State of Ohio Environmental Protection Agency

Street Address:
Lazarus Gov. Center
122 S. Front Street
Columbus, OH 43215

TELE: (614) 644-3020 **FAX:** (614) 644-2329

Mailing Address:
Lazarus Gov. Center
P.O. Box 1049
Columbus, OH 43216-1049

RE: **FINAL PERMIT TO INSTALL MODIFICATION** CERTIFIED MAIL

STARK COUNTY
Application No: 15-01314

Y	TOXIC REVIEW
Y	PSD
	SYNTHETIC MINOR
	CEMS
	MACT
AAa	NSPS
	NESHAPS
	NETTING
	MAJOR NON-ATTAINMENT
Y	MODELING SUBMITTED
	GASOLINE DISPENSING FACILITY

DATE: 1/22/2002

Republic Technologies International
Eric Howland
2633 Eighth St NE
Canton, OH 44701

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
236 East Town Street, Room 300
Columbus, Ohio 43215

Very truly yours,

Thomas G. Rigo

Thomas G. Rigo, Manager
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA Canton LAA

FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 15-01314

Application Number: **15-01314**

APS Premise Number: **1576050694**

Permit Fee: **$1000**

Name of Facility: **Republic Technologies International LLC-Canton Works**

Person to Contact: **Eric Howland**

Address: **2633 Eighth St NE**

Canton, OH 44701

Location of proposed air contaminant source(s) [emissions unit(s)]:
2633 Eighth St NE
Canton, OHIO

Description of modification:
Modification of PTI 15-1314, issued 08-11-1999 to increase the hourly allowable $_{NOx}$ and Pb emission rates add a lb NO_x/ton of steel limit for EAF # 9 and to allow the use of only 3 of the 4 fans on the No. 4 Melt Shop Baghouse.

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

GENERAL PERMIT CONDITIONS

TERMINATION OF PERMIT TO INSTALL

Substantial construction for installation must take place within 18 months of the effective date of this permit. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

NOTICE OF INSPECTION

The Director of the Ohio Environmental Protection Agency, or his authorized representatives, may enter upon the premises of the above-named applicant during construction and operation at any reasonable time for the purpose of making inspections, conducting tests, or to examine records or reports pertaining to the construction, modification or installation of the source(s) of environmental pollutants identified within this permit.

CONSTRUCTION OF NEW SOURCES

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

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

PERMIT TO INSTALL FEE

In accordance with Ohio Revised Code 3745.11, the specified Permit to Install fee must be remitted within 30 days of the effective date of this permit to install.

PUBLIC DISCLOSURE

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

APPLICABILITY

This Permit to Install is applicable only to the contaminant sources identified. Separate application must be made to the Director for the installation or modification of any other contaminant sources.

BEST AVAILABLE TECHNOLOGY

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

PERMIT TO OPERATE APPLICATION AND OPERATION AFTER COMPLETION OF CONSTRUCTION

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

If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within thirty (30) days after commencing operation of the source(s) covered by this permit.

NINETY DAY OPERATING PERIOD

The facility will be permitted to operate during a 90-day period in accordance with OAC rule 3745-35-02 (C)(4)(b). The purpose of this period of operation is to fulfill the performance tests conditions used in the determination of compliance with the provisions of this Permit to Install or other applicable Ohio EPA rules.

SOURCE OPERATION AFTER COMPLETION OF CONSTRUCTION

This facility is permitted to operate each source described by this permit to install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws and regulations.

Republic Technologies International Facility ID: **1576050694**
PTI Application: 15-01314
Modification Issued: 1/22/2002

AIR EMISSION SUMMARY

The air contaminant emissions units listed below comprise the Permit to Install for **Republic Technologies International** located in **STARK** County. The emissions units listed below shall not exceed the emission limits/control requirements contained in the table. This condition in no way limits the applicability of any other state or federal regulations. Additionally, this condition does not limit the applicability of additional special terms and conditions of this permit.

Ohio EPA Source Number	Source Identification Description	BAT Determination	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage Requirements
P905 (Mod)	85 tons/hour Electric Arc furnace (EAF No. 7) with direct evacuation control (DEC) and a building evacuation system for capture and a baghouse for control. Modification-process and maintenance improvements which promoted an increase in the actual production rate.	Use of a direct evacuation control (DEC) and building evacuation system for capture, a baghouse for control, compliance with the terms of this permit, and compliance with the Ohio EPA's Air Toxics Policy.	3745-17-07 (A)(1) (6/14/91)	BAT is more restrictive.
			3745-17-11 (6/14/91)	Particulate: 56.8 pounds/hour* 249 tons/year*
			3745-18-06 (E)(1) (10/31/96)	BAT is more restrictive.
			NSPS 40 CFR Part 60 Subpart AAa (10/31/84)	BAT is more restrictive. For visible emissions limits See ** below
			3745-31-05 3745-31-10 through 3745-31-20 (4/12/96)	Particulate: 0.0032 GR/DSCF $_{PM10}$ (76% of PM): 43.17 lbs/hr* 189.24 t/yr* Sulfur dioxide: 5.95 lbs/hr; 26.1 T/yr nitrogen oxides: 8.5 lbs/hr; 37.2 T/yr

Ohio EPA Source Number	Source Identification Number	BAT Determination	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage Requirements
(Mod) Con't				Carbon moNO$_x$ide: 340 lbs/hr; 1489.2 T/yr volatile organic compounds: 29.75 lbs/hr; 130.3 T/yr lead (combined emissions from P905 & P907): 0.036 lb/hr; 0.16 T/yr
P907 (Mod)	165 tons/hour Electric Arc Furnace (EAF No. 9) with direct evacuation control (DEC) and building evacuation system for capture and a baghouse for control. Modification-transformer upgrade, process improvements and maintenance improvements which promoted an increase in the actual production rate.	Use of a direct evacuation control (DEC) and building evacuation system for capture, a baghouse for control, compliance with the terms of this permit, and compliance with the Ohio EPA's Air Toxic Policy	3745-17-07 (A)(1) (6/14/91) 3745-17-11 (6/14/91) 3745-18-06 (E)(1) (10/31/96) NSPS 40 CFR Part 60 Subpart Aaa (10/31/84) 3745-31-05 3745-31-10 through 3745-31-20 (4/12/96)	See *** for clarification of hourly & annual limits. BAT is more restrictive. Particulate: 56.8 lbs/hr* 249 T/yr* BAT is more restrictive. For Visible emissions limits See *** below Particulate: 0.0032 GR/DSCF $_{PM10}$ (76% of PM): 43.17 lbs/hr* 189.24 T/yr* Sulfur dioxide: 11.55

