

**Table 1: Annual Respondent Burden and Cost – NESHAP for Ferroalloys Production: Fer XXX) (Renewal)**

Burden item	A	B	C
	Person-hours per occurrence	Annual occurrences per respondent	Person-hours per respondent per year (AxB)
1. Reporting Requirements			
A. Familiarize with Regulatory Requirements	4	1	4
B. Required activities			
a. Initial performance test (PM, HCl, Hg, PAH, Formaldehyde) - Furnace, capture systems - Fabric Filter	15	3	45
b. Initial performance test (PM, HCl, Hg, PAH, Formaldehyde) - Furnace, capture systems - Scrubber	15	2	30
c. Initial performance test (PM) - Local ventilation, Metal Oxygen Refining (MOR) process, crushing and screening	20	4	80
d. Periodic performance tests for submerged arc furnace control devices			
i. Annual wet scrubber PM tests (furnace)			
ii. Annual Hg tests for wet scrubber, fabric filter, and vent stacks (furnace)			
iii. Annual PAH tests for wet scrubber, fabric filter, and vent stacks (ferromanganese furnaces)	15	2.5	37.5
iv. PM tests for fabric filters every five years (furnace)			
v. HCl test every five years (furnace)			
vi. Formaldehyde test every five years (furnace)			
vii. Capture system test every five years (furnace)	15	0.5	7.5
viii. Local ventilation test every five years			
ix. MOR process test every five years			
x. Crushing and screening equipment test every five years	20	0.5	10
e. Non-furnace baghouse observations and inspections			
i. Daily visible emissions observations	0.5	350	175
ii. Weekly confirmation of dust removal	0.1	50	5
iii. Monthly check of bag cleaning mechanisms	0.1	12	1.2
iv. Quarterly baghouse integrity checks	0.1	4	0.4
v. Semiannual baghouse inspections	0.1	2	0.2
f. Furnace baghouse bag leak detection system (annual O&M)	4	2	8
g. Pressure drop/liquid flow rate CPMS-scrubber (annual O&M)	2	1	2
h. Weekly Method 9 (Opacity)	2	156	312
i. Ductwork flowrate monitoring (annual O&M)	2	1	2
j. Furnace capture system inspection (Quarterly)	2	4	8
C. Create information	See 1B		
D. Gather information	See 1B		
E. Report preparation			
a. Initial Notifications	N/A		

b. Notification of construction/reconstruction	N/A		
c. Notification of compliance status	4	1	4
d. Notification of performance test	2	1	2
e. Notification of opacity observations	2	1	2
f. Notification of change in information already provided	2	0.33	0.66
g. Report of performance tests, opacity observations	5	1	5
h. Process fugitive emissions ventilation plan			
i. Develop and submit plan	80	1	80
ii. Report deviations from plan	See 1.E.o		
iii. Update plan	See 1.E.o		
i. Outdoor fugitive dust control plan			
i. Develop and submit plan	10	1	10
ii. Report deviations from plan	See 1.E.o		
j. Bag leak detection system			
i. Develop plan	20	1	20
ii. Report alarms and actions taken in response	See 1.E.o		
k. Monitoring SOP manual for baghouses controlling process vents, process fugitive, or outdoor fugitive dust			
i. Develop and submit manual	10	1	10
ii. Report deviations from plan	See 1.E.o		
l. Report deviations from established parameters for pressure drop and flow rate in scrubbers controlling PM	See 1.E.o		
m. Report shop building capture system monitoring and deviations	See 1.E.o		
n. Reports of the results of quarterly inspections of the furnace capture system	4	4	16
o. Reports of deviations, alarms, actions taken, malfunctions, and exceedances	10	1	10
p. Annual compliance certification	10	1	10
<b>Subtotal for Reporting Requirements</b>			
<b>2. Recordkeeping Requirements</b>			
A. Familiarize with Regulatory Requirements	See 1A		
B. Implement activities	See 1B		
C. Develop record system	NA		
E. Records of information required by standards			
a. Bag leak detection system: output, alarms, corrective actions	1	1	1
b. Baghouses without leak detection systems: inspection and maintenance records	2	20	40
c. Wet scrubbers: pressure drop, water flow rate, deviations, corrective actions	2	1	2
d. Shop building capture system: monitoring, deviations, corrective actions	2	1	2
e. Inspections of the furnace capture system	2	4	8
f. Records of startup and/or shutdown.	1	1	1
g. Records of malfunctions and exceedances	2	1	2
h. Deviations from process fugitive emissions ventilation plan	1	1	1
i. Deviations from outdoor fugitive dust control plan	1	1	1

