

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
SOUTHCENTRAL REGION - FIELD OPERATIONS
AIR QUALITY CONTROL PROGRAM

OPERATING PERMIT

In accordance with provisions of the Air Pollution Control Act, the Act of January 8, 1960, P.L. 2119, as amended, and after due consideration of an application received under Chapter 127 of the rules and regulations of the Department of Environmental Resources, the Department hereby issues this permit for the operation of the air contamination source described below.

Permit No: <u>44-2001</u>	Source & Air Cleaning Device: <u>Electric Arc Furnaces and</u>
<u>Standard Steel</u>	
Owner: <u>Division of Freedom Forge Corp.</u>	<u>Combustion Sources</u>
Address: <u>500 North Walnut Street</u>	<u>(See Attached)</u>
<u>Burnham, PA 17009</u>	
Attention: <u>Mr. James A. Spendiff</u>	Location: _____
<u>President</u>	<u>Burnham Township</u>
	<u>Mifflin County</u>

This permit is subject to the following conditions:

1. That the source and any associated air cleaning devices are to be:
 - a. operated in such a manner as not to cause air pollution;
 - b. in compliance with the specifications and conditions of the Reasonably Available Control Technology (RACT) plan;
 - c. operated and maintained in a manner consistent with good operating and maintenance practices.
2. This permit is valid only for the specific equipment, location and owner named above.
3. This operating permit is valid for a limited time only and may be renewed before its expiration. Requests for an operating permit renewal must be in writing and must be accompanied by a fee in the amount of \$600 payable to the "Commonwealth of Pennsylvania - Clean Air Fund." The request should be made on the attached Interim Application for Renewal of a Permit to Operate form and must be received by the Department along with a completed Compliance History form (attached) no later than NOV 30 1999.
4. See attached.

Failure to comply with the conditions placed on this permit is a violation of Section 127.444. Violation of this or any other provision of Article III of the rules and regulations of the Department of Environmental Resources will result in suspension or revocation of this permit and/or prosecution under Section 9 of the Air Pollution Control Act.

Issued: MAY 31 1995



Program Manager

Southcentral Region 44-2001
EPA, Region III
Permits

PERMIT NO. 44-2001

STANDARD STEEL

Source, ContinuedI. List of Steel Production Furnaces, Combustion Sources over 50 mmbtu/hr Capacity and NO_x Emissions Potential

<u>Source</u>	<u>Manufacturer</u>	<u>Heat Input/ Capacity</u>	<u>Emission Factor</u>	<u>Potential Emissions</u>
#4 Electric Arc Furnace (EAF)	Electromelt	70 t/batch in 3 hrs	0.35 lb/t steel	34.5 tpy
#3 EAF Herolt	American Bridge	45 t/batch in 5 hrs	0.35 lb/t steel	13.3 tpy
#2 EAF	Electromelt	40 t/batch in 4 hrs	0.35 lb/t steel	14.7 tpy
LRM 8157 Furnace	Standard Steel (SS)	64.2 mmbtu/hr	84 lb/mmcf	23.6 tpy
ODFS 8121 Furnace	Salem Engineering	82.9 mmbtu/hr	84 lb/mmcf	30.5 tpy

II. List of Combustion Sources of Rated Capacity \geq 20 mmbtu/hr and $<$ 50 mmbtu/hr, and NO_x Emissions Potential

<u>Source</u>	<u>Manufacturer</u>	<u>Rated Capacity</u>	<u>Emission Factor</u>	<u>Potential Emissions</u>
AFM 8141 Walking Beam	Swindel Dressler (SD)	49.04 mmbtu/hr	140 lb/mmcf	28.9 tpy
LRM 8151 22' Square Car	Gas Machinery Co. (GMC)	41.92 mmbtu/hr	140 lb/mmcf	24.7 tpy
LRM 8147 Continuous Car	Olson	40.08 mmbtu/hr	140 lb/mmcf	23.6 tpy
ODFS 8068 N,S Car Type	Standard Steel (SS)	32.6 mmbtu/hr	140 lb/mmcf	19.2 tpy
AFM 8152 Single Chamber Box	GMC	27.75 mmbtu/hr	140 lb/mmcf	16.4 tpy
AFM 8153 Single Chamber Box	GMC	27.75 mmbtu/hr	140 lb/mmcf	16.4 tpy
AFM 8140 Continuous Conveyor	SD	27.3 mmbtu/hr	140 lb/mmcf	16.1 tpy
AFM 8138 Continuous Conveyor	SD	25.2 mmbtu/hr	140 lb/mmcf	14.9 tpy
AFM 8139 Continuous Conveyor	SD	21.0 mmbtu/hr	140 lb/mmcf	12.4 tpy