Ohio EPA Source Number	Source Identification Number	BAT Determination	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage Requirements
				lbs/hr & 50.6 T/yr nitrogen oxides: 0.35 lb/ton of steel as a 3-hour average, 33.0 lbs/hr& 144.5 T/yr Carbon moNO$_x$ide: 660 pounds/hour and 2890.8 tons/year Volatile organic compounds: 57.75 pounds/hour and 252.9 tons/year lead (combined emissions from P905 and P907): 0.036 pound/hour 0.16 ton/year
P123 (Mod)	Ladle metallurgy facility with fabric filter.	Fabric filter with an outlet grain loading of no more than 0.005 gr/DSCF	3745-17-07 (A)(1) (6/14/91)	See *** for clarification of hourly and annual limits
			3745-17-11 (6/14/91)	BAT is more restrictive.
			3745-18-06 (E)(1) (10/31/96)	BAT is more restrictive.
			3745-31-05 (4/12/96)	BAT is more restrictive.
P123				Particulate:0.005 GR/DSCF

Ohio EPA Source Number	Source Identification Number	BAT Determination	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage Requirements
(Mod) Con't			3745-31-10 through 3745-31-20 See section E in additional terms and conditions.	3.12 lbs/hr based on 72,800 DSCF/minute 13.67 T/yr $_{PM10}$:2.44 lbs/hr 10.69 T/yr Visible particulate emissions shall not exceed 5% opacity as a 6-minute average Sulfur dioxide: 525 lbs/3-hr period; 1,748 lbs/day; 318.84 T/yr Sulfur usage limit: 656 lbs/3-hr period 2,185 lbs/24-hr period; 399 T/yr (These usage limits are based on an emission factor of 0.8 pound SO_2/pound sulfur added. These numbers may be adjusted based on the results of future emissions tests) The BH serving this emissions unit also serves emissions units P128 and P129. The above limits are for the combined emissions from all three of these emissions units.
P126	196.2 MMBTU/Hour natural gas-fired bloom reheat	Low NO_x burners that are below 0.112 pound NO_x/mmBtu and compliance with the terms of this permit.	3745-17-07 (A)(1) (6/14/91) 3745-17-11	

Ohio EPA Source Number	Source Identification Number	BAT Determination	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage Requirements
(Mod)	furnace		(6/14/91) 3745-31-05 (4/12/96) 3745-31-10 through 3745-31-20 See Section E in additional terms and conditions.	BAT is more restrictive. BAT is more restrictive. Nitrogen oxides: 0.112 lb/MMBtu 22 lbs/hr and 96.2 tons/year Carbon moNO$_x$ide: 7.8 pounds/hour and 34.3 tons/year volatile organic compounds: 1.1 pounds/hour and 4.82 tons/year PM/$_{PM10}$: 1 pound/hour 4.4 tons/ year Sulfur dioxide: 0.12 pound/hour 0.52 ton/year Visible particulate emissions shall not exceed 5% opacity as a 6-minute average.
P130	14 MMBtu/hour natural gas-fired eccentric bottom tapping ladle preheater furnace	Low NO$_x$ burners that are below 0.089 lb NO$_x$/MmBtu & compliance with the terms of this permit.	3745-17-07 (6/14/91) 3745-17-11 (6/14/91) 3745-31-05 3745-31-10 through 3745-31-20 (4/12/96)	BAT is more restrictive. BAT is more restrictive.

Nitrogen oxides:
0.089 pound/MMBTU
1.25 pounds/hour and
5.5 tons/year

carbon moNO$_x$ide:
1.2 pound/hour
and 5.3 tons/year

PM/$_{PM10}$:
0.196 pound/hour
0.86 ton/year

Visible particulate emissions shall not exceed 5 % opacity as a 6-minute average.

- Combined limit for emissions from the baghouse servicing P905, P907, and P106. This limit is based upon considering P905, P907, and P106 as similar sources and using Figure II and an uncontrolled MRE of 7,232 pounds/hour based on an emission factor of 11.3 pounds PM/ton. 56.8 pounds/hour x 8,760 hours/year x 1 ton/2,000 pounds = 249 tons/year.

- The following standards are requirements of the NSPS Subpart Aaa, BACT and BAT. Visible emissions shall not exceed the following limits during a six-minute average:

  3 percent opacity from the baghouse exit; 6 percent opacity from the melt shop (This limit is more restrictive than the NSPS limit which only limits emissions due solely to the operation of an EAF (s) or AOD vessel (s).)' and, 10 percent opacity from the dust handling equipment.

- The hourly emissions limits established for sulfur dioxide, nitrogen oxide, and carbon moNO$_x$ide are based on the maximum hourly production rate of 85 tons of steel produced per hour.

- The hourly emissions limits established for sulfur dioxide, nitrogen oxide, and carbon moNO$_x$ide are based on the maximum hourly production rate of 165 tons of steel produced per hour.

SUMMARY
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant	**Tons/Year**
PM	267.93
PM10	205.19
SO_2	396.16

NO_x	283.40
CO	4,416.45
VOC	384.64
Pb	0.16

The information contained under the Summary of Emissions section of the Permit to Install is for informational purposes only and is not enforcable.

NSPS REQUIREMENTS

The following sources are subject to the applicable provisions of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60.

Source Number	Source Description	NSPS Regulation (Subpart)
P905	85 tons/hour EAF	AAa
P907	165 tons/hour EAF	AAa

The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

a. construction date (no later than 30 days after such date);
b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
c. actual start-up date (within 15 days after such date); and
d. date of performance testing (If required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
Lazarus Government Center
P.O. Box 1049
Columbus, OH 43216-1049

and Canton City Health Department
Air Pollution Control Division
420 Market Avenue North
Canton, OH 44702-1544

RECORD(S) RETENTION AND AVAILABILITY

All records required by this Permit to Install shall be retained on file for a period of not less than three years unless otherwise indicated by Ohio Environmental Protection Agency. All records shall be made available to the Director, or any representative of the Director, for review during normal business hours.

REPORTING REQUIREMENTS

Unless otherwise specified, reports required by the Permit to Install need only be submitted to **Canton City Health Department - Air Pollution Control Division, 420 Market Avenue North, Canton, OH 44702-1544.**

WASTE DISPOSAL

The owner/operator shall comply with any applicable state and federal requirements governing the storage, treatment, transport and disposal of any waste material generated by the operation of the sources.

MAINTENANCE OF EQUIPMENT

This source and its associated air pollution control system(s) shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers in order to minimize air contaminant emissions.

MALFUNCTION/ABATEMENT

In accordance with OAC RULE 3745-15-06, any malfunction of the source(s) or associated air pollution control system(s) shall be reported immediately to the **Canton City Health Department- Air Pollution Control Division, 420 Market Avenue North, Canton, OH 44702-1544.**

Except as provided by OAC Rule 3745-15-06(A)(3), scheduled maintenance of air pollution control equipment that requires the shutdown or bypassing of air pollution control system(s) must be accompanied by the shutdown of the associated air pollution sources.

AIR POLLUTION NUISANCES PROHIBITED

The air contaminant source(s) identified in this permit may not cause a public nuisance in violation of OAC Rule 3745-15-07.