j. Deviations from monitoring SOP manual for baghouses	1	1	1
k. Records of performance tests	2	2.5	5
F. Personnel training	20	1	20
G. Time for audits	NA		
<b>Subtotal for Recordkeeping Requirements</b>			
<b>Total Labor Burden and Cost (rounded) †</b>			
<b>Total Capital and O&amp;M Costs (rounded) †</b>			
<b>GRAND TOTAL (rounded) †</b>			

**Assumptions:**

- <sup>a</sup> There are two ferroalloy production facilities currently subject to the standard. We assume no additional respondents.
- <sup>b</sup> This ICR uses the following labor rates: \$153.55 per hour for Managerial labor; \$122.20 per hour for Technical labor. Source: U.S. Department of Labor, Bureau of Labor Statistics, March 2021, "Table 2. Civilian Workers, by Occupational Category." The rates have been increased by 110% to account for the benefit packages available to those employed by private industry.
- <sup>c</sup> There are a total of six operating furnaces at these two sources. Four furnaces are controlled with fabric filters and two baghouses controlling the arc furnaces are required to have bag leak detection systems.
- <sup>d</sup> There are a total of seven local ventilation, MOR process, and crushing/screening operations controlled by baghouses.
- <sup>e</sup> There are six operating furnaces at these two sources controlled by five control devices (four fabric filters and one baghouse).
- <sup>f</sup> We assume that all six ferromanganese furnaces have demonstrated compliance with the PAH standard in four control devices at a frequency to an annual basis.
- <sup>g</sup> This testing is done every five years. We assume these tests will be done simultaneously with the annual test. This testing will be done at two sources every five years. At these two sources, there are a total of three shop building operations, each controlled by baghouses.
- <sup>h</sup> Each source has non-furnace operations (crushing and screening, MOR process, building ventilation) that are controlled by baghouses and performed on the schedule shown.
- <sup>i</sup> At the two sources, there are a total of four arc furnaces each controlled by a single baghouse. These baghouses use fabric filters.
- <sup>j</sup> One source operates a scrubber controlling two arc furnaces.
- <sup>k</sup> We assume each respondent will perform weekly opacity readings on three non-furnace facilities. (3 x 52 = 156)
- <sup>l</sup> The ductwork flowrate monitoring is for determining compliance with the shop building opacity standard at 40 CL.
- <sup>m</sup> The capture systems collecting emissions from the six arc furnaces are inspected for proper functioning annually.
- <sup>n</sup> We assume sources will make changes to information previously reported once every three years.
- <sup>o</sup> These plans and manuals were developed and submitted during the first year after the most recent amendments were made.
- <sup>p</sup> We assume that both respondents will report deviations from these plans and parameters each year during the three-year period.
- <sup>q</sup> Respondents are required to update the process fugitive emissions ventilation plan every 5 years.
- <sup>r</sup> We assume that 2 respondents per year will need to submit a Report of Exceedance.
- <sup>s</sup> Each respondent is required to submit an Annual Compliance Certification each year.
- <sup>t</sup> Totals have been rounded to 3 significant values. Figures may not add exactly due to rounding.