III. List of Experimental Source and Boilers

URM 8150 Box (4 Doors, 4 Chambers)	GMC	19.9 mmbtu/hr	140 lb/mmcf	
7492 Waste Heat Boiler	ABCO	19.9 mmbtu/hr	140 lb/mmcf	
7466 500 HP Boiler	Clayton	19.9 mmbtu/hr	165 lb/mmcf	
7467 300 HP Boiler	Clayton	12.0 mmbtu/hr	165 lb/mmcf	
7465 150 HP Boiler	Clayton	6.0 mmbtu/hr	165 lb/mmcf	

PERMIT NO. 44-2001

STANDARD STEELSource, ContinuedIV. List of Combustion Sources, Rated Capacity > 2.5 mmbtu/hr and < 20 mmbtu/hr

<u>Source</u>	<u>Manufacturer</u>	<u>Rated Capacity</u>
LRM 8149E Box 1 Chamber, 1 Door	SS	18.9 mmbtu/hr
LRM 8149W Box 1 Chamber, 1 Door	SS	18.9 mmbtu/hr
Bay 30 8063 Continuous Car (Austenitize)	Electric Furnace (EF)	18.3 mmbtu/hr
HTP #1 8042 9' Vertical	Amsler-Morton (AM)	16.08 mmbtu/hr
Bay 30 8054 Continuous Car (Austenitize)	EF	15.8 mmbtu/hr
HTP #1 8040 14 1/2' x 14 1/2' Car	Olson	15.72 mmbtu/hr
HTP #1 8071 15 1/2' Vertical	SS	14.68 mmbtu/hr
CDFS 8125 Box (4 Door, 1 Chamber)	Olson	13.8 mmbtu/hr
HTP #1 8023 6 1/2' x 47' Car	SS	12.95 mmbtu/hr
HTP #1 8030 8' x 27 1/2' Car	SS	12.8 mmbtu/hr
CDFS 8142 Walking Beam	Selas	12.44 mmbtu/hr
HTP #1 8037 8' x 15' Car	Olson	12.3 mmbtu/hr
HTP #1 8021, 8022 11 ft. Beehive	SS	12.0 mmbtu/hr
HTP #1 8027, 8028 11 ft. Beehive	SS	12.0 mmbtu/hr
HTP #4 8154 20' Elevating Hearth	Selas	12.0 mmbtu/hr
HTP #1 8029 8' x 27 1/2' Car	SS	11.44 mmbtu/hr
Bay 30 8064 Continuous Car (Draw)	EF	10.8 mmbtu/hr
HTP #1 8025 8 1/2' x 24 1/2' Car	SS	10.31 mmbtu/hr
SPC #1 8052 Car Type 10'	EF	10.0 mmbtu/hr
HTP #4 8156 15' Elevating Hearth	SS	9.99 mmbtu/hr
HTP #4 8155 15' Elevating Hearth	SS	9.98 mmbtu/hr
HTP #1 8032 10' x 23' Car	SS	9.92 mmbtu/hr
HTP #1 8026 8 1/2' x 38' Car	SS	9.92 mmbtu/hr
HTP #1 8001, 8002 11 ft. Beehive	SS	9.0 mmbtu/hr

PERMIT NO. 44-2001

STANDARD STEELSource, ContinuedIV. List of Combustion Sources, Rated Capacity > 2.5 mmbtu/hr and < 20 mmbtu/hr, Continued

<u>Source</u>	<u>Manufacturer</u>	<u>Rated Capacity</u>
LRM 8160 Single Chamber Box	SS	9.0 mmbtu/hr
LRM 8159 Single Chamber Box	SS	9.0 mmbtu/hr
SPC #2 8013 9' Car	SS	8.58 mmbtu/hr
Bay 30 8055 Continuous Car (Draw)	EF	7.2 mmbtu/hr
SPC #2 8012 9' Car	SS	6.42 mmbtu/hr
HTP #4 8008, 8015 8 1/2' Beehive	SS	6.0 mmbtu/hr
Ladle Heater 8500 and 8501	American Combustion	6.0 mmbtu/hr
SPC #2 8014 9' Car	SS	6.0 mmbtu/hr
HTP #1 8004 14 ft. Beehive	SS	6.0 mmbtu/hr
LRM 8067 Slow Cool Pit	SS	5.24 mmbtu/hr
HTP #1 8041 10' x 14 1/2' Car	Olson	5.2 mmbtu/hr
HTP #1 8039 14 1/2' x 14 1/2' Car	Olson	5.0 mmbtu/hr
HTP #1 8031 8' x 27 1/2' Car	SS	4.93 mmbtu/hr
HTP #1 8006, 8007 12 ft. Beehive	SS	4.8 mmbtu/hr
HTP #1 8038 8' x 15' Car	Olson	4.12 mmbtu/hr
Melt Shop 8061 Car	Olson	4.12 mmbtu/hr
Melt Shop 8060 Car	Olson	4.12 mmbtu/hr
Melt Shop 8062 Car	Olson	4.12 mmbtu/hr
HTP #1 8003 14 ft. Beehive	SS	3.0 mmbtu/hr
HTP #1 8005 14 ft. Beehive	SS	3.0 mmbtu/hr
HTP #1 8035 8' x 15' Car	Olson	2.97 mmbtu/hr