CONSTRUCTION COMPLIANCE CERTIFICATION

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

ADDITIONAL SPECIAL TERMS AND CONDITIONS

V. Emissions Unit P905-85 tons/hr Electric Arc Furnace

A. <u>Operational Restrictions (905)</u>

1. The emissions from P905 shall be vented to the No. 4 Melt Shop baghouse. This baghouse shall have a minimum control efficiency of 99%. In addition, the system shall achieve a minimum capture efficiency that is sufficient to prevent violations of the 6 percent opacity limit for fugitive emissions from the melt shop. The capture system for the emissions unit shall include a common canopy hood and a roof control system, both of which vent to the No. 4 Melt shop baghouse. The No. 4 Melt Shop baghouse can be operated with only 3 fans. This results in an airflow decrease from 2,300,000 ACFM to 1,558,000 ACFM.

2. This emissions unit shall achieve a minimum capture efficiency of 99 percent for carbon moNO_xide emissions.

3. This emissions unit shall achieve a minimum capture efficiency of 99 percent for volatile organic compound emissions.

4. No more than 85 tons of steel per hour shall be processed in P905. This production rate is an average hourly rate determined by dividing the tons of steel produced per day by the number of operating hours per day.

5. Prior to the modification of this emissions unit, the permittee shall submit a Scrap Management Plan (SMP) to the Canton Local air agency for review and approval. The SMP shall be implemented immediately after approval by the Canton LAA. The main focus of the SMP will be to ensure that the purchase of excessively oily scrap and other combustible material will be minimized to the greatest extent possible. All grades of scrap shall be free of excessive dirt, oil and grease. Heavily oiled scrap shall not be used. As part of the SMP, the permittee shall install a radionuclide detector which will be used to inspect all incoming scrap material into the facility. Radioactive scrap material shall not be used at this facility. Any scrap material which is determined to be radioactive shall be disposed of pursuant to Republic's Radiation Management Program.

6. The permittee shall develop a parametric monitoring and recordkeeping plan in order to confirm that the Melt shop baghouse servicing this emissions unit is operating properly. This plan shall be developed prior to the modification of this emissions unit and shall be consistent with the Title V and CAM requirements. The monitoring equipment (if necessary) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual (s). This plan is subject to approval by the Canton Air Pollution Control Agency.

B. <u>Monitoring and/or Recordkeeping Requirements (P905)</u>

2. The following are requirements of the NSPS Subpart AAa. Observations of the opacity of the visible emissions from the control devices shall be performed by a certified visible emission observer as follows:

a. Visible emission observations shall be conducted at least once per day of operation. The observations shall occur when the furnace is operating in the charging, melting, tapping and refining period. These observations shall be taken in accordance with Method 9 of 40 CFR Part 60, Appendix A and, for at least three 6-minute periods, the opacity shall be recorded for point (s) where the greatest opacity visible emissions are observed, and that portion of the plume where the condensed water phase is not present in accordance with the procedures listed in Method 9 of 40 CFR Part 60, Appendix A. Where it is possible to determined that a number of visible emission sites related to only one incident of the visible emission, only one set of three 6-minutes observations will be required. In this case, Method 9 observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident. Records shall be maintained of any 6-minute average that is in excess of the opacity limits specified in the footnotes for the Air Emission Summary above.

The appropriate records shall be maintained in the permittee's files to identify the persons responsible for conducting the opacity readings and to verify that the Method 9 certifications are up to date for the responsible individuals.

3. The permittee shall monitor the operation of the furnace control systems and maintain records in accordance with the following requirements:

a. The permittee shall install, calibrate, and maintain a monitoring device that allows the pressure in the free space inside the EAF to be monitored. The monitoring device may be installed in any appropriate location in the EAF ducts prior to the introduction of ambient air such that reproducible results will be obtained. The pressure monitoring device shall have an accuracy of plus or minus 5 mm of water gauge over its normal operating range and shall be calibrated according to the manufacturer's instructions. The pressure determined during the most recent compliance demonstration shall be maintained at all times when the EAF is operating in a meltdown and refining period. Operation at higher pressures will be considered by the Ohio EPA, Division of Air Pollution Control (DAPC) to be unacceptable operation and maintenance of the control system. The permittee may petition the Ohio EPA for reestablishment of the 15-minute integrated average of the pressure whenever the permittee can demonstrate to the Agency's satisfaction that EAF operating conditions upon which the pressures were previously established are no longer applicable;

b. The permittee shall check and record on a once-per-shift basis the furnace static pressure and either (1) check and record the control system fan motor amperes and damper positions on a once-per-shift basis; or (2) install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through each separately ducted hood. The monitoring device may be installed in any appropriate location in the exhaust duct such that reproducible flow rate monitoring will result. The flow rate monitoring devices shall have an accuracy of plus or minus 10 percent over their normal operating range and shall be calibrated according to the

manufacturer's instructions. The Ohio EPA, DAPC may require the permittee to demonstrate the accuracy of the monitoring devices relative to Methods 1 and 2 of Appendix A of 40 CFR, Part 60. The values of these parameters as determined during the most recent demonstration of compliance shall be maintained at the appropriate levels for each applicable period. Operation at other than baseline values will be considered by the Ohio EPA, DAPC to be unacceptable operation and maintenance of the control system. The permittee may petition the Ohio EPA for reestablishment of these parameters whenever the permittee can demonstrate to the Agency's satisfaction that the operating conditions upon which the parameters were previously established are no longer applicable;

c. The permittee shall perform monthly operational status inspections of the equipment that is important to the performance of the total capture systems (i.e., prescence sensors, dampers, and damper switches). This inspection shall include observations of the physical appearance of the equipment (e.g., pressure of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion.) Any deficiencies shall be recorded and proper maintenance performed. The permittee may petition the Ohio EPA, DAPC to approve any alternative to monthly operational status inspections that will provide a continuous record of the operation of each emission capture system; and,

d. Upon approval by the USEPA, an alterative method may be established to replace the monitoring and recordkeeping requirements found in B.2.a., B.2.b, and B.2.c above.

3. The permittee shall maintain daily production records for this emissions unit. These records, at a minimum, shall contain the following information:

   a. The number of hours this emissions unit was in operation;
   b. The tons of steel produced; and
   c. The average hourly production rate in tons of steel per hour determined by dividing B.3.b by B.3.a.

4. The permittee shall maintain monthly records of the tons of steel produced during each calendar month.

5. The permittee shall perform the appropriate parametric monitoring and recordkeeping as identified in the plan established in Condition A.6 for the No. 4 Melt Shop baghouse.

C. <u>Reporting Requirements (P905)</u>

1. The permittee shall submit quarterly written deviation (excursion) reports of all exceedances of the opacity restrictions contained in the footnotes for the Air Emission Summary above. For the purposes of these reports, exceedance are defined as all 6 minute periods during which the average opacity exceeds these limits.

