures specified in 40 CFR Part 60, Appendix A, Method 9.

[Authority for Term: OAC rule 3745-77-07(C)(1)]

i. Emission Limitation:

Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the procedures specified in 40 CFR Part 60, Appendix A, Method 9. The points of observation for visible emissions determination shall include all non-stack egress points from the building housing the emissions units. Such points include, but are not limited to, doorways, windows, and roof monitors.

[Authority for Term: OAC rule 3745-77-07(C)(1)]

j. Emission Limitation:

For emissions units P222, P264, P282, P288, P289, P201, and P202, compliance with the individual emissions unit PE limitations is assumed provided compliance with the combined PE emissions limitation of 0.095 lb PE/PM_{10}/$PM_{2.5}$/ton steel is demonstrated.

Applicable Compliance Method:

Compliance with the 0.095 lb PE/PM_{10}/$PM_{2.5}$/ton steel limit shall be demonstrated based upon the emission testing requirements specified in section f)(2).

[Authority for Term: OAC rule 3745-77-07(C)(1)]

k. Emission Limitation:

For emissions units P282, P288, and P289, compliance with the individual emissions unit CO emissions limitations is assumed provided compliance with the combined CO emissions limitation of 9.84 lb CO/ton steel is demonstrated.

Applicable Compliance Method:

Compliance with the 9.84 lb CO/ton steel limit shall be demonstrated based upon the emission testing requirements specified in section f)(2).

[Authority for Term: OAC rule 3745-77-07(C)(1)]

l. Emission Limitation:

For emissions units P288 and P289, compliance with the individual emissions unit NOx emissions limitations is assumed provided compliance with the combined NOx emissions limitation of 0.42 lb NOx/ton steel is met.

Applicable Compliance Method:

Compliance with the 0.42 lb NOx/ton steel limit shall be demonstrated based upon the emission testing requirements specified in section f)(2).

[Authority for Term: OAC rule 3745-77-07(C)(1)]

m. Emission Limitation:

For emissions units P264, P282, P288, and P289, compliance with the individual emissions unit SO_2 emissions limitations is assumed provided compliance with the combined SO_2 emissions limitation of 20.68 lb SO_2/ton steel is met.

Applicable Compliance Method:

Compliance with the 20.68 lb SO_2/ton steel limit shall be demonstrated based upon the emission testing requirements specified in section f)(2).

[Authority for Term: OAC rule 3745-77-07(C)(1)]

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

a. The emissions testing shall be conducted during the same time as the testing for the EAFs (P258 and P292).

b. The emission testing shall be conducted to demonstrate compliance with the allowable emission factors in lbs/ton identified in f)(2)f. below for emissions offilterable PM_{10}/$PM_{2.5}$, NOx, CO, and SO_2, to demonstrate compliance with the visible emission limitations in b)(1), and to demonstrate the exhaust gas flow rate of Baghouse #4 and Baghouse #5 in dscfm.

c. The following test methods found in 40 CFR Part 60, Appendix A shall be employed (alternative U.S. EPA approved test methods may be used with prior approval from the Canton City Health Department, Air Pollution Control Division):

i.	Filterable PM_{10}:	Method 201 or 201A
ii.	Filterable $PM_{2.5}$	Filterable PM_{10} is used as a surrogate
iii.	NOx:	Method 7 or 7A
iv.	CO:	Method 10
v.	SO_2:	Method 6 or 6A
vi.	Visible Emissions:	Method 9

d. The tests shall be conducted at each baghouse outlet while the appropriate EAF (P292 when testing at Baghouse #4, and P258 when testing at Baghouse #5) is operating at or near its maximum steel production capacity of 63 tph with the maximum allowable amount of tires included in the furnace charge (13.3 lb tires/ ton steel), unless otherwise specified or approved by the Canton City Health Department, Air Pollution Control Division.

The sampling time shall include an integral number of heats.