**romanganese and Silicomanganese (40 CFR Part 63, Subpart**

D	E	F	G	H	Footnotes
Respondents per year <sup>a</sup>	Technical hours per year (Cx D)	Management hours per year (Ex0.05)	Clerical hours per year (Ex0.10)	Annual cost (\$) <sup>b</sup>	
2	8	0.4	0.8	\$1,088.23	
0	0	0	0	\$0	c
0	0	0	0	\$0	c
0	0	0	0	\$0	d
2	75	3.8	7.5	\$10,202.14	e, f
2	15.0	0.75	1.50	\$2,040.43	g
2	20	1.0	2.0	\$2,720.57	g
2	350	18	35	\$47,609.98	h
2	10	0.5	1.0	\$1,360.29	
2	2	0.1	0.2	\$326.47	
2	1	0.0	0.1	\$108.82	
2	0	0.0	0.0	\$54.41	
2	16	0.8	1.6	\$2,176.46	i
1	2	0.1	0.2	\$272.06	j
2	624	31	62	\$84,881.78	k
2	4	0.2	0.4	\$544.11	l
2	16	1	2	\$2,176.46	m

Labor Rates	
Management	\$153.55
Technical	\$122.20
Clerical	\$61.51

0	0	0	0	\$0	
2	4	0.2	0.4	\$544.11	
2	4	0.2	0.4	\$544.11	
2	1	0.1	0.1	\$179.56	n
2	10	0.5	1.0	\$1,360.29	
0	0	0	0	\$0	o
					p
					q
0	0	0	0	\$0	o
					p
0	0	0	0	\$0	o
					p
0	0	0	0	\$0	o
					p
					p
2	32	1.6	3.2	\$4,352.91	
2	20	1.0	2.0	\$2,720.57	p, r
2	20	1.0	2.0	\$2,720.57	s
		<b>1,420</b>		<b>\$167,984</b>	
2	2	0.1	0	\$272.06	
2	80	4	8	\$10,882.28	
1	2	0.10	0.2	\$272.06	
2	4	0.20	0.4	\$544.11	
2	16.0	0.80	1.60	\$2,176.46	
2	2.0	0.10	0.20	\$272.06	
2	4.0	0.20	0.40	\$544.11	
2	2	0.10	0.2	\$272.06	
2	2	0.1	0.2	\$272.06	

2	2	0.1	0.2	\$272.06
2	10	1	1	\$1,360.29
2	40	2.0	4.0	\$5,441.14
	<b>191</b>			<b>\$17,140</b>
	<b>1,610</b>			<b>\$185,000</b>
				<b>\$424,000</b>
				<b>\$609,000</b>

responses	hr/response
19	86
<u>1831.07</u>	
20	59
<u>2448.02</u>	
11	36

ents will become subject to this regulation in the three-year period of this ICR.

labor, and \$61.51 per hour for Clerical labor. These rates are from the United and Industry group.” The rates are from column 1, “Total Compensation.” industry.

l two furnaces are controlled with a single venturi scrubber. The fabric filter

uses at these two sources.

scrubber (5/2=2.5)). Each furnace is tested annually.

nsecutive tests and have petitioned the operating authority to reduce testing

s row calculates the average cost per year over five years (five furnace control s (local ventilation), one MOR process, and three crushing/screening

trolled by baghouses. These observations, inspections, and maintenance get

se bag leak detection systems.

FR 63.1623 and 63.1626(h).

ere promulgated.

re-year period of this ICR.