2. The permittee shall submit quarterly written deviation (excursion) reports that identify all

exceedance of the values established in B.2.a above and either operation of control system fan motor amperes at values exceeding plus 15 percent of the values established under B.2.b above or operation at flow rates lower than those established under B.2.b above.

3. The permittee shall submit quarterly written deviation (excursion) reports that identify any day in which the average hourly production rate of this EAF exceeded 85 tons/hr.

4. The permittee shall submit quarterly written deviation (excursion) reports that identify all periods of time during which the parameters established in the parametric monitoring plan for the Melt Shop baghouse did not comply with the allowable range specified in the plan.

5. The permittee shall submit quarterly reports that identify any exceedance of the permitted allowable emissions.

6. The reports identified above shall be submitted to the Canton City Health Department, Air Pollution Control Division, 420 Market Avenue North, Canton, Ohio 44702. These reports shall identify the probable cause of such deviations and any corrective actions or preventive measures taken. These reports shall be submitted quarterly, i.e., by January 15, April 15, July 15 and October 15 of each year for the previous calendar quarters. If no deviations occurred during a calendar quarter, a quarterly report shall be submitted which states that no deviations occurred during that period. (Any malfunctions must be reported in accordance with the procedures specified in OAC rule 3745-15-06.)

D. <u>Compliance Methods and Testing Requirements (P905)</u>

1. Compliance with the emission Limitations (s) of this permit shall be determined in accordance with the following method (s):

a. <u>Emissions Limitation</u>

56.8 pounds per hour of PM for the combined emissions from P905, P907 and P106.
43.17 pounds per hour of $_{PM10}$ for the combined emissions from P905, P907 and P106.
BACT limit of 0.0032 GR/DSCF from No. 4 Melt Shop Baghouse.

<u>Applicable Compliance Method</u>

For PM, Method 5, 40 CFR Part 60, Appendix A.
For $_{PM10}$, Method 201, 40 CFR Part 60, Appendix A.

b. <u>Emissions limitation</u>

3 percent opacity from the baghouse exit; 6 percent opacity from the melt shop; and 10 percent from the dust-handling system.

<u>Applicable Compliance Method</u>

Method 9, 40 CFR Part 60, Appendix A and the procedures of 40 CFR Part 60.11 shall be used to determine opacity as outlined in Condition B.1.a.

c. Emissions limitation

5.95 lbs/hour of sulfur dioxide

Applicable Compliance Method

Method 6, 40 CFR Part 60, Appendix A

d. Emission Limitation

8.5 lbs/hour of nitrogen oxides

Applicable Compliance Method

Initial Compliance shall be demonstrated using Method 7, 40 CFR Part 60, Appendix A. Thereafter, provided compliance is achieved during the stack test, multiply the nitrogen oxide emission factor, in lbs NO_x per ton of steel produced, established during the stack test (not to exceed 0.1 lb/ton steel) by the actual average hourly steel processing rate (tons/hour).

e. Emission limitation

340 lbs/hour of carbon moNO_xide

Applicable Compliance Method

Initial compliance shall be demonstrated using Method 10, 40 CFR Part 60, Appendix A. Thereafter, provided compliance is achieved during the stack test, multiply the carbon moNO_xide emission factor, in pound (s) CO per ton of steel produced, established during the stack test (not to exceed 4 lbs CO/ton steel) by the actual average hourly steel processing rate (tons/hour).

f. Emissions Limitation

29.75 lbs/hour of volatile organic compounds (VOC)

Applicable Compliance Method

Initial compliance shall be determined by Method 25 or Method 25A, 40 CFR Part 60, Appendix A shall be used. An emission factor of 0.35 lb VOC/ton of steel comes from Fire Version 5.0 SCC. 0.35 lb VOC/ton x 85 tons/hr = 29.75 lbs VOC/hr.

g. Emissions Limitation

0.036 lb/hour of lead (combined emissions from P905 & P907)

Applicable Compliance Method

Initial compliance shall be determined by Method 12, 40 CFR Part 60, Appendix A.

h. Emissions Limitation

249 tons PM/yr
189.24 tons $_{PM10}$/yr
26.1 tons SO_2/yr
37.2 tons NO_x/yr
1,489.2 tons CO/yr
130.3 tons VOC/yr
0.16 ton Pb/yr

Applicable Compliance Method

The ton-per-year limitations were developed by multiplying the pound/hour limitations by the maximum operating schedule of 8,760 hours/year and dividing by 2,000 pounds/ton. Therefore, provided compliance is shown with the hourly limitations, compliance will also be shown with the annual limitations.

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 no later than 90 days after the modification have been completed but no later than March 31,1999;

b. The test (s) shall be conducted while emissions units P106, P905, and P907 are all operating at or near their maximum capacities, unless otherwise specified or approved by the Canton City Health Department, Air Pollution Control Division;

A particulate emissions test also shall be conducted on the inlet to the control device to determine the combined uncontrolled mass rate of emission for P905, P907 & P106, for purposes of applying Figure II of OAC rule 3745-17-11. For this testing, Method 5 of 40 CFR Part 60, Appendix A shall be employed;

c. The parametric monitoring requirements established per Condition A.6 shall be checked during the emissions test;

d. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates:

Pollutant	Test Method	Location
PM	Method 5	40 CFR Part 60 Appendix A
SO_2	Method 6	40 CFR Part 60 Appendix A
CO	Method 10	40 CFR Part 60 Appendix A
NO_x	Method 7	40 CFR Part 60 Appendix A
VOC	Method 25	40 CFR Part 60 Appendix A
Pb	Method 12	40 CFR Part 60 Appendix A

Alternate test methods may be substituted with prior approval of the Canton local air agency.

Not later than 30 days prior to the proposed test date (s), the permittee shall submit an "Intent to Test" notification to the Canton Local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit's 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 Local air agency's refusal to accept the results of the emissions test (s);

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

A comprehensive written report on the results of the emissions test (s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Canton local air agency within 30 days following completion of the test (s);

e. The permittee shall determined compliance with the particulate matter standards as follows:

i. Method 5D shall be used for positive-pressure fabric filters to determined the particulate matter concentration and volumetric flow rate of the effluent gas. The sampling time and sample volume for each run shall be at least 4 hours and 4.50 dscm (160 DSCF) and, when a single EAF is sampled, the sampling time shall include an integral number of heats;

ii Method 9 and the procedures of 40 CFR Part 60.11 shall be used to determine opacity;

iii The test runs shall be conducted concurrently, unless inclement weather interferes;

iv If the test results show particulate emissions exceed the $_{PM10}$ emission limit, then the permittee shall perform a particles size distribution to determined the fraction of the $_{PM10}$ present in the composite sample which was collected;

f. During the particulate matter runs, the permittee shall obtain the following additional information:

i. The pressure in the free space inside the furnace shall be determined during the melting and refining period (s) using the monitoring devices required under Condition No. B.2.a of this permit;

ii The control system fan motor amperes and all damper positions or the volumetric flow rate through each separately ducted hood shall be determined during all periods in which a hood is operated for the purpose of capturing emissions from the EAFs; and,

g. During performance tests, the permittee shall not add gaseous diluents to the effluent gas stream after the fabric in any pressurized fabric filter collector unless the amount of dilution is separately determined and considered in the determination of emissions.