Compliance demonstration results shall be based on the arithmetical average of (3) back-to-back test runs.

e. Emissions from the EAF's (P292 and P258) are controlled by the Meltshop building evacuation system which is serviced by Baghouse #4 and Baghouse #5 combined. The following EU's also contribute emissions to the Meltshop and are exhausted to the same baghouses:

P282 (#1 Ladle Furnace)

P264 (Ladle Refiner)

P222 (Continuous Caster),

P288 and P289, (Tundish Preheaters),

P201 (Slag Processing), and

P202 (Hot Metal Transfer)

The emissions from these EU's are captured by both baghouses in undetermined proportions. Since it is not practical to operate both EAF's simultaneously at their maximum ratings, the testing to demonstrate compliance for P292 and/or P258 shall be conducted such that test results from testing at each baghouse individually are summed to determine a combined limit. Compliance of P292 and/or P258 is presumed if compliance with the combined limit is demonstrated.

If the combined limit for any pollutant is exceeded, then all emissions units which contribute to that pollutant's emissions factor identified in f)(2)f. below shall be considered out of compliance.

Compliance testing done at Baghouse #4 shall be performed while P292 is operating at or near its maximum steel production capacity, and sulfur is being added to P282 at or near to its maximum permitted rate of 500 lb/hr. (This maximum sulfur feed rate has been established by the Permittee as the maximum hourly sulfur feed rate for steel grades produced).

Compliance testing done at Baghouse #5 shall be performed while P258 is operating at or near its maximum steel production capacity.

f. The combined limits, for the purpose of compliance demonstration by stack testing, are derived as follows:

i. for SO_2 compliance demonstration: 19.753 lb/ton

EU #	Emissions Contribution Lb SO_2/ton steel	Basis for Contribution
P292 (EAF #2)	0.44	PTI P0105790
P282 (#1 Ladle Furnace)	$\frac{65 \text{ lb } SO_2/\text{hr}}{\text{tph steel}}$ = 0.103	PTI 15-575
P264 (Ladle Refiner)	$\frac{457.84 \text{ lb } SO_2/\text{hr}}{63 \text{ tph steel}}$ = 7.27	OAC rule 3745-18-06(E)(1) using 107 tph maximum molten steel refining rate
P201 (Slag Processing)	0.0	Negligible
P202 (Hot Metal Transfer)	0.0	Negligible
P258 (EAF #9)	0.44	PTI P0105790
P222 (Caster)	0.0	Negligible

P288 (Tundish Preheater)	$\frac{362.5 \text{ lb } SO_2/hr}{63 \text{ tph steel}}$ = 5.75	OAC rule 3745-18-06(E)(1) using 75.5 tph maximum molten steel handling capacity
P289 Tundish Preheater)	$\frac{362.5 \text{ lb } SO_2/hr}{63 \text{ tph steel}}$ = 5.75	OAC rule 3745-18-06(E)(1) using 75.5 tph maximum molten steel handling capacity
Total SO_2 emissions not to be exceeded for stack testing compliance	**19.753**	Sum of Baghouses #4 and #5

ii. for $PM_{10}/PM_{2.5}$ compliance demonstration: 0.095 lb/ton steel

EU #	Emissions Contribution Lb $PM_{10}/PM_{2.5}$/ton steel	Basis for Contribution
P292 (EAF #2)	0.052	PTI P0105790
P282 (#1 Ladle Furnace)	0.0034x0.076 = 0.00003	AP-42 Table 12.5.1-1 for PM x 76% of PM assumed as PM_{10}
P264 (Ladle Refiner)	0.0000	Included with P282
P201 (Slag Processing)	0.0	Negligible
P202 (Hot Metal Transfer)	0.0	Included in P222
P258 (EAF #9)	0.043	PTI P0105790
P222 (Caster)	0.00012x0.76 = 0.00009	AP-42 Table 12.5.1-1 for PM x 76% of PM assumed as PM_{10}. Baghouse efficiency of 99.9% assumed
P288 (Tundish Preheater)	0.0	Negligible PM_{10}, gas fired
P289 Tundish Preheater)	0.0	Negligible PM_{10}, gas fired
Total $PM_{10}/PM_{2.5}$ emissions not to be exceeded for stack testing compliance	**0.095**	Sum of Baghouses #4 and #5

iii. For CO compliance demonstration: 9.84 lb/ton steel

Only P282 (#1 Ladle Furnace), and P222 (Caster) contribute any relevant additional CO emissions to the EAF emissions leaving the baghouses