PERMIT NO. 44-2001

STANDARD STEELSource, ContinuedIV. List of Combustion Sources, Rated Capacity > 2.5 mmbtu/hr and < 20 mmbtu/hr, Continued

<u>Source</u>	<u>Manufacturer</u>	<u>Rated Capacity</u>
HTP #1 8043 6 1/2' x 7 1/2' Car	AM	2.96 mmbtu/hr
HTP #1 8044 6 1/2' x 7 1/2' Car	AM	2.96 mmbtu/hr
HTP #1 8045 6 1/2' x 7 1/2' Car	AM	2.96 mmbtu/hr
HTP #1 8046 6 1/2' x 7 1/2' Car	AM	2.96 mmbtu/hr
HTP #1 8047 6 1/2' x 7 1/2' Car	AM	2.96 mmbtu/hr
Ladle Heater 8527	Aftec	4.2 mmbtu/hr

Conditions, Continued

4. Potential to emit NO_x emissions from the facility shall never exceed 591 tpy. Also, NO_x emissions from the sources shall be equal to or below as stated in Source Item Nos. I and II, Page 2.
5. For the above Sources I and II, separate monthly records of operating hours and fuel consumption shall be maintained for each calendar year (January 1 through December 31). The company shall measure the gas consumption for each of the furnaces Nos. LRM 8157, CDFS 8121, AFM 8141, LRM 8151, LRM 8147, and ODFS 8068. Gas consumption for two single chamber furnaces Nos. AFM 8152 and AFM 8153, and three continuous conveyors Nos. AFM 8138, AFM 8139, and AFM 8140 may be measured in groups.
6. The facility shall keep a record of maintenance and repairs to the Sources.
7. The records listed in Conditions 5 and 6 shall be retained for two years and shall be made available to the Department upon its request.
8. Stack testing to determine the emissions rate of NO_x as NO₂ shall be performed on one representative of the stacks in two heating furnaces in Source I and another representative of each type of the burners in the Sources listed in II above. First stack test shall be performed within 365 days of issuance of this operating permit, and based on the results, the frequency of further stack test shall be determined by the Department.
9. Stack testing shall be performed in accordance with 25 Pa. Code, Chapter 139 and the current version of the Department Source Testing Manual, or by other means proposed by Standard Steel and approved by the Department.
10. A Stack Test Protocol is to be submitted to the Program Manager for approval at least sixty (60) days prior to stack test.

OPERATING PERMIT

Page 6

PERMIT NO. 44-2001

STANDARD STEEL

Conditions, Continued

11. The Department shall be notified at least two (2) weeks in advance of the date and time of the stack test.
12. Two (2) copies of the stack test results shall be submitted to the Program Manager for review within sixty (60) days of completion of testing. Results shall be reported as concentration in ppm as measured, mass and heat rates in lb/scf and lb/mmbtu.
13. The facility shall report to the Program Manager any modification to the Sources, which is expected to increase NO_x .
14. Department reserves the right to revise the emissions standards listed in the Sources I and II above and order further stack tests, based on information obtained during the testing program outlined in Conditions 8 through 13.
15. Further verification of NO_x emissions shall be performed once in five years for one representative of each of the following burners as per emissions test protocol submitted by the facility, and approved by the Department:
 - a. No. 212 Luminous Flame Burner - Installed in LRM 8157
 - b. No. 113-6 Luminous Flame Burner - Installed in CDFS 8121
 - c. No. 113-8A Luminous Flame Burner - Installed in CDFS 8121
 - d. No. 4422-6 Medium Velocity Side-Wall Burner
 - e. No. 4422-7B Medium Velocity Side-Wall Burner
 - f. No. 4832-7 Flat Flame Roof Burner
 - g. No. 6512-6 Low Velocity Luminous Flame (slow mixing) Burner
 - h. No. 6514-8A Low Velocity Dual Fuel Burner
16. Sources III above are subject to the following:
 - * URM 8150 - Experimental Heating Source - 25 Pa. Code, Section 129.93(c)(5).
 - * 7492 Waste Heat Boiler and 7466 500 HP Boiler - Limited to heat input capacity 19.9 mmbtu/hr subject to 25 Pa. Code, Section 129.93(c)(1).
 - * 7467 300 HP Boiler and 7465 150 HP Boiler - 25 Pa. Code, Section 129.93(c)(1).

OPERATING PERMIT

Page 7

PERMIT NO. 44-2001

STANDARD STEEL

Conditions, Continued

17. The company shall demonstrate the rated capacity of No. 7492 waste heat boiler never exceeded 19.9 mmbtu/hr by recording hourly gas consumption or other equivalent method approved by the Department.
18. The company shall maintain and operate sources rated at 2.5 mmbtu/hr but less than 20 mmbtu/hr as per 25 Pa. Code, Section 129.93(c)(1).