E. <u>Miscellaneous Requirements (P905)</u>

1. An evaluation of air toxic emissions was performed by the permittee. With the exception of aluminum and zinc, emissions of other air toxic pollutants did not exceed one (1) ton per year. The air toxics analyses for Zn showed concentrations of only 1 percent of the MAGLC and for Al only 3 percent of the MAGLC. In the event that additional air toxic emissions should exceed one ton per year in the future, the permittee shall perform an evaluation to determine compliance with the Ohio EPA's Air Toxics Policy.

II. Emissions Unit P907- 165 tons/hr Electric Arc Furnace

A. <u>Operational Restrictions (907)</u>

1. The emissions from P907 shall be vented to the No. 4 Melt Shop Baghouse. This baghouse shall have a minimum control efficiency of 99 percent. In addition, the system shall achieve a minimum capture efficiency that is sufficient to prevent violations of the 6 percent opacity limit for fugitive emissions from the melt shop. The capture system for the emissions unit shall include a common canopy hood and a roof control system, both of which vent to the No. 4 Melt Shop baghouse. The No. 4 Melt shop baghouse can be operated with only 3 fans. This results in an airflow decrease from 2,300,000 ACFM to 1,558,000 ACFM.

2. This emissions unit shall achieve a minimum capture efficiency of 99 percent for carbon moNO$_x$ide emissions.

3. This emissions unit shall achieve a minimum capture efficiency of 99 percent for volatile organic compound emissions.

4. No more than 165 tons of steel per hour shall be processed in P907. This production rate is an average hourly rate determined by dividing the tons of steel produced per day by the number of operating hours per day.

5. Prior to the modification of this emissions unit, the permittee shall submit a Scrap Management Plan (SMP) to the Canton Local air agency for review and approval. The SMP shall be implemented immediately after approval by the Canton LAA. The main focus of the SMP will be to ensure that the purchase of excessively oily scrap and other combustible material will be minimized to the greatest extent possible. All grades of scrap shall be free of excessive dirt, oil and grease. Heavily oiled scrap shall not be used. As part of the SMP, the permittee shall install a radionuclide detector which will be used to inspect all incoming scrap material into the facility. Radioactive scrap material shall not be used at this facility. Any scrap material which is determined to be radioactive shall be disposed of pursuant to Republic's Radiation Management Program.

6. The permittee shall develop a parametric monitoring and recordkeeping plan in order to confirm that the Melt shop baghouse servicing this emissions unit is operating properly. This plan shall be developed prior to the modification of this emissions unit and shall be consistent with the Title V and CAM requirements. The monitoring equipment (if necessary) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual (s). This plan is subject to approval by Canton Air Pollution Control Agency.

B. <u>Monitoring and/or Recordkeeping Requirements (P907)</u>

1. The following are requirements of the NSPS Subpart AAa. Observations of the opacity of the visible emissions from the control devices shall be performed by a certified visible emission observer as follows:

   a. Visible emission observations shall be conducted at least once per day of operation. The observations shall occur when the furnace is operating in the charging, melting, tapping and refining period. These observations shall be taken in accordance with Method 9 of 40 CFR Part 60, Appendix A and, for at least three 6-minute periods, the opacity shall be recorded for point (s) where the greatest opacity visible emissions are observed, and that portion of the plume where the condensed water phase is not present in accordance with the procedures listed in Method 9 of 40 CFR Part 60, Appendix A. Where it is possible to determine that a number of visible emission sites relate to only one incident of the visible emission, only one set of three 6-minutes observations will be required. In this case, Method 9 observations must be made for

the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident. Records shall be maintained of any 6-minute average that is in excess of the opacity limits specified in the footnotes for the Air Emission Summary above.

The appropriate records shall be maintained in the permittee's files to identify the persons responsible for conducting the opacity readings and to verify that the Method 9 certifications are up to date for the responsible individuals.

2. The permittee shall monitor the operation of the furnace control systems and maintain records in accordance with the following requirements:

   a. The permittee shall install, calibrate, and maintain a monitoring device that allows the pressure in the free space inside the EAF to be monitored. The monitoring device may be installed in any appropriate location in the EAF ducts prior to the introduction of ambient air such that reproducible results will be obtained. The pressure monitoring device shall have an accuracy of plus range and shall be calibrated according to the manufacturer's instructions. The pressure determined during the most recent compliance demonstration shall be maintained at all times when the EAF is operating in a meltdown and refining period. Operation at higher pressures will be considered by the Ohio EPA, Division of Air Pollution Control (DAPC) to be unacceptable operation and maintenance of the control system. The permittee may petition the Ohio EPA for reestablishment of the 15-minute integrated average of the pressure whenever the permittee can demonstrate to the Agency's satisfaction that EAF operating conditions upon which the pressures were previously established are no longer applicable;

   b. The permittee shall check and record on a one-per-shift basis the furnace static pressure and either (1) check and record the control system fan motor amperes and damper positions on a once-per-shift basis; or (2) install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through each separately ducted hood. The monitoring device may be installed in any appropriate location in the exhaust duct such that reproducible flow rate monitoring will result. The flow rate monitoring devices shall have an accuracy of plus or minus 10 percent over their normal operating range and shall be calibrated according to the manufacturer's instructions. The Ohio EPA, DAPC may require the permittee to demonstrate the accuracy of the monitoring devices relative to Methods 1 and 2 of Appendix A of 40 CFR Part 60. The values of these parameters as determined during the most recent demonstration of compliance shall be maintained at the appropriate levels for each applicable period. Operation at other than baseline values will be considered by the Ohio EPA, DAPC to be unacceptable operation and maintenance of the control system. The permittee may petition the Ohio EPA for reestablishment of these parameters whenever the permittee can demonstrate to the Agency's satisfaction that the operating conditions upon which the parameters were previously established are no longer applicable;

   c. The permittee shall perform monthly operational status inspections of the equipment that is important to the performance of the total capture systems (i.e., pressure sensors, dampers,

and damper switches). This inspection shall include observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion.) Any deficiencies shall be recorded and proper maintenance performed. The permittee may petition the Ohio EPA, DAPC to approve any alternative to monthly operational status inspections that will provide a continuous record of the operation of each emission capture system; and,

d. Upon approval by the USEPA, an alternative method may be established to replace the monitoring and recordkeeping requirements found in B.2.a, B.2.b, and B.2.c above.

3. The permittee shall maintain daily production records for this emissions unit. These records, at a minimum, shall contain the following information:

a. The number of hours this emissions unit was in operation;

b. The tons of steel produced; and.

a. The average hourly production rate in tons of steel per hour determined by dividing B.3.b by B.3.a.