P282 is permitted at 11.75 lb/hr CO. The maximum CO emissions contributed by P282 in lb/ton is

11.75 lb/hr ÷ 63 ton/hr = 0.20 lb CO/ton

P222 (Caster) is rated at 30 mmBtu/hr of natural gas heat input/hr, or 0.030 mmscf/hr of nat. gas. Applying an emissions factor taken from AP-42 gives the following contribution of NOx from P222:

$$\frac{0.03 \text{ mmscf/hr} \times 84 \text{ lb CO/mmscf}}{63 \text{ tph steel}} = 0.04 \text{ lb CO/ton}$$

The maximum permit allowable CO for P292 is 4.8 lb CO/ton

The maximum permit allowable CO for P258 is 4.8 lb CO/ton

Total CO emissions limit for demonstrating compliance

by stack testing (summation of above) **9.84 lb CO/ton**

iv. For NOx compliance demonstration: 0.42 lb/ton steel

Only P222 (Caster), contributes any relevant additional NOx emissions to the EAF emissions leaving the baghouses. It is rated at 30 mmBtu/hr of natural gas heat input/hr, or 0.030 mmscf/hr of nat. gas. Applying an emissions factor taken from AP-42 gives the following contribution of NOx from P222:

$$\frac{0.03 \text{ mmscf/hr} \times 50 \text{ lb NOx/mmscf}}{63 \text{ tph steel}} = 0.02 \text{ lb NOx/ton}$$

The maximum permit allowable NOx for P292 is 0.20 lb NOx/ton

The maximum permit allowable NOx for P258 is 0.20 lb NOx/ton

Total NOx emissions limit for demonstrating compliance

by stack testing (summation of above) **0.42 lb NOx/ton**

g. Monitoring and recording of the operating parameters of the baghouses specified in term d)(1) above shall be conducted at 15 minute intervals during the duration of the test(s). Hourly averages of the readings shall be used to establish and/or re-verify the parameter ranges or minimum limits specified in those terms.

h. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Canton City Health Department, Air Pollution Control Division. 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 Canton City Health Department, Air Pollution Control Division's refusal to accept the results of the emission test(s).

i. Personnel from the Canton City Health Department, Air Pollution Control Division, 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.

j. 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 Canton City Health Department, Air Pollution Control Division, 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 Canton City Health Department, Air Pollution Control Division.

[Authority for Term: OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

9. Emissions Unit Group -Steam Generators, 20.1 mmBtu/hr: P293,P294,P295,P297,

EU ID	Operations, Property and/or Equipment Description
P293	20.1 mmBtu/hr natural gas-fired steam generator
P294	20.1 mmBtu/hr natural gas-fired steam generator
P295	20.1 mmBtu/hr natural gas-fired steam generator
P297	20.1 mmBtu/hr natural gas-fired steam generator