**Table 2: Average Annual EPA Burden and Cost – NESHAP for Ferroalloys Production: Ferron (Renewal)**

Burden item	A	B	C
	EPA person-hours per occurrence	Annual occurrences per respondent	EPA person-hours per respondent per year (AxB)
Report reviews			
Notification of performance test	1	1	1
Notification of opacity observations	1	1	1
Notification of change in information already provided	1	0.33	0.3
Report of performance tests, opacity observations	5	1	5
Reports of the results of quarterly inspections of the furnace capture system	2	4	8
Reports of deviations, alarms, actions taken, malfunctions, and exceedances	14	1	14
Annual compliance certification	2	1	2
<b>TOTALS (rounded) <sup>c</sup></b>			

**Assumptions:**

<sup>a</sup> There are two ferroalloy production facilities currently subject to the standard. We assume no additional respondents will

<sup>b</sup> This cost is based on the following labor rates which incorporates a 1.6 benefits multiplication factor to account for government (60%), Technical rate of \$51.23 (GS-12, Step 1, \$32.03 + 60%), and Clerical rate of \$27.73 (GS-6, Step 3, \$17.33 + 60%). Schedule” which excludes locality rates of pay.

<sup>c</sup> Totals have been rounded to 3 significant values. Figures may not add exactly due to rounding.



**nanaganese and Silicomanganese (40 CFR Part 63, Subpart XXX)**

<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>
<b>Respondents per year <sup>a</sup></b>	<b>Technical hours per year (Cx<sub>D</sub>)</b>	<b>Management hours per year (Ex<sub>0.05</sub>)</b>	<b>Clerical hours per year (Ex<sub>0.10</sub>)</b>	<b>Annual cost (\$) <sup>b</sup></b>
2	2	0.1	0.2	\$114.91
2	2	0.1	0.2	\$114.91
2	1	0.03	0.1	\$37.92
2	10	0.5	1	\$574.55
2	16	0.8	1.6	\$919.28
2	28	1.4	2.8	\$1,608.74
2	4	0.2	0.4	\$229.82
	<b>72</b>			<b>\$3,600</b>

<b>Labor Rates</b>	
Management	\$69.04
Technical	\$51.23
Clerical	\$27.73

ll become subject to this regulation in the three-year period of this ICR.

ernment overhead expenses: Managerial rate of \$69.04 (GS-13, Step 5, \$43.15 +  
 These rates are from the Office of Personnel Management (OPM) “2021 General

<b>Total Annual Responses</b>	
(A) Information Collection Activity	(B) Number of Respondents
Initial Notifications	0
Notification of construction/reconstruction	0
Notification of compliance status	0
Notification of performance test	2
Notification of opacity observations	2
Notification of change in information already provided	2
Report of performance tests, opacity observations	2
Reports of the results of quarterly inspections of the furnace capture system	2
Report of deviations, alarms, actions taken, malfunctions, and exceedances	2
Annual compliance certification	2

<b>Number of Respo</b>	
	Respondents Tha
Year	(A) Number of New Respondents
1	0
2	0
3	0
Average	0

<b>Capital/Startup vs. Operatio</b>	
(A)	(B)
Performance Testing/Continuous Monitoring Device	Capital/Startup Cost for One Respondent
Initial Compliance test (PM, HCl, Hg, PAH, Formaldehyde) - Furnace PP FF	\$200,000
Initial Compliance test (PM, HCl, Hg, PAH, Formaldehyde) - Furnace NP FF/Scrubber	\$52,000
Initial Compliance test (PM) Building Ventilation/#12 casting/misc. sources NP/FF	\$5,000
Pressure Drop/Liquid Flow Rate CPMS - Scrubber <sup>a</sup>	\$50,000
Bag Leak Detection System <sup>b</sup>	\$269,148
Ductwork Flow Rate Monitoring <sup>c</sup>	\$41,400
Annual furnace control device tests: PM, Hg, PAH <sup>d</sup>	
Five-year furnace control device tests: HCl, formaldehyde, capture system <sup>e</sup>	

Five-year local ventilation test <sup>f</sup>	
Five-year crushing and screening equipment test <sup>g</sup>	
Five-year metal oxygen refining (MOR) process test <sup>h</sup>	
<b>Totals (rounded) <sup>i</sup></b>	

<sup>a</sup> One respondent uses a single venturi scrubber to control emissions from two furnaces.