4. The permittee shall maintain monthly records of the tons of steel produced during each calendar month.

5. The permittee shall perform the appropriate parametric monitoring and recordkeeping as identified in the plan established in Condition A.6 for the #4 Melt Shop Baghouse.

C. <u>Reporting Requirements (P907)</u>

1. The permittee shall submit quarterly written deviation (excursion) reports of all exceedance of the opacity restrictions contained in the footnotes to the Air Emission Summary above. For the purposes of these reports, exceedances are defined as all 6-minutes periods during which the average opacity exceeds these limits.

2. The permittee shall submit quarterly written deviation (excursion) reports that identify all exceedances of the values established in B.2.a above and either operation of control system fan motor amperes at values exceeding plus 15 percent of the values established under B.2.b above or operation at flow rates lower than those established under B.2.b above.

3. The permittee shall submit quarterly written deviation (excursion) reports that identify any day in which the average hourly production rate of this EAF exceeded 165 tons/hr.

4. The permittee shall submit quarterly written deviation (excursion) reports that identify all periods of time during which the parameters established in the parametric monitoring plan for the Melt Shop Baghouse did not comply with the allowable range specified in the plan.

5. The permittee shall submit quarterly reports that identify any exceedances of the permitted allowable emissions.

6. The reports identified above shall be submitted to the Canton City Health Department, Air Pollution Control Division, 4202 Market Avenue N., Canton, Ohio 44702. These reports shall identify the probable cause of such deviations and any corrective actions or preventive measures taken. These reports shall be submitted quarterly, i.e., by January 15, April 15, July 15, and October 15 of each year for the previous calendar quarters. If no deviations occurred during the calendar quarter, a quarterly report shall be submitted which states that no deviations occurred during that period. (Any malfunctions must be reported in accordance with the procedures specified in OAC rule 3745-15-06.)

D. <u>Compliance Methods and Testing Requirements (P907)</u>

1. Compliance with the emission limitation (s) of this permit shall be determined in accordance with the following method (s):

   a. <u>Emissions Limitation</u>

   56.8 pounds per hour of PM for the combined emissions from P905, P907, and P106. [43.17 pounds per hour of PM_{10} for the combined emissions from P905, P907 and P106.] BACT limit of 0.0032 GR/DSCF from No. 4 Melt Shop Baghouse.

   <u>Applicable Compliance Method</u>

   For PM, Method 5, 40 CFR Part 60, Appendix A.
   For $_{PM10}$, Method 201, 40 CFR Part 60, Appendix A

   b. <u>Emissions Limitation</u>

   3 percent opacity from the baghouse exit; 6 percent opacity from the melt shop; and 10 percent from the dusthandling system.

   <u>Applicable Compliance Method</u>

   Method 9, 40 CFR Part 60, Appendix A and the procedures of 40 CFR Part 60.11 shall be used to determine opacity as outlined in Condition B.1.a.

   c. <u>Emissions Limitation</u>

   11.55 lbs/hour of sulfur dioxide

   <u>Applicable Compliance Method</u>

   An emission factor of 0.07 lb SO_2/ton of steel comes from FIRE Version 5.0 SCC. 0.07 lb/ton X 165 tons/hr = 11.55 lbs/hr.

d. Emissions Limitation

0.35 lb/ton of steel as a 3-hour average and 33 lbs/hour of nitrogen oxides.

Applicable Compliance Method

Initial compliance shall be demonstrated using Method 7 or 7E, 40 CFR Part 60, Appendix A. As part of the stack test submittal, the permittee shall submit calculations for the lbs of emissions per ton of liquid steel produced for NO_x. The lbs of NO_x/ton of liquid steel produced shall be determined by dividing the average hourly mass emission rate for NO_x as measured during the performance test, divided by the average hourly amount of liquid steel reproduced during the same period. The sampling time for each run, when doing the NO_x testing, shall be approximately 3 hours in duration. Each run shall include an integral number of heats.

e. Emissions Limitation

660 lbs/hour of carbon moNO_xide

Applicable Compliance Method

Initial compliance shall be demonstrated using Method 10, 40 CFR Part 60, Appendix A. Thereafter, provided compliance is achieved during the stack test, multiply the carbon moNO_xide emission factor, in pound (s) CO per ton of steel produced, established during the stack test (not to exceed 4 lbs CO/ton steel) by the actual average hourly steel processing rate (tons/hour).

f. Emissions Limitation

57.75 lbs/hour of volatile organic compounds (VOC)

Applicable Compliance Method

Initial compliance shall be determined by Method 25 or Method 25A, 40 CFR Part 60, Appendix A shall be used. An emission factor of 0.35 lb VOC/ton of steel comes from FIRE Version 5.0 SCC. 0.35 lb VOC/ton X 165 tons/hr = 57.75 VOC lbs/hr.

g. Emissions Limitation

0.036 lb/hour of lead (combined emissions from P905 & P907)

Applicable Compliance Method

Initial compliance shall be determined by Method 12, 40 CFR Part 60, Appendix A shall be used.

h. Emissions Limitation

249 tons PM/yr
189.24 tones $_{PM10}$
50.6 tons SO_2/yr
144.5 tons NO_x/yr
2,890.8 tons CO/yr
252.9 tons VOC/yr
0.16 ton Pb/yr

Applicable Compliance Method

The ton-per-year limitations were developed by multiplying the pound/hour limitations by the maximum operating schedule of 8,760 hours/year and dividing by 2,000 pounds/ton. Therefore, provided compliance is shown with the hourly limitations, compliance will also be shown with the annual limitations.

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 no later than one year after the issuance of this permit or in accordance with the testing schedule established in the Title V operating Permit for this emissions unit.

b. The test (s) shall be conducted while emissions units P106, P905, and P907 are all operating at or near their maximum capacities unless otherwise specified or approved by the Canton City Health Department, Air Pollution Control Division.

A particulate emissions test also shall be conducted on the inlet to the control device to determine the combined uncontrolled mass rate of emissions for P905, P907 & P106, for purposes of applying Figure II of OAC rule 32745-17-11. For this testing, Method 5 of 40 CFR Part 60, Appendix A shall be employed;

c. The parametric monitoring requirements established per Condition A.6 shall be checked during the emissions test;

d. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates:

Pollutant	Test Method (s)	Location
PM	Method 5	40 CFR Part 60 Appendix A
SO_2	Method 6	40 CFR Part 60 Appendix A
CO	Method 10	40 CFR Part 60 Appendix A
NO_x	Method 7/7E	40 CFR Part 60 Appendix A
VOC	Method 25/25A	40 CFR Part 60 Appendix A
Pb	Method 12	40 CFR Part 60 Appendix A

Alternate test methods may be substituted with prior approval of the Canton Local air agency. Not later than 30 days prior to the proposed test date (s), the permittee shall submit an "Intent to Test" notification to the Canton Local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit's 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 Local air agency's refusal to accept the results of the emission test (s).