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 15-01555 issued 7/1/2004)	Particulate emissions less than 10 microns in diameter (PE/PM_{10}) shall not exceed 0.15 lb/hr and 0.66 ton/yr. Nitrogen oxide (NOx) emissions shall not exceed 2.32 lbs/hr and 10.16 tons/yr. Carbon monoxide (CO) emissions shall not exceed 1.62 lbs/hr and 7.10 tons/yr. Volatile Organic Compound (VOC) emissions shall not exceed 0.11 lb/hr and 0.48 ton/yr. Sulfur dioxide (SO_2) emissions shall not exceed 0.01 lb/hr and 0.04 ton/yr. See b)(2)a. and b)(2)b. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1) and 40 CFR Part 60, Subpart Dc.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by rule.
c.	OAC rule 3745-17-10 OAC rule 3745-18-06	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-18-82	Exempt. See b)(2)c.
e.	40 CFR Part 60 Subpart Dc (40 CFR Part 60.40c -60.48c) [In accordance with 40 CFR 60.40c(a), this emissions unit is a steam generating unit with a maximum design heat input of 100 mmBtu/hr or less, but greater than 10 mmBtu/hr, for which construction commenced after June 9, 1989.]	See b)(2)d.

(2) Additional Terms and Conditions

a. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the operational restriction in c)(1).

b. The emissions limitations in b)(1)a. are based on the emissions units' potential to emit. Therefore no monitoring, record keeping, and reporting requirements are necessary to ensure ongoing compliance with these emissions limitations.

c. These emissions units are exempt from the requirements of OAC rule 3745-18-82 pursuant to OAC rule 3745-18-06(A) because they burn only natural gas.

d. Based on firing only natural gas, these emissions units are subject to only the applicable requirements pursuant to 40 CFR Part 60 Subpart Dc for record keeping and notification as specified in terms d)(2) and e)(3) of this permit.

c) Operational Restrictions

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

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI 15-01555]

d) Monitoring and/or Recordkeeping Requirements

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

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 15-01555]

(2) The permittee shall comply with the applicable monitoring and record keeping requirements pursuant to 40 CFR Part 60, Subpart Dc, in the following section:

60.48c(g)(2)	Maintain records of the amount of natural gas combusted during each calendar month.

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. each day when a fuel other than natural gas was burned in this emissions unit.

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

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 15-01555]

(3) The permittee shall comply with the applicable notification requirements pursuant to 40 CFR Part 60, Subpart Dc, in the following section (if the information has not already been reported):

60.48c(a)	Notification of construction and startup dates

f) Testing Requirements

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

a. Emissions Limitation:

Particulate emissions less than 10 microns in diameter (PE/PM_{10}) shall not exceed 0.15 lb/hr and 0.66 ton/yr

Applicable Compliance Method:

The hourly PE/PM_{10} emissions rate was established by calculation using the following formula:

E = (A) x (B), where:

E= Calculated (PE/PM_{10}) emissions rate from burning natural gas, in lb/hr;

A = 7.6 lb/mmscf, emission factor for (PE/PM_{10}) from natural gas combustion from AP-42, Section 1.4 Natural Gas Combustion, Table 2.4-2, 7/98; and

B = 0.0193 mmscf/ hr, maximum fuel consumption rate of the furnace calculated by dividing the maximum rated heat input to the furnace of 20.1 mmBtu/hr by the natural gas heating value of 1040 Btu/scf.

The annual limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore compliance with the hourly PE/PM_{10} emission limitation demonstrates compliance with the annual PE/PM_{10} emission limitation.

If required, the permittee shall demonstrate compliance with the hourly emissions limitation through emissions testing performed in accordance with 40 CFR Part 51, Appendix M,Method 201 or 201A.Alternative U.S. EPA approved test methods may be used with prior approval from the Canton City Health Department, Air Pollution Control Division.

[Authority for term: OAC rule 3745-77-07(C)(1)]

b. Emissions Limitation:

Nitrogen oxide (NOx) emissions shall not exceed 2.32 lbs/hr and 10.16 tons/yr

Applicable Compliance Method:

E = (A) x (B), where:

E= Calculated NOx emissions rate from burning natural gas, in lb/hr;

A = 120 lb/mmscf, emission factor for NOx supplied by the steam generator vendor; and

B = 0.0193 mmscf/ hr, maximum fuel consumption rate of the furnace calculated by dividing the maximum rated heat input to the furnace of 20.1 mmBtu/hr by the natural gas heating value of 1040 Btu/scf.