<sup>b</sup> Four furnaces are each controlled with fabric filters and are equipped with bag leak detection systems (BLDS).

<sup>c</sup> There are five furnace capture systems that require quarterly examinations of the ductwork to insure proper operation.

<sup>d</sup> The control devices on furnaces are tested annually. A wet scrubber is tested for PM, Hg, and PAH, while a fabric filter is tested for PM.

<sup>e</sup> The control devices on furnaces are required to be tested for HCl, formaldehyde, and their capture system tests, or an average of \$126,000 per test. (See Table 2 of ICR 2448.02.) The cost shown is the five-year average.

<sup>f</sup> The shop building ventilation systems controlled by baghouses require testing every five years. There are 12 baghouses for initial testing for 'Initial Compliance test (PM) - Bldg. Vent./#12 casting/misc. sources NP FF'. The cost shown is the five-year average.

<sup>g</sup> The crushing/screening operations controlled by baghouses require testing every five years. There are 12 baghouses for initial testing for 'Initial Compliance test (PM) - Bldg. Vent./#12 casting/misc. sources NP FF'. The cost shown is the five-year average.

<sup>h</sup> Only one respondent has a metal oxygen refining (MOR) process. This will be tested every five years. There is 1 MOR process for initial testing for 'Initial Compliance test (PM) - Bldg. Vent./#12 casting/misc. sources NP FF'. The cost shown is the five-year average. (1 MOR process/5 years)

<sup>i</sup> Totals have been rounded to 3 significant figures. Figures may not add exactly due to rounding.

(C) Number of Responses	(D) Number of Existing Respondents That Keep Records But Do Not Submit Reports	(E) Total Annual Responses E=(BxC)+D
0	0	0
0	0	0
1	0	0
1	0	2
1	0	2
0.33	0	0.66
1	0	2
4	0	8
1	0	2
1	0	2
	<b>Total</b>	<b>19</b>

**Respondents**

Do Not Submit Reports	Respondents That Do Not Submit Any Reports		
(B) Number of Existing Respondents	(C) Number of Existing Respondents that keep records but do not submit reports	(D) Number of Existing Respondents That Are Also New Respondents	(E) Number of Respondents (E=A+B+C-D)
2	0	0	2
2	0	0	2
2	0	0	2
2	0	0	2

**Operating and Maintenance (O&M) Costs**

(C) Number of New Respondents	(D) Total Capital/Startup Cost, (B X C)	(E) Annual O&M Costs for One Respondent	(F) Number of Respondents with O&M	(G) Total O&M (E X F)
0	\$0			
0	\$0			
0	\$0			
0	\$0	\$18,000	1	\$18,000
0	\$0	\$109,539	2	\$219,078
0	\$0	\$2,070	2	\$4,140
		\$5,000	5	\$25,000
		\$126,000	1.2	\$151,200

		\$5,000	0.6	\$3,000
		\$5,000	0.6	\$3,000
		\$5,000	0.2	\$1,000
	<b>\$0</b>			<b>\$424,000</b>

LDS).

per operation.

the fabric filters are tested for Hg and PAH. We assume that respondents operating ferromanganese furnaces have 1 every five years. This is a repeat of the initial performance testing that cost a total of \$756,000 for 6 furnace per year. (6 furnaces/5 years = 1.2 per year)

total of three shop buildings that require testing. Testing costs are taken from Table 2 Year 2 of ICR 2448.02 that shown is the five-year average. (3 systems/5 years = 0.6/year)

total of three crushing/screening operations that require testing. Testing costs are taken from Table 2 Year 2 of 'FF'. The cost shown is the five-year average. (3 operations/5 years = 0.6/year)

Testing costs are taken from Table 2 Year 2 of ICR 2448.02 for initial testing for 'Initial Compliance test (PM) - years = 0.2/year)