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

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 local air agency within 30 days following completion of the test (s);

e. The permittee shall determine compliance with the particulate matter standards as follows:

i. Method 5D shall be used for positive-pressure fabric filters to determine the particulate matter concentration and volumetric flow rate of the effluent gas. The sampling time and sample volume for each run shall be at least 4 hours and 4.50 dscm (160 DSCF) and, when a single EAF is sampled, the sampling time shall include an integral number of heats;

ii Method 9 and the procedures of 40 CFR Part 60.11 shall be used to determine opacity;

iii. The test runs shall be conducted concurrently, unless inclement weather interferes; and,

iv. If the test results show particulate emissions exceed the $_{PM10}$ emission limit, then the permittee shall perform a particle size distribution to determine the fraction of the $_{PM10}$ present in the composite sample which was collected;

f. During the particulate matter runs, the permittee shall obtain the following additional information:

i. The pressure in the free space inside the furnace shall be determined during the melting and

refining period (s) using the monitoring devices required under Condition B.2.a of this permit unless alternative monitoring is approved by USEPA; and

ii. The control system fan motor amperes and all damper positions or the volumetric flow rate through each separately ducted hood shall be determined during all periods in which a hood is operated for the purpose of capturing emissions from the EAFs; and,

g. During performance tests, the permittee shall not add gaseous diluents to the effluent gas stream after the fabric in any pressurized fabric filter collector unless the amount of dilution is separately determined and considered in the determination of emissions.

h. As part of the stack test submittal, the permittee shall submit calculations for the lbs of emissions per ton of liquid steel produced for NO_x. The lbs of NO_x/ton of liquid steel produced shall be determined by dividing the average hourly mass emission rate for NO_x as measured during the performance test, divided by the average hourly amount of liquid steel produced during the same period.

i. The sampling time for each run, when doing the NO_x testing, shall be approximately 3 hours in duration. Each run shall include an integral number of heats.

E. <u>Miscellaneous Requirements (P907)</u>

1. An evaluation of air toxic emissions was performed by the permittee. With the exception of aluminum and zinc, emissions of other air toxic pollutants did not exceed one (1) ton per year. The air toxics analyses for Zn showed concentrations of only 1 percent of the MAGLC and for A1 only 3 percent of the MAGLC. In the event that additional air toxic emissions should exceed one ton per year in the future, the permittee shall perform an evaluation to determine compliance with Ohio EPA's Air Toxics Policy.

III. Emissions Unit P123 - Ladle Metallurgy Facility

A. <u>Operational Restrictions (P123)</u>

1. All sulfur additions in the LMF shall be done by injecting the material under the surface of the molten steel. This may include, but is not limited to, wire injection.

2. The LMF shall be equipped with a fabric filter baghouse control system which shall be designed at an average flow rate of 72,800 dry standard cubic feet per minute (DSCF) and operated at a sufficient volume flow rate capture emissions generated by the LMF to achieve a maximum particulate emissions rate of 0.005 grain per dry standard cubic foot of exhaust gas (gr/DSCF).

3. The SO_2 mass emission limitations for this emissions unit in the air emissions summary and sulfur addition restrictions in the Additional Special Terms and Conditions are based on an emission factor of 0.80 ton S)2 emissions/ton sulfur added to the steel, as determined by mass balance and based on the assumption that all the excess sulfur is converted to SO_2. Some additional SO_2 is also generated from the sulfur already present in the steel prior to sulfur additions at this emissions unit. Based on

the analyses required in the term III.D.2.g, this emission factor may be adjusted.

4. Based on the emission factor of 0.8 lb SO_2/lb of sulfur added, the following sulfur addition rates shall not be exceeded:

   a. No more than 656 pounds of sulfur additions shall take place in any three-hour period;

   b. No more than 2,185 pounds of sulfur additions shall take place in any 24-hour period; and

   c. No more than 399 tons of sulfur additions shall take place in any year;

   As state in Term and Condition III.A.1.4, the 0.8 lb SO_2/lb sulfur added emission factor may be adjusted based on future emissions tests which will, in turn, allow these usage rates to be adjusted.

5. This emissions unit shall not emit more than 525 lbs of SO_2 in any three-hour period based upon a rolling, 3-hour summation of the hourly emissions.

6. This emission unit shall not emit more than 1,748 lbs of SO_2 in any 24-hour period based upon a rolling, 24-hour summation of the hourly emissions.

7. This emissions unit shall not emit more than 399 tons of SO_2 in any year based upon a rolling, 12-month summation of the sulfur addition figures.

   To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the sulfur addition levels specified in the following table:

Months	Maximum Allowable Sulfur Additions Tons
1	33.25
1-2	66.50
1-3	99.75
1-4	133.00
1-5	166.25
1-6	199.50
1-7	232.75
1-8	266.00
1-9	299.25
1-10	332.50
1-11	365.75
1-12	399.00

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual sulfur addition limit shall be based upon a rolling, 12-month summation of the sulfur addition figures.

8. The pressure drop across the baghouse shall be maintained within the range of pressure drop in inches of water (e.g., 2.5 to 5.0) established during the most recent emission test that demonstrated that the emissions unit was in compliance.

B. <u>Monitoring and/or Recordkeeping Requirements (P123)</u>

1. The permittee shall maintain records of the following:

   a. The hourly records of sulfur additions for this emissions unit;

   b. The rolling, 3-hour rates of sulfur additions;

   c. The rolling, 24-hour rates of sulfur additions; and,

   d. Beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the sulfur addition figures.

   Also, during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative sulfur additions for each calendar month.

2. The permittee shall install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual (s). The permittee shall record the pressure drop across the baghouse on a daily basis.

C. <u>Reporting Requirements (P123)</u>

The permittee shall submit quarterly deviation (excursion) reports with identification of the following:

1. Each rolling, 3-hour period in which the sulfur addition rate in this emissions unit exceeded 656 pounds and the actual average hourly sulfur usage for each such 3-hour period.

2. Each rolling, 24-hour period in which the sulfur addition rate in this emissions unit exceeded 2,185 pounds and the actual sulfur usage for each such 24-hour period.

3. All exceedances of the rolling, 12-month limitation and for the first 12 calendar months after issuance of this permit, all exceedances of the maximum allowable cumulative sulfur addition levels.

4. All periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.

5. The permittee shall submit required reports in the following manner:

   a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the Canton local air agency; and,

b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventative measures which have been or will be taken, shall be submitted to the Canton local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 15, April 15, July 15, and October 15 or 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.)