The annual limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore compliance with the hourly NOx emission limitation demonstrates compliance with the annual NOx emission limitation.

If required, the permittee shall demonstrate compliance with the hourly emissions limitation through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4 and 7 or 7E. Alternative U.S. EPA approved test methods may be used with prior approval from the Canton City Health Department, Air Pollution Control Division.

[Authority for term: OAC rule 3745-77-07(C)(1)]

c. Emissions Limitation:

Carbon monoxide (CO) emissions shall not exceed 1.62 lbs/hr and 7.10 tons/yr.

Applicable Compliance Method:

The hourly CO emissions rate was established by calculation using the following formula:

E = (A) x (B), where:

E= Calculated CO emissions rate from burning natural gas, in lb/hr;

A = 84 lb/mmscf, emission factor for CO from natural gas combustion from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-1, 7/98; and

B = 0.0193 mmscf/ hr, maximum fuel consumption rate of the furnace calculated by dividing the maximum rated heat input to the furnace of 20.1 mmBtu/hr by the natural gas heating value of 1040 Btu/scf.

The annual limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore compliance with the hourly CO emission limitation demonstrates compliance with the annual CO emission limitation.

If required, the permittee shall demonstrate compliance with the hourly emissions limitation through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4 and 10. Alternative U.S. EPA approved test methods may be used with prior approval from the Canton City Health Department, Air Pollution Control Division.

[Authority for term: OAC rule 3745-77-07(C)(1)]

d. Emissions Limitation:

Volatile Organic Compound (VOC) emissions shall not exceed 0.11 lb/hr and 0.48 ton/yr.

Applicable Compliance Method:

E = (A) x (B), where:

E= Calculated VOC emissions rate from burning natural gas, in lb/hr;

A = 5.5 lb/mmscf, emission factor for VOC from natural gas combustion from AP-42, Section 1.4 Natural Gas Combustion, Table 2.4-1, 7/98; and

B = 0.0193 mmscf/ hr, maximum fuel consumption rate of the furnace calculated by dividing the maximum rated heat input to the furnace of 20.1 mmBtu/hr by the natural gas heating value of 1040 Btu/scf.

The annual limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore compliance with the hourly VOC emission limitation demonstrates compliance with the annual VOC emission limitation.

If required, the permittee shall demonstrate compliance with the hourly emissions limitation through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 18, 25, or 25A. Alternative U.S. EPA approved test methods may be used with prior approval from the Canton City Health Department, Air Pollution Control Division.

[Authority for term: OAC rule 3745-77-07(C)(1)]

e. Emissions Limitation:

Sulfur dioxide (SO_2) emissions shall not exceed 0.01 lb/hr and 0.04 ton/yr.

Applicable Compliance Method:

The hourly SO_2 emissions rate was established by calculation using the following formula:

E = (A) x (B), where:

E= Calculated SO_2 emissions rate from burning natural gas, in lb/hr;

A = 0.6 lb/mmscf, emission factor for SO_2 from natural gas combustion from AP-42, Section 1.4 Natural Gas Combustion, Table 2.4-1, 7/98; and

B = 0.0193 mmscf/ hr, maximum fuel consumption rate of the furnace calculated by dividing the maximum rated heat input to the furnace of 20.1 mmBtu/hr by the natural gas heating value of 1040 Btu/scf.

The annual limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hrs/yr and dividing by

2000 lbs/ton. Therefore compliance with the hourly SO_2 emission limitation demonstrates compliance with the annual SO_2 emission limitation.

If required, the permittee shall demonstrate compliance with the hourly emissions limitation through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Method 6. Alternative U.S. EPA approved test methods may be used with prior approval from the Canton City Health Department, Air Pollution Control Division.

[Authority for term: OAC rule 3745-77-07(C)(1)]

f. Emissions Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(3) using the methods and procedures specified in U.S.EPA Reference Method 9.

g) Miscellaneous Requirements

(1) None.