D. Compliance Methods and Testing Requirements (P123)

1. Compliance with the emission limitations (s) of this permit shall be determined in accordance with the following method (s):

a. Emissions Limitations

0.005 grain/DSCF, 3.12 lbs PM/hr, and 13.67 tons PM/yr

Applicable Compliance Method

Method 5, 40 CFR Part 60, Appendix A

b. Emissions limitation

2.44 lbs $_{PM10}$/hr and 10.69 tons $_{PM10}$/yr

Applicable Compliance Method

See D.2.f, Method 201, 40 CFR Part 60, Appendix A

c. Emissions Limitation

Visible emissions limit

Applicable Compliance Method

Method 9, 40 CFR Part 60, Appendix A

d. Emissions Limitation

525 lbs/3-hour period of sulfur dioxide, 1,748 lbs/day of sulfur dioxide and 318.94 tons of sulfur dioxide/yr

Applicable Compliance Method

Method 6, 40 CFR Part 60, Appendix A. Sulfur addition limits shall also be used to determine compliance. Multiply the sulfur dioxide factor of 0.8 lbs SO_2/lb sulfur added by the actual sulfur usage. This emission factor may be adjusted based on the future results of future emissions tests.

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 no later than 90 days after the completion of the modification but not later than March 31, 1999;

b. The test (s) shall be conducted while the emissions unit is operating at or near its maximum capacity unless otherwise specified or approved by the Canton City Health Department, Air Pollution Control Division (Canton Local air agency);

c. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for SO_2 and PM;

d. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates:

Pollutant	Test Methods	Location
PM	Method 5	40 CFR Part 60, Appendix A
SO_2	Method 6	40 CFR Part 60, Appendix A

e. The parametric monitoring requirements established per Condition A.5 shall be checked during the emissions test;

f. If the test results show particulate emissions exceed the $_{PM10}$ emission limit, then the permittee shall perform a particle size distribution to determine the fraction of the $_{PM10}$ present in the composite sample which was collected; and

g. This emissions test shall be used to establish an emission factor to relate the sulfur dioxide

emission rate to the amount of sulfur added in this emissions unit. Prior to this test, the permittee shall submit an approvable plan to the Canton Local air agency that details how this emission factor shall be determined.

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

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

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 Local air agency within 30 days following completion of the test (s).

E. <u>Miscellaneous Requirements (P123)</u>

1. The terms and conditions of this permit to install shall supersede all the air pollution control requirements for this emissions unit contained in permit to install 15-1093, as issued on December 22, 1993.

IV Emissions Unit P126 - 196.2 MMBTU/hr Natural Gas Fired Bloom Reheat

A. <u>Operational Restrictions (P126)</u>

1. The only fuel to be burned in this emissions unit shall be natural gas.
2. This emissions unit shall be equipped with low NO_x burners rated at 0.112 lb NO_x/MMBtu or lower.

B. <u>Monitoring and Recordkeeping Requirements (P126)</u>

None

C. <u>Reporting Requirements (P126)</u>

None

D. Compliance Methods and Testing Requirements (P126)

1. Compliance with the emission limitation (s) of this permit shall be determined in accordance with the following method (s):

   a. Emissions Limitation
   0.112 lb NO_x/MMBtu, 22 lbs NO_x/hr

   Applicable Compliance Method
   Strack test conducted on January 19, 1996 showed an average NO_x emission rate only 2 lbs/hr. No future testing should be necessary.

   b. Emissions Limitation
   7.8 lbs CO/hr

   Applicable Compliance Method
   An emission test conducted on 3-1-99 on a similar furnace at the Timken Company showed an emission factor of 9 lbs of CO/MMCF which converts to 1.8 lbs of CO/hr.

   c. Emissions Limitation
   1 lb PM-$_{PM10}$/hr

   Applicable Compliance Method
   AP42 emission factor found in Table 1.4-2 of 1-5 lbs PM/MMCF converts to 0.98 lb PM/hr

   d. Emissions Limitation
   0.33 lb VOC/hr

   Applicable Compliance Method
   AP42 emission factor found in Table 1.4-2 (March 1998 EDITION) of 5.5 lbs VOC/MMCF converts to 1.1 lb VOC/hr.

   e. Emissions Limitation
   0.12 lb SO_2/hr

   Applicable Compliance Method
   AP42 emission factor found in Table 1.4-1 of 0.6 lb SO_2/MMCF converts to 0.12 lb SO_2/hr

   f. Emission Limitation
   96.2 tons NO_x/yr
   34.3 tons CO/yr
   4.4 tons PM-$_{PM10}$/yr

4.82 tons VOC/yr
0.52 ton SO_2/yr

Applicable Compliance Method
The ton-per-year limitations were developed by multiplying the pound/hour limitations by the maximum operating schedule of 8,760 hours/year and dividing by 2,000 pounds/ton. Therefore, provided compliance is shown with the hourly limitations, compliance will also be shown with the annual limitations.

g. Emissions Limitations
Visible Emissions Limits

Applicable Compliance Method
Method 9, 40 CFR Part 60, Appendix A

E. Miscellaneous Requirements (P126)

1. The terms and conditions of this permit to install shall supersede all the air pollution control requirements for this emissions unit contained in permit to install 15-1093, as issued on December 22, 1993.

V. Emissions Unit P130 - 14 MMBtu/hr Natural Gas Fired Eccentric Bottom Tapping Ladle Preheater

A. Operational Restrictions (P130)

1. The only fuel to be burned in this emissions unit shall be natural gas.

2. This emissions unit shall be equipped with low $_{NOx}$ burners.

B. Monitoring and Recordkeeping Requirements (P130)

None

C. Reporting Reqiurements (P130)

None

D. Compliance Methods and Testing Requirements

1. Compliance with the emissions limitation (s) of this permit shall be determined in accordance with the following method (s):

a. Emissions Limitations
0.089 lb $_{NOx}$/MMBtu, 1.25 lbs $_{NOx}$/hr, and 5.5 tons $_{NOx}$/yr

Applicable Compliance Method

AP42 emission factor found in Table 1.4-1 83 lbs $_{NOx}$/MmCF converts to 1.16 lbs $_{NOx}$/hr

b. Emissions Limitations
1.2 lbs CO/hr

Applicable Compliance Method
AP42 (3/98 EDITION) emission facot for low $_{NOx}$ burners for 10-100 MMBtu/hr found in Table 1.4-1 of 84 lbs CO/MMCF converts to 1.2 lbs/hr.

c. Emissions Limitations
0.196 lb PM-$_{PM10}$/hr

Applicable Compliance Method
AP42 emission factor found in Table 1.4-2 of 6.2 lbs PM/MMCF converts to 0.09 lbs PM/hr

d. Emissions limitation
5.5 tons $_{NOx}$/yr
5.3 tons CO/yr
0.86 ton PM-$_{PM10}$/yr

Applicable compliance Method
The ton-per-year limitations were developed by multiplying the pound/hour limitations by the maximum operating schedule of 8,760 hours/year and dividing by 2,000 pounds/ton. Therefore, prouvided complinace is shown with the hourly limitations, compliance will also be shown with the annual limitations.

e. Emission Limitation
Visible Emissions Limits

Applicable Compliance Method
Method 9, 40 CFR Part 60, Appendix A

E. Miscllaneous Requirements (P130)

1. EAF#6 (P904), located at this facility, shall be permanently shut down.